

Interfaces & IP Addresses		Routing		DNS & Name Resolution		Ports, Connections & Troubleshooting (cont)	
Command	Purpose	Command	Purpose	Command	Purpose		
ip addr	Show IP addresses/interfaces	ip route	Display routing table	dig DOMAIN	DNS lookup	ss -u	UDP sockets
ip addr show eth0	Show specific interface	ip route get IP	Show route used to reach IP	dig DOMAIN A	Query A record	ss -l	Listening sockets
ip link	Show interface state	ip route add ...	Add route	dig DOMAIN MX	Query mail records	ss -tulpn	Listening TCP/UDP + processes
ip link set eth0 up	Enable interface	ip route del ...	Delete route	dig -x IP	Reverse DNS lookup	ss -tan	TCP connections numerically
ip link set eth0 down	Disable interface	route -n	Legacy routing table	nslookup DOMAIN	Basic DNS lookup	t = TCP u = UDP l = Listening p = Process n = Numeric	
ip -s link	Interface statistics			host DOMAIN	Simple DNS lookup		
nmcli device status	NetworkManager device status			getend hosts HOST	Test system name resolution		
nmcli connection show	Show connections	ping HOST	Test connectivity	resolvectl status	DNS resolver status	Network Testing Tools	
hostname	Show hostname	ping -c 4 HOST	Send 4 pings	Important files: /etc/hosts /etc/resolve.conf /etc/nsswitch.conf		curl URL	Test HTTP/HTTPS
hostnname	Show hostname	tracepath HOST	Trace network path			wget URL	Download/test web resource
hostnname	Show hostname	tracepath HOST	Trace route to host			nc HOST PORT	Test TCP/UDP port
hostnname	Show hostname	mttr HOST	Continuous route/latency test			tcpdump	Capture network packets
						nmap HOST	Scan hosts/ports
						Network Statistics	
						Command	Purpose
						ip -s link	RX/TX statistics
						ss -s	Socket summary
						ethtool	NIC/link information