

IP Command Cheatsheet

By Dejan Panovski • Updated on Feb 19, 2026 • [Download PDF](#)

Quick reference for using ip command to manage addresses, routes, links, and network diagnostics in Linux

The `ip` command is the standard Linux tool for managing network interfaces, IP addresses, routes, ARP/neighbor entries, and policy routing. This cheatsheet covers the most common commands you will use in daily administration and troubleshooting.

Basic Syntax

Use this structure for most `ip` operations.

<code>ip [OPTIONS] OBJECT COMMAND</code>	General <code>ip</code> command syntax
<code>ip -br a</code>	Show addresses in brief format
<code>ip -c a</code>	Show colored output
<code>ip -4 a</code>	Show only IPv4 addresses
<code>ip -6 a</code>	Show only IPv6 addresses

Show Interfaces and Addresses

Inspect links and assigned IP addresses.

<code>ip link show</code>	Show all network interfaces
<code>ip link show dev eth0</code>	Show one interface
<code>ip addr show</code>	Show all IP addresses
<code>ip addr show dev eth0</code>	Show addresses on one interface
<code>ip -br addr</code>	Brief interface and address overview

Add and Remove IP Addresses

Assign or remove IP addresses on interfaces.

<code>sudo ip addr add 192.168.1.50/24 dev eth0</code>	Add IPv4 address
<code>sudo ip addr del 192.168.1.50/24 dev eth0</code>	Remove IPv4 address
<code>sudo ip addr add 2001:db8::50/64 dev eth0</code>	Add IPv6 address
<code>sudo ip addr flush dev eth0</code>	Remove all addresses from interface
<code>ip addr show dev eth0</code>	Verify interface addresses

Bring Interfaces Up or Down

Enable, disable, or rename network links.

<code>sudo ip link set dev eth0 up</code>	Bring interface up
<code>sudo ip link set dev eth0 down</code>	Bring interface down
<code>sudo ip link set dev eth0 mtu 9000</code>	Change MTU
<code>sudo ip link set dev eth0 name lan0</code>	Rename interface
<code>ip -br link</code>	Show link state quickly

Routing Table

Inspect and manage network routes.

<code>ip route show</code>	Show IPv4 routing table
<code>ip -6 route show</code>	Show IPv6 routing table
<code>ip route get 8.8.8.8</code>	Show route used for destination
<code>sudo ip route add default via 192.168.1.1</code>	Add default gateway
<code>sudo ip route del default</code>	Remove default gateway
<code>sudo ip route add 10.10.0.0/16 via 192.168.1.254 dev eth0</code>	Add static route

Neighbor (ARP/NDP) Table

View and manage neighbor cache entries.

<code>ip neigh show</code>	Show neighbor table
<code>ip neigh show dev eth0</code>	Show neighbors for one interface
<code>sudo ip neigh flush dev eth0</code>	Clear neighbor entries on interface
<code>sudo ip neigh del 192.168.1.10 dev eth0</code>	Remove a neighbor entry
<code>ip -s neigh</code>	Show neighbor statistics

Policy Routing

Work with multiple routing tables and rules.

<code>ip rule show</code>	List policy routing rules
<code>sudo ip rule add from 192.168.10.0/24 table 100</code>	Route source subnet using table 100
<code>sudo ip route add default via 10.0.0.1 table 100</code>	Add default route to custom table
<code>sudo ip rule del from 192.168.10.0/24 table 100</code>	Remove policy rule
<code>ip route show table 100</code>	Show routes in table 100

Network Namespaces

Inspect or run commands inside network namespaces.

<code>ip netns list</code>	List network namespaces
<code>sudo ip netns add ns1</code>	Create namespace
<code>sudo ip netns exec ns1 ip a</code>	Run <code>ip a</code> inside namespace
<code>sudo ip netns del ns1</code>	Delete namespace
<code>ip -n ns1 route</code>	Show routes in namespace

Troubleshooting

Fast checks for common network issues.

No IP assigned to interface	<code>ip addr show dev eth0</code>
Interface is down	<code>ip link show dev eth0</code> then <code>sudo ip link set dev eth0 up</code>
Wrong default route	<code>ip route show</code> and verify <code>default via ...</code>
Cannot reach destination	<code>ip route get DESTINATION_IP</code>
Stale ARP/neighbor entry	<code>sudo ip neigh flush dev eth0</code>

Related Guides

Use these articles for detailed networking workflows.

Linux ip Command with Examples	Complete <code>ip</code> command guide
How to Find Your IP Address in Linux	Public and private IP lookup methods
Traceroute Command in Linux	Path and hop diagnostics
UFW Cheatsheet	Firewall rules quick reference