ping Cheatsheet

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Quick reference for testing network reachability and latency with ping in Linux

The `ping` command tests whether a host is reachable and shows round-trip latency. This cheatsheet covers common IPv4 and IPv6 checks, count and interval options, packet sizing, and practical troubleshooting patterns.

Basic Syntax

Core `ping` command forms.

`ping host`	Continuously ping a host
`ping -c 4 host`	Send 4 echo requests, then stop
`ping -i 2 host`	Wait 2 seconds between packets
`ping -w 10 host`	Stop after 10 seconds
`ping --help`	Show available options

Common Reachability Checks

Quick tests for DNS names and IP addresses.

`ping google.com`	Test DNS resolution and connectivity
`ping 8.8.8.8`	Test reachability to a public IPv4 address
`ping localhost`	Verify local TCP/IP stack
`` `ping $(hostname -I ``	awk '{print $1}')`
`ping router.local`	Test a local network device by hostname

Count and Timing

Control how many packets are sent and how long `ping` runs.

`ping -c 3 host`	Send exactly 3 packets
`ping -c 5 -i 0.5 host`	Send 5 packets at 0.5-second intervals
`ping -w 5 host`	Stop after 5 seconds total
`ping -W 2 host`	Wait up to 2 seconds for each reply
`ping -c 10 -q host`	Show summary only after 10 packets

IPv4 and IPv6

Force the address family when needed.

`ping -4 host`	Use IPv4 only
`ping -6 host`	Use IPv6 only
`ping6 host`	IPv6 ping on systems that provide `ping6`
`ping -c 4 -4 example.com`	Check IPv4 replies for a dual-stack host
`ping -c 4 -6 example.com`	Check IPv6 replies for a dual-stack host

Packet Size and Interface

Adjust packet payload and source interface.

`ping -s 1400 host`	Send larger packets with 1400-byte payload
`ping -s 56 host`	Use the default payload size explicitly
`ping -I eth0 host`	Send packets from a specific interface
`ping -I 192.168.1.10 host`	Use a specific source address
`ping -D host`	Print timestamps before each reply

Troubleshooting

Quick checks for common `ping` issues.

`Name or service not known`	DNS failed; test with an IP address directly
`Destination Host Unreachable`	Check routing, gateway, and local network link
`100% packet loss`	The host may be down, blocked by a firewall, or not routing replies
`ping: socket: Operation not permitted`	Use `sudo` or verify capabilities on systems with restricted raw sockets
`IPv6 ping fails only`	Confirm the host has AAAA records and IPv6 connectivity

Related Guides

Use these guides for broader network troubleshooting workflows.

ping Command in Linux	Full ping guide with detailed examples
IP command cheatsheet	Inspect interfaces, addresses, and routes
ss Command in Linux	Inspect sockets and active network connections
traceroute Command in Linux	Trace the route packets take to a host
SSH cheatsheet	Quick reference for remote connectivity commands