

AIM:

Study of various Network commands used in Linux and Windows.

Basic Networking Commanding

(i) arp -a

O/P:

Interface : 192.168.110.1 --- 0x7

Internet Address Physical Address Type

192.168.110.254 00-50-56-~~f8~~-fc-9a dynamic

192.168.110.255 ff-ff-f8-ff-ff-ff static

224.0.0.2 01-00-5e-00-00-02 static

224.0.0.22 01-00-5e-00-00-16 static

224.0.0.251 01-00-5e-00-00-f6 static

(ii) Host name:

O/P:

DESKTOP-Q46TUEV

(iii) ip config /all

O/P:

Windows IP Configuration:

Host Name : DESKTOP-Q46TUEV

Primary Dns Suffix

Node Type : Mixed

IP Routing Enabled : No

WINS Proxy Enabled : No

Ethernet adapter Ethernet

Connection-specific DNS suffix

Description : Realtek PCIe GBE family controller

Physical Address : 50-9A-4C-34-D7-82

DHCP Enabled : No.

Auto configuration enabled : Yes.

a)

4) nbt stat -a:

NBTSTAT [-a Remote Name] [-A IP address] [-C] [-n]
[-Y] [-R] [-RR] [-S] [E] [Interval]

5) Net stat: (network statistic) netstat displays
a variety of statistics about a
computer's active TCP/IP connections.

6) ns lookup : To display DNS

Default Server: Unknown

Address: 172.16.8.1

7) Pathping : Traces the route to destination

Usage: pathping [-g host-list] [-k maximum-hops]
[-i address] [-n] [-p period] [-q num-queries]
[-w timeout] [-4] [-6] target-name

8) Ping : Best way to test connectivity

Usage: Ping [-t] [-a] [-n count] [-l size] [-f] [-i TTL]
[-v TOS] [-r count] [-s count] [-S host-list]
[-K host-list] [-W timeout] [-k] [-s smaddr]
[-c compartment] - [-p]
[-4] [-6] target-name

a) Route: Used to show / manipulate the IP

Manipulate network routing tables

ROUTE [-f] [-p] [-q/-6] [destination] [MASK netmask] [gateway] [METRIC metric] [IF interface]

LINUX COMMANDS

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Some important Linux Commands:

1) ifconfig: It is a staple in many sysadmin tool belt for configuring and trouble shooting networking. It has since been replaced by ip command.

O/P:

enp250: flags = 4419 <UP, Broadcast, Running

Promisc, Multicast > mtu 1500

inet 172.16.8.116 netmask 255.255.252

broadcast 172.16.11.255

init 6: flags = 2560 : 88 al: (green) bca, pndtnt

by scopeid 0x20 <link>

ether 50:9a:4c:35:0f:51 brqneuelen 1000 (Ethernet)

Rx errors 0 dropped 394 overruns 0 frame 0

Tn packet 131261 bytes 74472091 (71.0MB)

Tn errors 0 dropped 0 overruns 0

Carriers 0 collision 0.

lossy.

2) IP:

O/P : Usage : IP [option] object {command / help} / IP { - for } - batch filename.

IP address show:

lo: <loop Back, up, lower-up > mtu 65536

q disc noque state Un know.

0.0%

0.01%

0.0%

0.3%

0.0%

0.0%

group default qlen 1000.
 enp2s0: < Broadcast, multicast, promisc, up,
 lower-up > mtu 1500 qdisc fq-codel.
 Stat up group default qlen 1000.
 wlp3s0: < No-CARRIER, Broadcast,
 multicast, up > mtu 1500 qdisc no queue
 & state down group default qlen 1000

3) mtr: (Mett's traceroute)

O/P:

mtr google.com

localhost.localdomain (0.0.0.0)

Keys : Help display mode Restart statistics
Order of fields Quit.

Hosts:

- 1) 172.16.8.1
- 2) static - 1.229.249.49 - tata�� - com
- 3) 142.250.172.162
- 4) 142.251.227.215
- 5) 142.250.228.81
- 6) maa.05212-in-f4.lev100.net

Sat, July 2011 : 32 2024

Loss%	Snt	Last	Ping			
			Avg	Best	worst	stddev
0.0%	314	0.2	0.2	0.1	2.6	0.1
0.01%	314	2.6	2.9	2.4	20.9	1.2
0.0%	314	1.9	2.1	1.6	28.9	1.8
0.3%	314	2.6	2.9	2.3	16.0	1.4
0.0%	314	2.9	3.3	2.5	27.1	1.9
0.0%	314	2.5	2.8	2.2	17.0	1.3

4) tcpdump:

O/P:

Permission required

5) Ping:

O/P:

Ping google.com

ping google.com (142.250.67.46) 56(84) bytes
of data 64 bytes from maa.05.s12.infra.10.0.0.0:

(142.250.67.46): icmp - seq = 1

t+1 = 120 time = 2.85 ms

RESULT:

Thus the program for Linux and windows command is executed & output is verified successfully.