

EX No: 1

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BASIC NETWORK COMMANDS

Linux Network Commands – Synopsis & Description

| Command | Synopsis | Description |
|-----------------|-----------------------|---|
| ifconfig / ip a | ip a | Shows IP address, MAC address, and interface status. ip is the modern replacement for ifconfig. |
| ping | ping google.com | Sends ICMP packets to test connectivity and measure response time. |
| traceroute | traceroute google.com | Displays the path packets take to reach a host, showing each hop. |
| netstat - tuln | netstat - tuln | Lists active TCP/ UDP ports and listening services. |
| ss - tuln | ss - tuln | Faster and more |

| | | |
|-------------|-----------------------------------|---|
| | | detailed alternative to netstat. |
| nslookup | nslookup example.com | Queries DNS to resolve domain names to IP addresses. |
| dig | dig example.com | More advanced DNS query tool showing detailed records. |
| hostname | hostname | Displays or sets the system's hostname. |
| curl | curl https://example.com | Fetches data from a URL, useful for testing APIs or websites. |
| wget | wget https://example.com/file.zip | Downloads files from the internet. |
| nmap | nmap 192.168.1.1 | Scans ports and services on a host (requires installation). |
| ip route | ip route | Shows the system's routing table. |
| iptables -L | sudo iptables -L | Lists firewall |

rules (requires root privileges).

Windows Network Commands – Synopsis & Description

| Command | Synopsis | Description |
|-------------|--------------------------|--|
| ipconfig | ipconfig | Displays IP address, subnet mask, and gateway info. |
| ping | ping google.com | Tests connectivity and shows round-trip time. |
| tracert | tracert google.com | Traces the route packets take to a destination. |
| netstat -an | netstat -an | Lists active connections and listening ports. |
| nslookup | nslookup example.com | Resolves domain names to IP addresses using DNS. |
| hostname | hostname | Displays the computer's name. |
| curl | curl https://example.com | Retrieves content from a URL (available in Windows 10+). |
| getmac | getmac | Shows MAC address of network interfaces. |
| route print | route print | Displays the routing table. |

arp -a

netsh

tasklist | findstr

arp -a

netsh interface show
interface

tasklist | findstr chrome

Shows the ARP cache
(IP to MAC mappings).

Configures and displays
network settings.

Checks if a specific
process is running.