

R.V. COLLEGE OF ENGINEERING

OBSERVATION / DATA SHEET

Date 04/02/21 Name Ajgresh kumar

Dept./Lab MCA/03 Class 1 sem Expt./No. 08

Title _____

① ifconfig:

- It is used at boot time to set up interfaces as necessary
- It is usually only need when debugging or when system is needed
- It display the status of all given interface.

① ifconfig -a :- display all interfaces which are currently available.

O/P:-

enp0s3:

inet addr: 10.0.2.15 mask: 255.255.255.0

lo: inet addr: 127.0.0.1 mask: 255.0.0.0

① ifconfig -S :- display a short list

O/P:-

iface	MTU	Met	Rx-OK	Rx-ERR	Rx-DRP	Rx-OVR	Tx-OK	Tx-ERR
enp0s3	1500		0	709	0	0 0	828	0
MRU				68	0	0 0	68	0
lo	65536		0					
RU								
			Tx-DRP		Tx-OVR	flag		
			0		0	B		
			0		0	L		

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①① ifconfig -v :- Be more verbose for some error condition

O/P:- enp0s3

inet addr: 10.0.2.15 Bcast: 10.0.2.255

mask: 255.255.255.0

lo:-

inet addr: 127.0.0.1 Mask: 255.0.0.0

② netstat :- print network connections, routing, table, interface, statistics and multicast memberships.

→ By default netstat display a list of open sockets.

O/P:-

Active Internet connections (w/o servers)

proto	Recv-Q	Send-Q	local address	foreign address	state
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Active UNIX domain sockets (w/o servers)

proto	RefCnt	flags	Type	state	I-Node	path
unix-3	3	[]	DRGRAM		12399	/run/systemd/notify
unix-2	2	[]	DRGRAM		18547	/run/user/1000/systemd/notify

③ netstat -i :- Display a table of all network interface

O/P:-

kernel Interface table:

iface	MTU	MTX	RX-OK	RX-ERR	RX-DRP	RX-OVR
enp0s3	1500	0	1033	0	0	0

lo

65536

Tx-OK	Tx-ERR	Tx-DRP	Tx-OVR	Flg
1174	0	0	0	BMRU
68	0	0	0	LRU

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Date 04/02/21 Name Suresh Kumar

Dept./Lab MCA/03 Class 1sem Expt./No. 08

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⑪ netstat -g :- Display multicast group membership information for IPv4 and IPv6

O/P:-
IPv6 / IPv4 group memberships

Interface	RefCnt	group
lo	1	all-system.mcast.net
enp0s3	1	all-system.mcast.net
lo	1	ip6-allnodes
lo	1	ff01::1
enp0s3	1	ff02::1: ffoa:2597
enp0s3	1	ip6-allnodes
enp0s3	1	ff01::1

⑫ netstat -a :- show both listening and non-listening socket. with the -- interfaces option, show interfaces that are not up.

O/P:-
Active Internet connections (servers and established)

proto	Recv-Q	Send-Q	local address	foreign address	state
tcp	0	0	mca1-virtual Boardmain	* : *	listen
udp	0	0	* : 54550	* : *	

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* nslookup :- This command is used to find the IP address of a domain.

① nslookup amazon.com

O/P:-

Server : 127.0.1.1

Address : 127.0.1.1#53

Name : amazon.com

Address : 176.32.103.205

② nslookup google.com

Server : 127.0.1.1

Address : 127.0.1.1#53

Name : google.com

Address : 142.250.182.238

* tracert google.com :- This command is used to find the route taken by packets.

O/P:-

1	10.0.2.2 (10.0.2.2)	0.622 ms	0.472 ms	0.812 ms
2	192.168.0.1 (192.168.0.1)	20.660 ms	20.600 ms	20.299 ms
3	172.18.0.1 (172.18.0.1)	20.215 ms	19.678	19.582 ms
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9	108.170.248.209 (108.170.248.209)	19.905 ms	23.511 ms	23.462 ms

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Date 04/02/21 Name Surgen Kumar
Dept./Lab MCA/03 Class 1 Sem Expt./No. 08
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* ping 172.16.34.32 : It uses the ICMP protocols. mandatory ECHO-REQUEST to exist an ICMP ECHO-RESPONSE from a host or gateway.

O/P:-
from 192.160.56.1 : icmp_seq=1 ttl=64 time=0.086ms

* ping -i 1 172.16.34.32 :- It waits intervals seconds
1(one) means time between sending each packet interval
(not to be less than 0.25)

O/P:-
64 bytes from 172.16.34.32 icmp_seq=1 ttl=64
time=0.086

* ping -c 2 172.16.34.32 :- To stop after sending
count ECHO-REQUEST packets.

O/P:- -- 172.16.34.32 ping statistics --

2 packets transmitted, 2 received 0% loss time 0.00ms
rtt/min/avg/max/mdev = 0.043/0.061/0.079/0.018 ms

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