

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 route get IP	Show route used to reach IP	dig DOMAIN A	Query A record	ss -l	Listening sockets
ip addr show eth0	Show specific interface			dig DOMAIN MX	Query mail records	ss -tulpn	Listening TCP/UDP + processes
ip link	Show interface state	ip route add ...	Add route	dig -x IP	Reverse DNS lookup	ss -tan	TCP connections numerically
		ip route del ...	Delete route			t = TCP u = UDP l = Listening p = Process n = Numeric	
ip link set eth0 up	Enable interface	route -n	Legacy routing table	nslookup DOMAIN	Basic DNS lookup		
ip link set eth0 down	Disable interface			host DOMAIN	Simple DNS lookup		
ip -s link	Interface statistics	Connectivity		getend hosts HOST	Test system name resolution	Network Testing Tools	
nmcli device status	NetworkManager device status	ping HOST	Test connectivity			Command	Purpose
		ping -c 4 HOST	Send 4 pings	resolvectl status	DNS resolver status	curl URL	Test HTTP/HTTPS
nmcli connection show	Show connections	tracert HOST	Trace network path	Important files: /etc/hosts /etc/resolv.conf /etc/nsswitch.conf		wget URL	Download/test web resource
hostname	Show hostname	tracert HOST	Trace route to host			nc HOST PORT	Test TCP/UDP port
hostnma mectl	Hostname/system information	mtr HOST	Continuous route/latency test	Network Configuration		tcpdump	Capture network packets
Legacy commands		ARP / Neighbor Table		NetworkManager		Network Statistics	
				nmcli		Command	
				nmtui		Purpose	
				systemd-networkd		ip -s link	
				networkctl		ss -s	
				Ports, Connections & Troubleshooting		ethtool	
ifconfig	Interface configuration			Command	Purpose		
ifup	Bring interface up			ss	Display sockets		
ifdown	Bring interface down			ss -t	TCP sockets		