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| **Ex No:01** | **Learn to use commands like tcpdump, netstat, ifconfig, nslookup and**  **traceroute. Capture ping and traceroute PDUs using a network protocol**  **analyzer and examine.** |
| **Date:** |

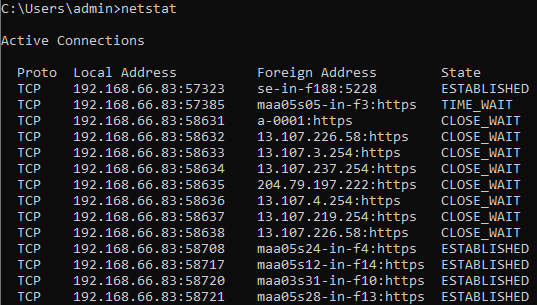
**AIM:**

To Learn to use commands like tcpdump, netstat, ifconfig, nslookup and traceroute ping

**Commands:-**

**netstat:-**

This command displays active TCP connections by default.

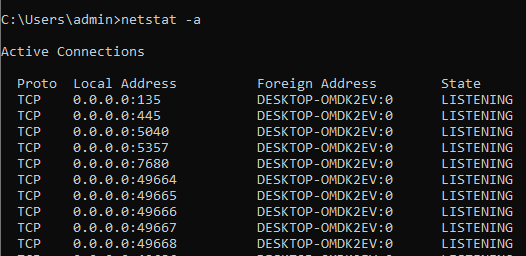
**Example:-**  


**Netstat commands with their flags:-**

**netstat -a:**

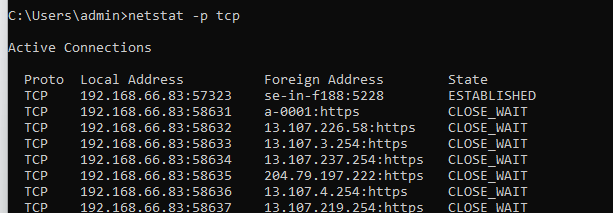
Shows all active connections and listening ports, both TCP and UDP.

**Example**



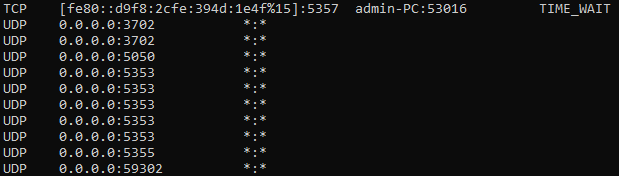
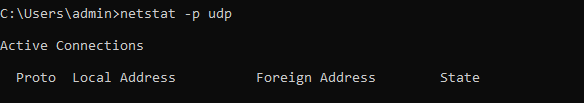
**netstat -p tcp:**

 Displays only TCP connections.



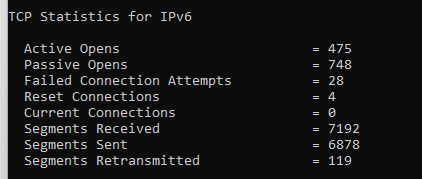
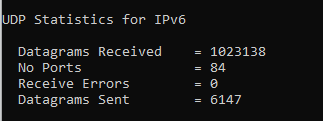
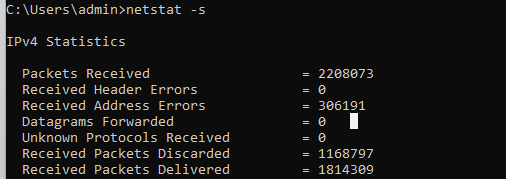
**netstat -p udp:**

  Displays only UDP connections.



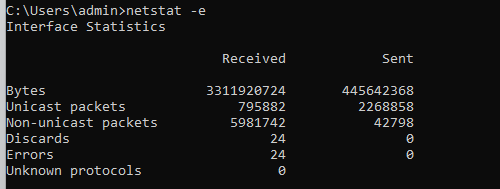
**netstat -s:**

Provides statistics for each protocol. This includes various network-related statistics such as TCP segments sent/received, UDP datagrams sent/received, etc.



**netstat -e:**

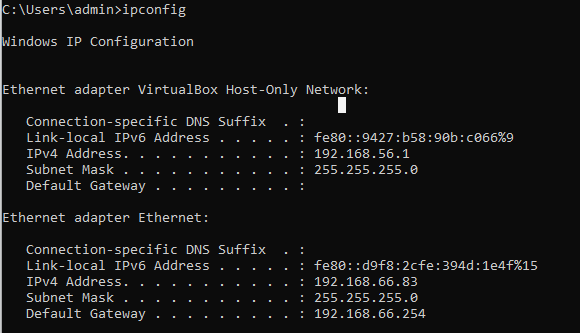
Displays Ethernet statistics, including bytes sent/received, packets sent/received, and other network interface-specific information.



**ipconfig:**

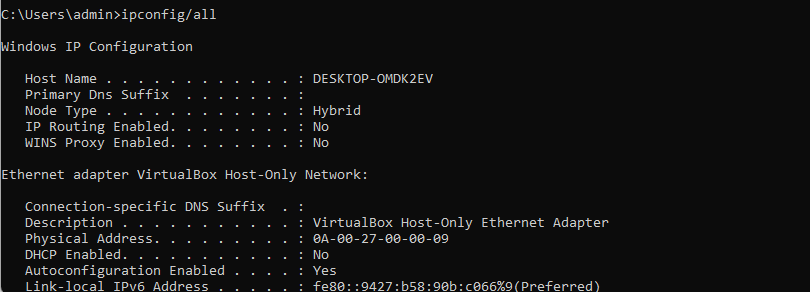
Displays the IP configuration of all network interfaces, including IP addresses, subnet masks, default gateways, and DNS servers.

**Example:-**



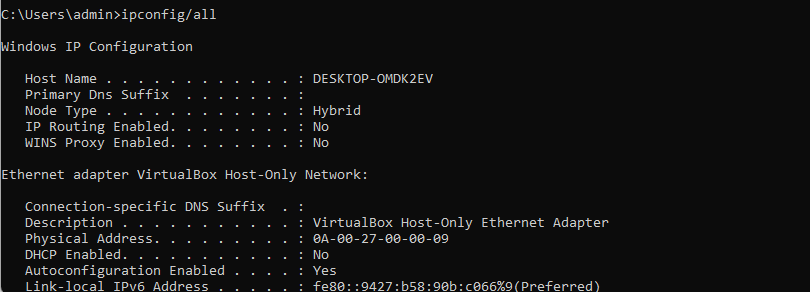
**ipconfig /all:**

Provides detailed information about the IP configuration of all network interfaces, including physical addresses (MAC addresses), DHCP lease information, and DNS settings.



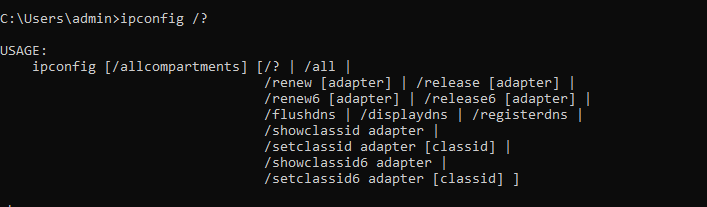
**ipconfig /all:**

Provides detailed information about the IP configuration of all network interfaces, including physical addresses (MAC addresses), DHCP lease information, and DNS settings.



**ipconfig /?:**

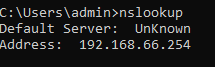
Displays the help information for the ipconfig command, providing details about the available flags and their usage.



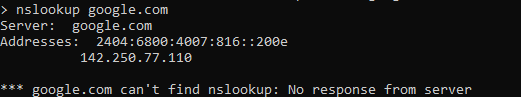
**nslookup:**

It used for querying DNS (Domain Name System) to obtain domain-related information.

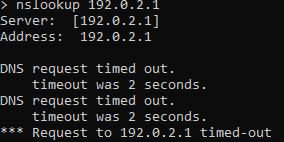
**Example:**



**nslookup <domain>:** Queries the DNS for the IP address of a specific domain.



**nslookup <IP address>:** Performs a reverse DNS lookup to find the domain name associated with a given IP address.

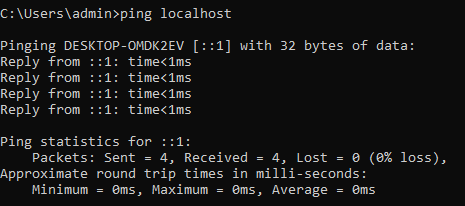


**ping:**

 command in Windows is used to test network connectivity and measure the response time between a source and destination. Here are some common ping commands with their flags and examples:

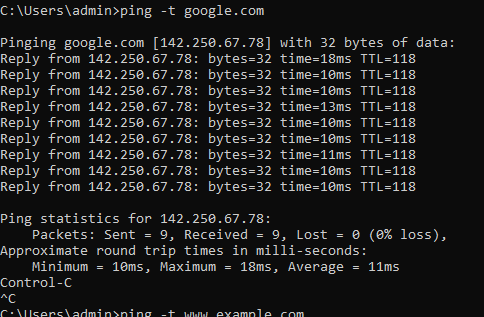
**ping <hostname or IP address>:** Sends ICMP echo requests to the specified destination and displays the round-trip time and status of each reply.

**Example:**

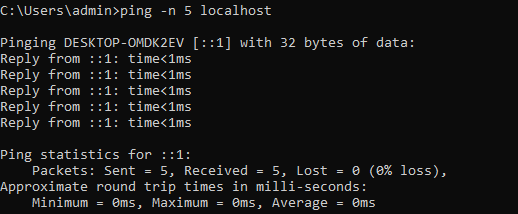


**ping -t <hostname or IP address>:**

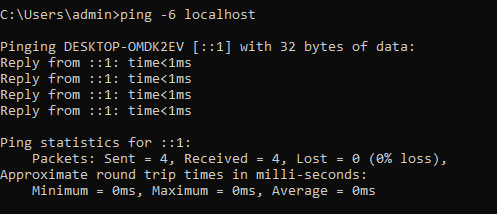
Continuously pings the specified destination until manually stopped by pressing Ctrl+C.



**ping -n <count> <hostname or IP address>:** Sends the specified number of ICMP echo requests to the destination.



**ping -6 <hostname or IP address>:** Forces the use of IPv6 for the ping request.



**RESULT**

Thus the various networks commands like tcpdump, netstat, ifconfig, nslookupand traceroute ping are executed successfully