**10 essential networking commands commonly used in Linux environments**

**ping**: Tests the reachability of a host on an IP network.

ping google.com

This command sends ICMP echo requests to google.com and waits for a response.

1. **ifconfig**: Configures network interfaces.

ifconfig eth0

This command displays the configuration of the eth0 network interface.

1. **netstat**: Displays network connections, routing tables, interface statistics, masquerade connections, and multicast memberships.

netstat -tuln

This command shows all listening ports and their associated services.

1. **traceroute**: Traces the route packets take to a network host.

traceroute google.com

This command shows the path packets take to reach google.com.

1. **nslookup**: Queries DNS to obtain domain name or IP address mapping.

nslookup google.com

This command retrieves the IP address associated with google.com.

1. **dig**: Performs DNS lookups and displays the answers.

dig google.com

This command provides detailed DNS information for google.com.

1. **ip**: Shows/manages routing, devices, policy routing, and tunnels.

ip addr show

This command displays all IP addresses assigned to all network interfaces.

1. **arp**: Displays and modifies the ARP (Address Resolution Protocol) cache.

arp -a

This command shows the ARP table, listing IP addresses and their corresponding MAC addresses.

1. **route**: Displays/manipulates the IP routing table.

route -n

This command shows the kernel routing table.

1. **tcpdump**: Captures and analyzes network traffic.

tcpdump -i eth0

This command captures packets on the eth0 interface for analysis. These commands are fundamental for network troubleshooting and configuration.