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Study of various Network commands used in Linux and windows

Aim :

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Basic Networking commands

1. arp -a :

ARP is short form of address resolution protocol. It will show the IP address of your computer along with IP address and MAC address of your router.

OUTPUT:

Interface : 192.168.29.99...0x9

Internet address	Physical address	Type
192.168.29.1	04-ab-08-2a-f3-61	dynamic
192.168.29.255	ff-ff-ff-ff-ff-ff	static
244.0.0.22	01-00-5e-00-00-b	static
244.0.0.251	01-00-5e-00-00-f6	static

2. hostname : This is the simplest of all TCP/IP commands. It simply displays the name of your computer

OUTPUT:

KSO3-74

3. ipconfig /all : This command displays detailed configuration information

about your TCP/IP connection.

OUTPUT:

Windows IP configuration

Host name

Primary DNS suffix

Node Type mixed

IP routing Enabled No

WINS Proxy Enabled No

4. nbtstat -a:

This command helps solve problem with NetBIOS name resolution. CNbt stands for NetBIOS over TCP/IP.

OUTPUT:

NBTSTAT [-a Remote Name] [-A IP address] [-c] [-n] [-r] [-R] [-s] [-S] [interval]

-a (adapter status) Lists the remote machine's name table given its name

-A (Adapter status) Lists the remote machine's name table given its IP address

-c (cache) Lists NBT's cache of remote machine names and their IP addresses.

5. netstat : (network statistics) netstat displays a variety of statistics about a computer's active TCP/IP connections. It is a command line tool for monitoring network connections both incoming and outgoing as well as viewing routing tables, interface statistics etc.

OUTPUT:

Proto	Local Address	Foreign Address	State
TCP	127.0.0.1:49672	KS03-69:49673	Established
TCP	127.0.0.1:49673	KS03-69:49672	Established
TCP	127.16.75.69:7180	KS03-108:61310	TIME_WAIT

6. nslookup : (name server lookup) is a tool used to perform DNS lookups in Linux. It is used to display DNS details, such as the IP address of a particular computer, the MX records for a domain or the NS servers of a domain. nslookup can operate in two modes: interactive and non-interactive.

OUTPUT:

Default server: Unknown

Address : 172.16.72.11

7. pathping : pathping is unique to windows and is basically a combination of the ping and the tracet commands. pathping traces the route to the destination address then

launched a 25 second test of each route along the way, gathering statistics on the rate of data loss along each hop.

OUTPUT:

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

8. Ping: (Packet Internet Groper) command is the best way to test connectivity between two nodes. Ping uses ICMP (Internet Control Message protocol) to communicate to other devices.

OUTPUT:

ping [-t] [-a] [-n count] [-l size] [-f]
[-i TTL] [-v TOS] [-r count] [-s count]
[[-j host-list] | [x-host-list]] [-w timeout]
[-R] [-s srcaddr] [-c compartment] [-p]
[-4] [-6] target-name

9. Route: Route command is used to show -I manipulate the IP routing table. It is primarily used to setup static routes to specific host or network via an

interface.

OUTPUT:

ROUTEE [-6] [-P] [-4/6] command [destination]
[m ASK netmask] [gateway] [METRIC metric]
[IP interface]

Interface list

								Intel (R)
19..20	88	10	87	9e	ad	00	56	Microsoft wifi
8..4e	82	a9	78	00			55	Microsoft wifi
7..42	82	a9	78	00				

Verifying

SN
W#