

# Experiment - 1

Date: 16-7-24

Aim:

To study of various networking command used in Linux & Windows.

arp-a

Show of address resolution protocol.

Show IP address of computer along with MAC address of router.

O/p:

interface : 172.16.11.189 ... O/P

Internet address	Physical address	Type
172.16.11.189	00-0c-ef-be-46	dynamic
	255.0.0.0	NET

hostname:

→ display name of computer

O/p:

Desktop 3Dc04126A.

IP config /all

→ display detailed configuration.

O/p:

L - Lernvorgang

PL-5-21 : 26A

## Windows w configuration

Hostname: Desktop 3D015402

primary suffix: -p plants of  
-switched network as how  
Ethernet adopter ethernet

F<sub>60</sub>

160  
start DNS Server ... 172.16.8.1  
with nbtstat -a: p. see b6 9.1 work  
solve problem with net ~~too big~~

*hame*

~~W354~~ 0/p:

Active Connectors:	
proto - f95f-ec-ec	foreign address 1.3t.24.01 m-a: 0
TCP	0.0.0.0:135
	State listening

metastasis ever palpable

infarct list

## IPv4 Route Table

~~network distribution~~ network gateway interface number  
0.0.0.0 0.0.0.0 192.168.1.2 192.168.1.31

## nslookup

Tool to perform DNS lookups in  
line or displays IP address of a  
computer.

O/P:

Server: unknown

Address: 192.168.232.31

No authoritative answer for

Name: www.google.com

Address: 2489:6800:4007:82a::2004  
.m2. 280.193.132

Pathping: however it's library

→ combination of ping & tracepath

command:

O/P.

pathping [-g maxlist] [-t maximum-hops]

[-i address] [n] [-p period]

[-q num-queries] [-w timeout]

[-h] [-b] target - route.

Dot path traceroute

browses [-d] [-r] [-t] [-l depth]

forward - down [-w waitsets]

infests [-c] [cycles] [waitsets]

Ping:

- reported 240 bytes to host connecting.
- is the best way to check if
- to switch 90 subjects to avoid b/w two nodes.

O/P:

> ping localhost  
pinging 127.0.0.1 [500000000] bytes fine a lot  
of data reply from localhost with

loss = 0% approx. was new  
host found: good type: available  
set of photo's.

ping statistics for ::1:

packet sent = 1, received = 1, lost = 0  
about 1 ms per round trip times in  
approximate round trip  
multisecond.

Route:

→ used to [show/manipulate the  
host IP routing table in -i]

sent w/ [show-current -p]

O/P:  
route -dump [s. I.P.]  
manipulate network routing table

route [-f] [-P] [-m-n-b] command

[destination] [mask-not-mask]

[metric] [metric] [IP interface]

## Some Linux Networking Commands:

(1) IP:

(a) ip address show:

if: 0/p: 192.168.0.10  
< loopback, up, lower-up > mtu 16536 qdisc no queue state unknown group default

qdisc mq link /loop back 00:00:00:00:00:00

link brd: 1000:00:00:00:00:00

inet : 192.0.0.218. subnetmask/0.0.0.0

(2) ip config:

enp0s3: flags = 4163 <up, broadcast, running>

multicast > mtu 1500 qdisc no queue

inet 10.0.2.16 netmask 255.255.255.0  
broadcast 10.0.2.255. interface br0:0: mtu 1500  
broadcast 10.0.2.255.

rx packets 212 bytes 41197 (40.2 kb)

Cheerful ) Rx packets 212 bytes 41197 (40.2 kb)

collisions 0.

tx bytes 0

tx bytes 0

(3) Mr.

mta.google.com

2  
12

(1)

local hot-line (10.0.2.16)

→ gogle

→ google .com

Exp 2024-01-16 02:01 W 12.33:50  
C11.211.166 2024.02.01. W 12.33:50

thought giving 1000 rounds per shot & new or

00:00:00 00:00:00

host packet

Pungs 1

(i) gateway less 1. ext cas 00:00 : 00:00 best

(iv) waiting for reply 0.0% 163 03

(5) top downward, go up = go down

for the first 20 days

lost metadata during migration. check: 04/3/06

copy.

On Jan 19-2024 at 11:21:46 AM

already installed

nothing to do.

complete!

### (5) tcpdump - d

1. enpass [sys, running, connected]
2. any (pseudo-device that captures on all interfaces). [sys, running].
3. go [sys, running, loopback].

### (6) tcpdump -i enp0s3

drops pws to tcu-dump

O/P:

tcpdump: verbose output suppressed;  
use -v [v] for full protocol

decode:

### (7) tcpdump -enp0s3 -c 3

O/P:

tcpdump: invalid option --o.

tcpdump version 4.9.4

(with -f packet-v3)

libcap version 1.10.4

red line

(5)

ping:

# ping google.com

O/P: (server.com) (surfbar)

ping.google.com (142.250.182.14)

56(84) bytes of data.

64 bytes from naas.lg-in-flu.lc.

loss.

# ping -c 10 google.com

O/P: (server.com) (surfbar)

ping.google.com (142.250.182.14)

56(76) bytes of data.

64 bytes from naas.lg-in-flu.lc.

loss = 1

(142.250.182.14): icmp\_seq=1

## Configuration of ethernet connection by

using:

(i) nuchi connection show:

Name	UUID	Type	Device
wired connection	15ecb6490cc20-3668-81f4-0314927f3f75	ethernet	enp0s3
1			

(ii) nuchi connection modify "nuchi connection"  
nuchi connection.

(iii) nuchi connection show for displaying  
the current setting.

O/P:  
Connection interface name: eth0  
Connection auto connect: yes  
Connection auto connect: yes  
ip v4: auto  
ip v6: auto

(2) ~~(i)~~ nuchi connection up Internet - fault

(i) # ip address show config  
O/P: < broadcast, multicast, up,  
config: (lower-up)

(ii) # ip route show default.  
default via 10.0.2.2 dev s0 config  
proto dhc src 10.0.2.15  
metric 20100

(iii) ip -6 route show default.  
default via 2010: dev: 8:1: if8  
dev s0 proto static  
metric 102 pref metric

(iv)

# of /etc/resolv.conf

of:

none never, 190. 6. 1. 2

~~Result: Result:~~

These basic Linux command  
command have been studied &  
~~executed.~~

~~Ques~~  
~~16) 8/24~~