



# Computer Networks Lab

## Lab-I

### BASIC NETWORKING COMMANDS

## **BASIC NETWORKING COMMANDS**

1. **hostname**
2. **getmac**
3. **netstat**(Network Statistics)
4. **netstat -a**
5. **netstat -sp tcp**
6. **netstat -sp udp**
7. **ipconfig**(ip configuration)
8. **ipconfig/all**
9. **ping**(Packet InterNet Groper)
10. **ping -t**
11. **tracert**(Trace route)
12. **tracert -h maxhop**

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## BASIC NETWORKING COMMANDS

| Sl. No. | Windows           | Linux/Ubuntu        |
|---------|-------------------|---------------------|
| 1       | hostname          | hostname            |
| 2       | getmac            | getmac              |
| 3       | netstat           | netstat             |
| 4       | netstat -a        | netstat -a          |
| 5       | netstat -sp tcp   | netstat -sp tcp     |
| 6       | netstat -sp udp   | netstat -sp udp     |
| 7       | ipconfig          | ifconfig            |
| 8       | ipconfig/all      | ifconfig -a         |
| 9       | ping              | ping                |
| 10      | ping -t           | ping -t             |
| 11      | tracert           | traceroute          |
| 12      | tracert -h maxhop | tracerout -m maxhop |

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- **hostname**

The *hostname* command is used to show or set a computer's host name and domain name

A host name is a name that is assigned to a host (i.e., a computer connected to the network) that uniquely identifies it on a network and thus allows it to be addressed without using its full IP address. Domain names are user-friendly substitutes for numeric IP addresses.

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- **getmac**

getmac is a Windows command used to display the Media Access Control (MAC) addresses (physical address) for each network adapter in the computer.

- **netstat**

Displays active TCP connections, ports on which the computer is listening, Ethernet statistics, the IP routing table, IPv4 statistics (for the IP, ICMP, TCP, and UDP protocols), and IPv6 statistics (for the IPv6, ICMPv6, TCP over IPv6, and UDP over IPv6 protocols).

Used without parameters, netstat displays active TCP connections.

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- **netstat -a**

Displays all active connections and the TCP and UDP ports on which the computer is listening.

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- **netstat -sp tcp**

Display the **statistics** for only the **TCP Protocols**.

- **netstat -sp udp**

Display the **statistics** for only the **UDP Protocols**.



- **ipconfig**

Displays all current TCP/IP network configuration values and can modify Dynamic Host Configuration Protocol DHCP and Domain Name System DNS settings.

Used without parameters, **ipconfig** displays the IP address, subnet mask, and default gateway for **all** adapters.

- **ipconfig/all**

Display more details information than  
ipconfig(hostname, physical address and ip  
address)

- **ping ip address of other computer(172.16.63.235)**

Test the reachability of a host on an Internet Protocol (IP) network and to measure the round-trip time for messages sent from the originating host to a destination computer and back.

- **ping -t ip address of other computer(172.16.63.235)**

Ping the specified host until stopped.

To see statistics and continue – Control-Break

To stop - type Control-C.

- **tracert**

Displaying the route (path) over a maximum of 30 hops and measuring transit delays of packets across an Internet Protocol (IP) network.

- **tracert -h maxhop**

Displaying the route (path) over a maximum of given number hops and measuring transit delays of packets across an Internet Protocol (IP) network.