

INDEX

Name G.Vigneshwaran.....

Class CSE - D

SI No.	Date	Particulars	Marks	Signature of Teacher /Remarks
1	14/7/25	Study of various Network commands used in Linux and Windows	10	V 10 2/10 (7)
2	24/7/25	Study of different types of network cable	10	M 10 3/10 (2)
3	24/7/25	Study of packet tracer installation and user interface overview	10	?
4	28.8.25	Setup & configure ALAL	10	M 10 6
5	14/8/25	Hamming code	10	
6	14/9/25	Sliding Windows	10	
7	11/9/25	NMAP to discover	10	
8	18/9/25	Implementation of subnet using cisco	10	
9	11/9/25	Internetworking with routers	10	
10	22/9/25	Simulate RIR routing	10	
11	25/9/25	Client - Server using TCP	10	
12	29/9/25	Ping Program	10	
13	6/10/25	Packet switching using RAN	10	
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				
76				
77				
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				
101				
102				
103				
104				
105				
106				
107				
108				
109				
110				
111				
112				
113				
114				
115				
116				
117				
118				
119				
120				
121				
122				
123				
124				
125				
126				
127				
128				
129				
130				
131				
132				
133				
134				
135				
136				
137				
138				
139				
140				
141				
142				
143				
144				
145				
146				
147				
148				
149				
150				
151				
152				
153				
154				
155				
156				
157				
158				
159				
160				
161				
162				
163				
164				
165				
166				
167				
168				
169				
170				
171				
172				
173				
174				
175				
176				
177				
178				
179				
180				
181				
182				
183				
184				
185				
186				
187				
188				
189				
190				
191				
192				
193				
194				
195				
196				
197				
198				
199				
200				
201				
202				
203				
204				
205				
206				
207				
208				
209				
210				
211				
212				
213				
214				
215				
216				
217				
218				
219				
220				
221				
222				
223				
224				
225				
226				
227				
228				
229				
230				
231				
232				
233				
234				
235				
236				
237				
238				
239				
240				
241				
242				
243				
244				
245				
246				
247				
248				
249				
250				
251				
252				
253				
254				
255				
256				
257				
258				
259				
260				
261				
262				
263				
264				
265				
266				
267				
268				
269				
270				
271				
272				
273				
274				
275				
276				
277				
278				
279				
280				
281				
282				
283				
284				
285				
286				
287				
288				
289				
290				
291				
292				
293				
294				
295				
296				
297				
298				
299				
300				
301				
302				
303				
304				
305				
306				
307				
308				
309				
310				
311				
312				
313				
314				
315				
316				
317				
318				
319				
320				
321				
322				
323				
324				
325				
326				
327				
328				
329				
330				
331				
332				
333				
334				
335				
336				
337				
338				
339				
340				
341				
342				
343				
344				
345				
346				
347				
348				
349				
350				
351				
352				
353				
354				
355				
356				
357				
358				
359				
360				
361				
362				
363				
364				
365				
366				
367				
368				
369				
370				
371				
372				
373				
374				
375				
376				
377				
378				
379				

14/7/21

Practical - 1

AIM:- Study of various networks' commands used in Linux and Windows.

Basic Networking commands

1) arp - a - shows the IP and MAC addresses of devices on your network

O/P: Interface : 172.16.75.78 -- 0x5

172.16.72.1 7C-5A-1C-CF-BC - 41 dynamic

244.0.0.2 ff - ff - ff - ff - ff - ff

239.192.152.143 01-00-5C-40-9B-BF static

2) hostname - Displays name of your system

O/P: k. so3 - 78

3) ipconfig / all = Displays detailed TCP/IP configuration

O/P: Windows IP config

Hostname : k. so3 - 78

Node type : hybrid

ethernet adapter

Media state: disconnected

4) nbstat -d - displays NetBIOS name resolution statistics, useful for diagnosing name resolution output

NETBIOS Remote machine Name table

Name	Type	SAM Status	Network Address	Registration
KSL03	C003	Established	200.128.31.10.55	1.88.0.1.55

5) netstat shows network statistics such as active connections, routing tables and interface info

Active Internet connections (w/o servers)

Proto Recv-Q Send-Q Local Address Foreign Address State

tcp 0 0 Localhost:22 *.* LISTEN

,) nslookup - Resolves domain names to IP address

Server: Unknown

Address: 192.168.1.1.)

Non-authoritative answer.

Name: google.com

Address: 142.250.72.238

7) Pathping (~~without com~~)

Combines ping and traceroute to one in AB: qn. 1

Pathping is unique to windows and is basically a combination of ping & tracert commands.

Pathping Eg host-list] [-h maximum hops]

[-s address] [-a] [-p period] [-q num-queries]

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

8) Ping: command is the best way to test connectivity between two nodes.

Pinging google.com [142.250.77.46] with 32 bytes of data

from [192.168.1.10] to [142.250.77.46] (0 bytes left)

1) Route: Displays or modifies the kernel IP routing table

route Point

Active Routes

Network Destination Network Mask Gateway Interface Metric

192.168.1.0 255.255.0 on-link 192.168.1.5 281

Linux commands:

1. ip : It is one of the basic commands every administrator will need in daily work.

a) ip address show

172.16.8.1.254

b) ip address add 10.2.16.8.1.254/24 dev ens0

c) ip address del 10.2.16.8.1.254/24 dev ens0

d) ip link set eth0 up

2) ifconfig: It is a stable tool for configuring and troubleshooting networks. It has been

eth0: flags = 4163 <up, broadcast, running, multicast, mtu 1500

inet 192.168.1.5 netmask 255.255.255.0 broadcast 192.168.1.255

broadcast 192.168.1.255

inet 21.111.81.125 netmask 255.255.255.0 broadcast 21.111.81.255

0.0.0.0 0.0.0.0

3) neth : set up a program with a user interface that serves as a netma and sniffer tool.

a) neth google.com

Host : myhost.6.ca Loss %, snt, Last Avg Best Worst

1. 1 - 192.168.1.1 0.0% 10 0.8 ~0.7~0.5 1.0~0.2

b) neth -> google.com

Host Loss %, snt Last Avg Best Worst stdv

gateway.home 0.0% 10 0.7 0.8 0.6 1.2 0.2

c) tcptrace

12:17:03 -> 192.34.56.1 P 192.168.1.10. 55432 > 1425.77

Flags [s] seq 123456789 others

d) Ping : a tool that verifies IP-level connectivity to another TCP/IP computer

Ping google.com

64 bytes from 80.02.027 - in (216.58.208.774)

icmp - seq=1 ttl = 52 time = 10.7 ms

Lu connection show

NAME

TYPE DEVICE

wired connection & sobel 490-020 ethernet on si 30
-3668

2) nmcli connection add con-name if same type
connection estaller.

3) nmcli connection modify "wired connection"
nmcli for rename

4) nmcli connection show
1) P v 4. method : auto
1) P v 6. method : auto

5) nmcli connection modify "Wired connection"
1) P v 4. method auto

6) nmcli connection modify "Wired connection"
1) P v 6. method auto

7) nmcli connection up without -Lan

(-IPT-205-82-015) nm -r s & so for work network id

2) IPT-01 = net 12 = Mh 1 = ipo2 - qm1

Student observation

- 1) which command is used to find the reachability of a host machine from your device.
=> ping <hostname or IP> ping google.com
- 2) which command will be give the details how taken by a packet to reach its destination
=> tracert <hostname>
tracert google.com
- 3) which command displays the IP configuration of your machine?
on Linux : ip address show
on windows : ipconfig / all
- 4) which command displays the TCP port status?
netstat
netstat -n
- 5) write the command to modify the IP configuration in a Linux machine
+ To add : ip address add 192.168.1.254/24 dev ens3
+ To del : ip address del 192.168.1.254/24 dev ens3

Result

Therefore the above Linum and Winchell commands are enacted successfully.

~~reets with respect winchell men~~
~~and old men in town~~
~~Dr. [unclear]~~ ~~supervision > new~~
~~new~~

upon publication with wife of New Hampshire State
interviews to follow on Tuesday next and make

Canton > state =

new slope state

descriptions of all inspectors Governor's office

vertical numbers of mine no

also pictures of certain no

photographs of all inspectors Governor's office

listation

listation

Newspaper will publish all documents of state with

list of names of workers used in all

Office Vets 214275-1801 for numbers 91 : lots of
214275-1801 for numbers 91 : lots of

214275-1801 for numbers 91 : lots of