

Basic Networking Commands

Aim: study of various Networking commands used in  
arp-a :

Interface : 172.16.75.91 --- 0xc

Internet Address	physical Address	type
172.16.72.1	7c-5a-1c-(f-be-4)	dynamic
172.16.72.133	4c-ae-a3-65-97-f3	dynamic
172.16.72.195	4c-ae-a3-64-fc-50	dynamic
172.16.72.254	0b-0c-09-86-8c-e0	dynamic
172.16.75.89	4c-82-a9-78-90-c5	dynamic
172.16.75.90	4c-82-a9-78-8d-57	dynamic
172.16.75.129	4c-82-a9-78-94-8d	dynamic
172.16.79.255	ff-ff-ff-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
224.0.0.113	01-00-5e-00-00-71	static
228.8.8.8	01-00-5e-00-00-fb	static
239.0.0.8	01-00-5e-00-00-fc	static

hostname:

KSO3-97

ipconfig /all :

## windows IP configuration

Host Name : K503-91

Primary Dns Suffix :

Node type : Hybrid

IP routing enabled : No

Wins Proxy enabled : No

ethernet adapter ethernet :

Media state : Media disconnected

connection-specific DNS suffix :

Description : Intel (R) ethernet connection (1.7) 1219-LM

Physical Address : 20-88-10-86-2E-5E

DHCP enabled : Yes

Autoconfiguration enabled : Yes

netstat :

Proto	Local Address	foreign Address	state
TCP	127.0.0.1:49671	k503-91:49672	established

TCP	172.16.75.91:50488	123-11-215-66:https	close-wait
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TCP	172.16.75.91:50726	123: http	time-wait
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TCP	172.16.75.91:50949	172.16.14.83:ms-do	syn-sent
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nslookup :

default server : unknown

[F-] [S-] [T-] [D-] [A-] [P-] [R-] [L-] [W-] [C-]

Address : 172.16.8.1

[F-] [S-] [T-] [D-] [A-] [P-] [R-] [L-] [W-] [C-]

Server : www.google.com

[F-] [S-] [T-] [D-] [A-] [P-] [R-] [L-] [W-] [C-]

Addresses : 2404:6860:4007:81e::2004

[F-] [S-] [T-] [D-] [A-] [P-] [R-] [L-] [W-] [C-]

www.google.com [F-] [S-] [D-] [A-] [P-] [R-] [L-] [W-] [C-]

nbtstat -a :

NBTSTAT [ [-a Remote Name] [-A IP address] [-c]

[-h] [-r] [-R] [-RR] [-s] [-S] [interval]

[-t] [remote machine name]

Remote Name [remote host machine name]

IP address Dotted decimal representation

of the IP address.

Interval Redisplays selected statistics, pausing  
interval seconds between each display.

Pathping :

usage : pathping [-g host-list] [-h maximum-

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

num-queries] [-w timeout] [-4] [-6] target-

name

## Ping :

Usage : ping [-t] [-a] [-h count] [-l size] [-f]  
[-i TTL] [-v TOS] [-r count] [-s count]  
[[-j host-list] | [-K host-list]] [-W timeout]  
[-R] [-S Srcaddr] [-c compartment]  
[-P] [-4] [-6] target-name.

## Route :

Route [-f] [-P] [-4|-6] command [destination]  
[Mask netmask] [gateway] [Metric metric]  
[if interface]

## ip a :

lo <loopback, up, lower-up> mtu 65536 qdisc

noqueue state:未知 group default qlen 1000

link/loopback 00:00:00:00:00:00 brd  
00:00:00:00:00:00

## ifconfig :

enp2s0 : flags = 4163 < UP, BROADCAST, RUNNING,  
MULTICAST > mtu 1500  
inet 172.16.8.92 netmask 255.255.252.0 broadcast  
172.16.11.255.  
inet6 fe80::bc77:296:90e0:38c3 prefixlen 64  
scope id 0x20 < link >  
ether 50:9a:4c:35:0c:f5 txqueuelen 1000 (Ethernet)

## mtr :

Host	loss%	snt	last	Pings			stddev
				Packets	Avg.	best	
1. 172.16.8.1	0.0%	910	0.2	0.2	0.1	0.4	0.0
2. 142.250.172.162	0.0%	110	7.4	16.8	2.6	107.5	19.9

## Ping :

ping google.com.

Ping google.com (142.250.182.14) 56(84) bytes of data.

64 bytes from maa05s18-in-f14.le100.net

(142.250.182.14) : icmp\_seq=1 ttl=120 time=3.51 ms

64 bytes from maa05s18-in-f14.le100.net

(142.250.182.14) : icmp\_seq=2 ttl=120 time=3.33 ms

observation:

- 1) which command is used to find the reachability of a host machine from your device?

ping < hostname or IP address >

- 2) which command will be given the details of hops taken by a packet to reach its destination?

traceroute < destination >

- 3) which commands display the ip configuration of your machine.

ipconfig

- 4) which command display the TCP port status in your machine?

netstat -an

- 5) write the modify the ip configuration in a linux machine.

addr add < interface-name >

Result :

Thus the study of various network commands used in linux & windows was done successfully.