Ex.No: 01

DATE: 18.7.25

STUDY OF VARIOUS NETWORK COMMANDS USED IN LINUX AND WINDOWS

1) arp - a

Output:

Interface: 172.16.10.46 --- 0x4

Internet Address

172.16.8.1

Physical Address

7c-5a-1c-cf-bc-45

Type

dynamic.

2) Hostname

output:

— iop.

3) ip config all

output:

windows ip configuration

Hostname ---- : iop

Ethernet adapter ethernet:

description ---- : intel (R)

I219-V

Physical Address — : D8-BB-C1-C5-CC-20

4) nbtstat -2

Displays Protocol Statistics and current TCP/IP connections using NBT.

- Jananna

5) netstat

Active connections

Proto	Local Address	Foreign Address
TCP	172.16.10.46:4913	4.213.25.240:https
TCP	172.16.10.46:49694	428.202-229-22:https

State

ESTABLISHED.

CLOSED.

6) netstat -r

Interface list

4 .... d8 bbc1c59c20... Intel(R) Ethernet connection

14 .... 0a 0027000000c — virtual box host only

7) pathping :

Usage: pathping [-g host-ixt]

[-h max-hops] [-i address]

[-p period] [-q num-queries]

[-w timeout] target-name.

8) ping

Usage: ping [-t] [-a] [-n count]

[-l size] [-f]

9) route

manipulate network routing tables

ROUTE [-f] [-p] [-4] [-6] command.

P destination

10) nslookup

Default Server: Unknown
Address: 172.16.3.1

SOME IMPORTANT LINUX NETWORKING COMMANDS:

1) ip

one of the basic command every administrator will need in daily work. The ip command can show address information, manipulate routing plus display network various devices, interfaces and tunnels.

ip < OPTIONS > < OBJECT > < COMMAND >

a) To show IP address assigned to an interface of your Server:

a) [root@ Server] # ip address show.

b) To delete an IP on an interface:

a. [root@ Server] # ip address del

192.168.1.254/24 dev enp503.

c) To display route taken for IP 10.10.14

[root@ Server] # ip route get 10.10.1.4.

2) if config :

The ifconfig command was/is a staple in many sysadmin's tool belt for configuring and trouble shooting networks, replaced by ip command discussed above.

3) mtr

MTR (matts trace route) is a program with a command line interface that serves as a network diagnostic and trouble shooting tool. If you see a sudden increase in response time or packet loss, then obviously there is a bad link somewhere.

Syntax :

mtr <options> hostname / IP .

a) Show the numeric IP address and hostnames, too:

[root @ Server ~] # mtr -b google.com

b) Set the number of pings that you want to send :

[root@ Server ~]# mtr_c 10 google.com

4.) tcp dump:

designed for capturing and displaying

Packages.

You can install tcp dump with the command Below:

[root @ server ~] # dnf install -y tcpdump.

- capture traffic to and from one host:

for traffic coming from 8.8.8.8, we:

[root @ server ~] # tcp dump -i ethO src host 8.8.8.8

- capture traffic to and from a network:

[root @ Server ~] # tcp dump -i ethO net 10.1.0.0 mask 255.255.255.0

- capture traffic to or from port numbers:

capture only DNS port 53 traffic:

[root @ Server ~] # tcpdump -i ethO port 53

for specific host,

[root @ Server ~] # tcpdump -i ethO host 8.8.8.8 and port 53.

5) Ping

Ping is a tool that Verifier IP - level connectivity used to Trouble Shoot Connectivity reachability and name resolution.

[root @ Server~] # ping google.com

64 bytes from sofo 2527-le 00.net 1216.53.201.124

icp-seq = 1 ttl = 56 = 10.7ms

You need to stop the ping command By Pressing CTRL + c.

Result:

The commands are executed Successfully.

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