Ex-1 Study of Various network Commands used in Linux.

1. arp -a

Output :

Interface = 172.16.10.46 ------ 0x6   type

Internet address   Physical address   dynamic

172.16.8.1   7C-5a-1c-cJ-be-45

2. host name

Output :
    -iop

3. ipconfigall

Output : -iop

Windows IP configuration

Host name - - - - - - iop

Ethernet adapter ethernet !

Description .... : Intel (R) Ethernet Connection

Physical adress - B8-BB-C1-C5-CC-20

4. nbtstat -a

Displays protest statistics and incurrent TCP/IP Connections using NBT

5. Netstat

Active Connections

proto   Local adress   foreign adress   State

TCP   172.16.10.46.496 8.3   4.2 B,25.240: bHPS   Established

TCP   172.16.1046 : 49696   a 23-202-229-22 HPS   Closed

6. netstat →
   output
   Interface list
   4 ...... 28 bbc1 c5 cc 20 ... Inbl(R) Ethernet Connection
   14 ... co oo 2700 00 oc ... virtual Box Host only

7. pathpinirg
   output
   usage pathping [-g host -list] [-h max -hops] [i-addr
                  [-p period] [-q num-queries]
                  [-w timeout] target -name

8. ping
   output
   usage -ping [-t] [-a] [-n count] [-l size] [-6] [i-TTL]

9. route
   output
   manipulates network routing tables
   RouTE [-d] [-P] [-4] [-6] command [determination]

10. nslookup
    output
    Default Server - unknown
    Adress - 172.16.8.1

Linuc networking Commands

1. ip
   The ip command is one of the basic command
   every administrator will need in daily work.
   IP [OPTIONS] OBJECT [command]
   @ To show the ip adress a signed to an
   interface on your server   #ip adress show.

b. To assign an IP to an interface, for example

exp303 a[root @ Server ~] # ip adress add.
192.168.1.254/24

2) ifconfig.

The config command was/is a staple in many sysadmin's tool felt for configuring and trouble shooting networks.

3) mtr.

syntax.

mtr <optionts> host name / IP

(a) The base mtr command shows you the statistics including each hol (host names) with time and less %.

[root @ Server ~] # mtr google.com

(b) show the numeric IP addresses and host names to [root @ Server ~] # mtr -b google.com

4. tcpdump

The tcpdump command is defined for Capturing and displaying packets.

Install tcpdump with the command below

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

5. ping

ping is a trob that verifies Ip-level connectivity to another Tcp/IP computer by Sending ICMP [root @ Server] # ping google.com

ping pinsa google.com (216.58.266.Ap-56.184) bates of data.

Configure an ethernet connection by using nmc[...]

If you connect a host to the network over ethernet, you can manage the connection settings on the command line by using nmc[...] utility.

Procedure

1. List the network manager connection prof[...]

nmcli connection show.

Name	UUID	Type	Device
wired connection	a5ebb490	Ethernet	enp3s.

2. # nmcli connection add con< name < connec[...] name ? if name < device -name > type ethernet

3. optional Rename the Connection profile
nmcli connection modify ' wired Connection'

4. Display the Current Setting of the Connection profile
nmcli connection show

5. Configure the IPv4 settings.

(1) To use DHCP enter

nmcli connection modify ' wired Connection' ipv4 method auto

(2) To set a static IP 4 address, netw[...] mask default gateway, DNS servers and Search domain.

nmcli connection modify wired connec[...]

6. Configure the IPv6 settings

    # nmcli connection modify "wired connection"

7. Activate the profile

    # nmcli connection up Internal-LAN

Verification

1. Display the IP settings of the NIC

    # IP address show enp1s0

2. Display the IPv4 default gateway

    # ip route show default

    default via 192.6.2.0.56 dev enp1s0 proto stat

    metric 102

3. Display the IPv6 default gateway

    # IP 6 route show default

    default via 2001:db:8:1: ffe dev enp1s0 proto

    static metric 102 pref medium.

4. Display the DNS setting

    # cat /etc/resolv.conf

    search example.com

    name server 192.62.200

5. Use the ping utility to verify that this host can send packets to other host's

    # ping < host-name or -IP-address >

Result.

Thus the basic linux commands have been executed successfully.