Remote & Network Command-Line Cheatsheet

A comprehensive cheat sheet for remote access, network diagnostics, and management commands in the command-line interface. This guide provides quick references and examples for common tasks.

Basic Network Information

Network Configuration

`ip addr show` or `ifconfig`	Displays network interface configurations including IP addresses, MAC addresses, and status.
`ip route show` or `route -n`	Shows the kernel's IP routing table. `-n` option displays numerical addresses instead of trying to determine symbolic host names.
`netstat -rn`	Displays network routing information, including the destination network, gateway, and interface.
`hostname`	Displays the system's hostname.
`hostname -I`	Displays all IP addresses of the host.
`resolvectl status`	Show current DNS configuration. (systemd-resolved required)

DNS Lookup

`nslookup <domain>`	Queries DNS servers to find the IP address associated with a domain.
`dig <domain>`	A more advanced DNS lookup utility, providing detailed DNS record information.
`host <domain>`	Performs DNS lookups to find the IP address of a domain.
`resolvectl query <domain>`	Resolve domain name to IP addresses and vice versa using systemd-resolved.
`cat /etc/resolv.conf`	Check what DNS server is used.

Remote Access and File Transfer

Secure Shell (SSH)

`ssh <user>@<host>`	Connects to a remote host via SSH.
`ssh -p <port> <user>@<host>`	Connects to a remote host using a specific port.
`ssh-copy-id <user>@<host>`	Copies your public key to the remote host for passwordless login.
`ssh -L <local_port>: <remote_host>: <remote_port> <user>@<ssh_server>`	Creates a local port forwarding via SSH.
`ssh -R <remote_port>: <local_host>: <local_port> <user>@<ssh_server>`	Creates a remote port forwarding via SSH.

Secure Copy (SCP)

`scp <file> <user>@<host>: <destination>`	Copies a file to a remote host.
`scp <user>@<host>: <file> <destination>`	Copies a file from a remote host.
`scp -r <directory> <user>@<host>: <destination>`	Copies a directory recursively to a remote host.
`scp -P <port> <file> <user>@<host>: <destination>`	Copies a file to a remote host using a specific port.

rsync

`rsync -avz <source> <destination>`	Synchronizes files/directories between two locations (local or remote). `-a` archive mode; `-v` verbose; `-z` compression.
`rsync -avz <source> <user>@<host>: <destination>`	Synchronizes files/directories to a remote host.
`rsync -avz <user>@<host>: <source> <destination>`	Synchronizes files/directories from a remote host.

Network Diagnostics

Ping

`ping <host>`	Tests network connectivity by sending ICMP echo requests to a host.
`ping -c <count> <host>`	Sends a specific number of ping requests.
`ping -i <interval> <host>`	Specifies the interval between ping requests in seconds.
`ping -s <size> <host>`	Sets the size of the ping packet.

Traceroute

`traceroute <host>`	Traces the route packets take to a destination host.
`traceroute -m <max_hops> <host>`	Sets the maximum number of hops to search for the destination.
`traceroute -n <host>`	Prints hop addresses numerically rather than symbolically.

netcat (nc)

`nc -zv <host> <port>`	Performs a port scan to check if a port is open. -z: zero-I/O mode, -v: verbose.
`nc -l -p <port>`	Listen on a specified port for incoming connections.
`nc <host> <port>`	Connect to a specified port on a remote host.

Network Management

Network Interface Management

`ip link set <interface> up`	Brings up a network interface.
`ip link set <interface> down`	Brings down a network interface.
`ip addr add <ip_address>/<cidr> dev <interface>`	Assigns an IP address to a network interface.
`ip addr del <ip_address>/<cidr> dev <interface>`	Removes an IP address from a network interface.

Firewall Management (iptables)

`iptables -L`	Lists the current iptables rules.
`iptables -A INPUT -p tcp --dport <port> -j ACCEPT`	Allows incoming TCP traffic on a specific port.
`iptables -A INPUT -p tcp --dport <port> -j DROP`	Blocks incoming TCP traffic on a specific port.
`iptables -F`	Flushes all existing iptables rules (use with caution).

Firewall Management (firewalld)

`firewall-cmd --state`	Check if firewalld is running.
`firewall-cmd --list-all`	Lists all settings of the default zone.
`firewall-cmd --zone=public --add-port=<port>/tcp --permanent`	Opens a port permanently in the public zone.
`firewall-cmd --reload`	Reloads firewalld to apply changes.