

Command	Primary Function	Example Usage
ifconfig	View or configure network interfaces	ifconfig eth0 up
ip addr	Show or assign IP addresses	ip addr show eth0
ip link	Manage network interfaces	ip link set eth0 down
ip route	Display or modify routing tables	ip route add 192.168.1.0/24 via 192.168.1.1
ping	Test connectivity to a host	ping google.com
tracert	Trace route packets take to destination	tracert 8.8.8.8
tracert	Similar to traceroute, but simpler	tracert google.com
netstat	Display network connections and ports	netstat -tuln
ss	Show socket statistics (replacement for netstat)	ss -tulwn
nslookup	Query DNS records	nslookup example.com
dig	Perform detailed DNS lookups	dig example.com +short
host	Find IP address of a domain	host google.com
route	Display or set up IP routing tables	route -n
arp	Show or manipulate the ARP cache	arp -a
hostname	Display or set the system hostname	hostnamectl set-hostname server01
curl	Transfer data from or to a URL	curl -I https://example.com
wget	Download files from the internet	wget https://example.com/file.zip
scp	Securely copy files between systems	scp file.txt user@192.168.1.2:/home/user/
rsync	Sync files and directories over SSH	rsync -avz /src /dest
ftp	Transfer files using FTP protocol	ftp ftp.example.com
sftp	Secure file transfer over SSH	sftp user@remotehost
ethtool	Display Ethernet interface info	ethtool eth0
mtr	Combine ping and traceroute results	mtr google.com
tcpdump	Capture and analyze network packets	tcpdump -i eth0
Wireshark	GUI-based network packet analyzer	Wireshark
nmap	Scan open ports and services	nmap 192.168.1.1
nc (netcat)	Read/write data over network	nc -zv 192.168.1.1 22
telnet	Connect to a remote host manually	telnet mail.example.com 25
ssh	Secure remote login	ssh user@192.168.1.1
whois	Get domain registration details	whois example.com
iwconfig	Configure wireless interfaces	iwconfig wlan0 essid "WiFiName"
iwlist	Scan available wireless networks	iwlist wlan0 scan
nmcli	Control NetworkManager from CLI	nmcli dev status

Command	Primary Function	Example Usage
systemctl	Manage network services	systemctl restart network
firewall-cmd	Configure firewalld firewall	firewall-cmd --list-all
ufw	Manage uncomplicated firewall	ufw allow 22/tcp
iptables	Control packet filtering rules	iptables -L -v
sshd	SSH server daemon control	systemctl restart sshd
curl ifconfig.me	Check external IP address	curl ifconfig.me
journalctl	View system and network logs	journalctl -u network
nmcli connection show	List all active network connections	nmcli connection show
ip neigh	Display ARP table (neighbor cache)	ip neigh show
dhclient	Obtain IP address from DHCP server	dhclient eth0
hostnamectl	View or set system hostname	hostnamectl
netcat -l	Start listener on a port	nc -l -p 8080
curl -O	Download a file directly	curl -O https://example.com/file.zip
scp -r	Recursively copy directories via SSH	scp -r /folder user@remote:/backup
ping -c 5	Send a fixed number of pings	ping -c 5 8.8.8.8
ip link show	List all network interfaces	ip link show
nmcli device status	Check device connectivity	nmcli device status