13/7/2024. PRACTICAL-1

AIM: Study of various network commands used in linux and windows.

BASIC NETWORKING COMMANDS:

IN WINDOWS.

(1) arap -a

output: Interface: 192.168.186.237 --- 0x10

Internet Address	Physical Address	
192.168.186.40	22-5a-46-c9-4f-64	dynamic
192.168.186.255	ff-ff-ff-ff-ff-ff	static

(2) hostname

harshniP

(3) ipconfig /all

Host Name . . . . . : harshniP

Primary Dns Suffix :

Node Type : Hybrid.

IP routing Enabled : : No

WINS Proxy Enabled : No.

(4) nbtstat -a

NBTSTAT [[-a RemoteName] [-A IP address] [-c] [-n] [-r] [-R] [-RR] [-s] [-S] [interval]].

(5) netstat

Active Connections.

Proto	Local Address	foriegn address	State
TCP	192.168.186.287.49721	20.198.119.143	Established
TCP	192.168.186.237.60517	20.198.119.143	Established
TCP	192.168.186.237.60521	237:4070	Established

(6) nslookup www.google.com

Default Server: Unknown.

Address : 192.168.186.40

Non-authoritative answer:

Name: Google.

Address: 2404:6800:4007:81d::

2004.142.250.196.68

(7) Pathping

[-g host-list] [-h maximum hops]

[-i address] [-n] [-p period] [-q num-queries]

[-w timeout] [-4] [-6] target-name.

(8) ping www.facebook.com

[157.240.16.35] with 32 byte of data:

reply from 157.240.16.35: byte = 32 time1111ms TTL=54

reply from 157.240.16.35 byte=32 time 50ms TTL=54

(9) route:

ROUTE [-f] [-p] [-4|-6] command [destination]

[MASK netmask] [gateway] [METRIC metric]

[IF interface]

IN LINUX.

1) ip : ip [OPTIONS] OBJECT {COMMAND | help}

ip [-force] -batch filename.

OBJECT := {link | address | addrlabel | route | rule | neigh | ntable}.

OPTIONS := {-v[ersion] | -s[tatistics] | -d[etails] | -r[esolve] | -h[uman-readable]}.

2) ifconfig :

enp2s0 : flags = 4163<UP, BROADCAST, RUNNING, MULTICAST> mtu 1500

inet 172.16.11.183 netmask 255.255.255.0

broadcast 172.16.11.255 inet6 fe80::d3b2:e539:e1ab:4b68 prefixlen 64 scopeid 0x20<link>

3) mtr google.com

	Host	Packets	Pings
1.	172.16.8.1	0.0% 78 0.9	0.2 0.1 0.9 0.0
2.	142.250.171.162	0.0% 78 2.5	3.7 2.4 61.2 6.3
3.	142.251.227.215	0.0% 78 3.7	2.4 1.9 9.9 1.0
4.	142.250.228.81	0.0% 78 7.1	3.8 21.8 21.2 9

4) tcpdump -D

1. enp2s0 [Up, Running]
2. any (Pseudo-device that captures on all interfaces) [Up, Running]
3. lo [Up, Running, Loopback]
4. wlp3s0
5. bluetooth0 (Bluetooth adapter number 0).

(5) ping

ping [-aAbBdDfhLnOqrRUvV64] [-c count] [-i interval] [-I interface] [-m mark] [-M pmtudisc option] [-l preload] [-p pattern] [-Q tos] [-s packetsize] [-S sndbuf] [-t ttl] [-T timestamp option] [-w deadline] [-w timeout] [hop1 ...] destination.

Configuration and Ethernet:

(1) Listing Network manager.

NAME New 802-3-ethernet-connection 48e

(2) > nmcli connection add con-name <connection name> o/p : connedion added.

(3) > nmcli connection modify (rename.

> nmcli connection modify "kang" connection id "king"

> connection id/name changed.

(4) nmcli connection delete king

o/p : connection king deleted.

Student Observation.

(1) Which command is used to find the host
→ ping to find readability

(2) Which command will be given the details of taken by a packet.
mtr < web address.

(3) Which commands display the ip config of your machine
ip address show to show ipconfig.

(4) Which command displays the TCP.
netstat.

(5) Write the modify the ip config in a linux.
ifconfig.

RESULT: Thus the study of various network commands used in linux & windows was successfully completed.

24/2/24