

## BASIC NETWORKING COMMANDS

Aim:

Study of various network commands used in Linux and Windows.

Commands:

1) arp-a :

ARP is short form of address resolution protocol which shows the IP address of your command along with IP address and MAC address of your router.

Output:

Interface: 172.16.8A3.... 0x4

Internet Address	Physical Address	Type
172.16.8.1	7c-5a-1c-cf-be-45	dynamic
172.16.8.172	7c-57-58-35-0d-3d	dynamic
172.16.11.255	ff-ff-ff-ff-ff-ff	static
244.0.0.2	01-00-5e-00-00-02	static
244.0.0.251	01-00-5e-00-00-fb	static
<del>239.255.255.250</del>	<del>01-00-5e-7f-ff-fa</del>	<del>static</del>

Interface: 192.168.182.1 .... 0x6

Internet Address	Physical Address	Type
192.168.182.255	ff-ff-ff-ff-ff-ff	static
244.0.0.2	01-00-5e-00-00-02	static
244.0.0.252	01-00-5e-00-00-fc	static
239.255.255.250	01-00-5e-7f-ff-fa	static



## 2) Hostname:

It displays the name of your computer

Output: DESKTOP-V4FUKL3

## 3) ipconfig /all:

This command displays detailed configuration information about your TCP/IP connection.

Output: Windows IP configuration

Host Name : DESKTOP-V4FUKL3

Primary DNS suffix

Node Type : Mixed

IP Routing Enabled : No

WINS Proxy Enabled : No

Ethernet adapter Ethernet2:

Connection specific DNS suffix:

Description: Virtual Box Host-only Ethernet Adapter

Physical Address: 0A-00-27-00-00-11

DHCP Enabled: No

Subnet Mask: 255.255.255.0

## 4) nbtstat -a:

This command helps solve problems with NetBIOS name resolution.

Output 1:

nbtstat-a DESKTOP-V4FUKL3

OIP:

Ethernet2:

Node IP Address: [192.168.56.1] scope id: []

Host not found



Ethernet

Node IP Address: [172.16.8.93] scope id: []

Host not found

VMware Network Adapter VMNet 8:

Node IP Address: [192.168.8.1] scope id: []

Host not found

VMware Network Adapter VMNet 1:

Node IP Address: [192.168.182.1] scope id: []

Host not found

nbstat -r

Output:

NetBIOS Name Resolution and Registration Statistics

Resolved By Broadcast = 0

Resolved By Name Server = 0

Registered By Broadcast = 12

Registered By Name Server = 0

nbstat -s

Output:

VMware Network Adapter VMNet 1:

Node IP Address: [192.168.255.1] scope id: []

No connections

~~VMware Network Adapter VMNet 8:~~

~~Node IP Address: [192.168.72.1] scope id: []~~

~~No connections~~

Ethernet:

Node IP Address: [172.16.8.112] scope id: []

No connections



### 5) netstat :

netstat displays a variety of statistics about a computer active TCP/IP connections.

#### Output :

Active connections

Proto	Local Address	Foreign Address	State
TCP	172.16.8.93:52328	56-70-f188:5228	ESTABLISHED
TCP	172.16.8.93:52464	13.107.213.254:https	CLOSE-WAIT
TCP	172.16.8.93:52497	52.139.252.32:https	ESTABLISHED
TCP	172.16.8.93:52498	23-57-53-203:https	TIME-WAIT
TCP	172.16.8.93:52499	20.198.118.190:https	ESTABLISHED
TCP	172.16.8.93:52500	23-11-215-11:https	CLOSE-WAIT
TCP	172.16.8.93:52501	23-11-215-11:https	ESTABLISHED
TCP	172.16.8.93:52502	23-11-215-11:https	CLOSE-WAIT
TCP	172.16.8.93:52503	23-11-215-11:https	CLOSE-WAIT
TCP	172.16.8.93:52504	40.79.189.58:https	ESTABLISHED
TCP	172.16.8.93:52505	13.107.18.254:https	ESTABLISHED

### 6) nslookup :

It is used to perform DNS lookups in Linux

#### Output :

1. nslookup www.facebook.com

#### Output :

Server: unknown

Address: 172.16.8.1

Non-authoritative answer:

Name: stan-mini.cla.facebook.com

Address: 2003:2880:f137:182:face:b00c:025de  
157.240.192.35

Aliases: www.facebook.com



Output:

Server: unknown

Address: 192.16.8.1

Non-authoritative answer:

Name: twitter.com

Address: 104.244.42.1

Aliases: www.twitter.com

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Result:

Thus, the basic IPsec & Windows commands have been studied and executed successfully.