

G. PULLA REDDY ENGINEERING COLLEGE (AUTONOMOUS): KURNOOL
COMPUTER SCIENCE AND ENGINEERING DEPARTMENT
B.TECH – V SEMESTER
DATA COMMUNICATION AND COMPUTER NETWORKS LABORATORY

TITLE: NETWORK COMMANDS

GPREC-D/CS/EXPT-DCCN-01

AIM: Study of basic network command and Network configuration commands.

1.ipconfig

C:\Users\PGLAB-002>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

Connection-specific DNS Suffix . :
Link-local IPv6 Address : fe80::bc0f:8c15:9c15:75c5%3
IPv4 Address. : 192.168.6.31
Subnet Mask : 255.255.255.0
Default Gateway : 192.168.6.1

Tunnel adapter isatap.{866D805A-7C52-4A1A-9893-07EF6BF42621}:

Media State Media disconnected
Connection-specific DNS Suffix . :

2.ipconfig/all

C:\Users\PGLAB-002>ipconfig/all

Windows IP Configuration

Host Name : PGLAB-31
Primary Dns Suffix :
Node Type Hybrid
IP Routing Enabled. No
WINS Proxy Enabled. No

Ethernet adapter Ethernet:

Connection-specific DNS Suffix . :
Description Broadcom NetLink (TM) Gigabit Ethernet

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page 1 of 46
Revision No.:0

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Physical Address.....B8-AC-6F-37-0A-18
DHCP Enabled.No
Autoconfiguration Enabled.....Yes
Link-local IPv6 Address : fe80::bc0f:8c15:9c15:75c5%3(Preferred)
IPv4 Address. : 192.168.6.31(Preferred)
Subnet Mask : 255.255.255.0
Default Gateway..... : 192.168.6.1
DHCPv6 IAID 62434415
DHCPv6 Client DUID. : 00-01-00-01-2A-41-BA-08-B8-AC-6F-37-0A-18

DNS Servers : 192.168.6.1
NetBIOS over Tcpi. Enabled

Tunnel adapter isatap.{866D805A-7C52-4A1A-9893-07EF6BF42621}:

Media State Media disconnected
Connection-specific DNS Suffix . :
DescriptionMicrosoft ISATAP Adapter
Physical Address. : 00-00-00-00-00 00 00-E0
DHCP Enabled.No
Autoconfiguration Enabled.....Yes

3. ping

C:\Users\PGLAB-002>ping google.com

Pinging google.com [142.250.183.142] with 32 bytes of data:
Reply from 142.250.183.142: bytes=32 time=41ms TTL=59
Reply from 142.250.183.142: bytes=32 time=41ms TTL=59
Reply from 142.250.183.142: bytes=32 time=41ms TTL=59
Reply from 142.250.183.142: bytes=32 time=41ms TTL=59

Ping statistics for 142.250.183.142:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 41ms, Maximum = 41ms, Average = 41ms

C:\Users\PGLAB-002>nslookup www.gmail.com
Server: UnKnown
Address: 192.168.6.1

Non-authoritative answer:
Name: www.gmail.com
Addresses: 2404:6800:4009:810::2005

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page 2 of 46
Revision No.:0

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142.250.199.133

4. tracert

C:\Users\PGLAB-002>tracert www.gmail.com

Tracing route to www.gmail.com [142.250.182.229]
over a maximum of 30 hops:

```
 1  <1 ms  <1 ms  <1 ms 192.168.6.1
 2  37 ms  37 ms  37 ms bom07s29-in-f5.1e100.net [142.250.182.229]
```

Trace complete.

5. hostname

C:\Users\PGLAB-002>hostname
PGLAB-31

6. systeminfo

C:\Users\PGLAB-002>systeminfo

Host Name: PGLAB-31
OS Name: Microsoft Windows 8.1 Pro
OS Version: 6.3.9600 N/A Build 9600
OS Manufacturer: Microsoft Corporation
OS Configuration: Standalone Workstation
OS Build Type: Multiprocessor Free
Registered Owner: PGLAB-002
Registered Organization:
Product ID: 00260-00000-00001-AA576
Original Install Date: 18-06-2022, 11:35:11
System Boot Time: 04-08-2022, 10:36:33
System Manufacturer: Dell Inc.
System Model: OptiPlex 380
System Type: x64-based PC
Processor(s): 1 Processor(s) Installed.
[01] : Intel64 Family 6 Model 23 Stepping 10 GenuineIn
tel ~2933 Mhz
BIOS Version: Dell Inc. A07, 13-06-2012
Windows Directory: C:\Windows
System Directory: C:\Windows\system32
Boot Device: \Device\HarddiskVolume1

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page 3 of 46
Revision No.:0

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System Locale: 4009
Input Locale: 00004009
Time Zone: (UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi
Total Physical Memory: 5,020 MB
Available Physical Memory: 2,880 MB
Virtual Memory: Max Size: 5,852 MB
Virtual Memory: Available: 3,658 MB
Virtual Memory: In Use: 2,194 MB
Page File Location(s): C:\pagefile.sys
Domain: WORKGROUP
Logon Server: \\PGLAB-31
Hotfix(s): 179 Hotfix(s) Installed.
[01]: KB2899189_Microsoft-Windows-CameraCodec-Package
Network Card(s): 1 NIC(s) Installed.
[01]: Broadcom NetLink (TM) Gigabit Ethernet
Connection Name: Ethernet
DHCP Enabled: No
IP address(es)
[01]: 192.168.6.31
[02]: fe80::bc0f:8c15:9c15:75c5
Hyper-V Requirements: VM Monitor Mode Extensions: Yes
Virtualization Enabled In Firmware: Yes
Second Level Address Translation: No
Data Execution Prevention Available: Yes

7. pathping

C:\Users\PGLAB-002>pathping gmail.com

Tracing route to gmail.com [142.250.195.37]
over a maximum of 30 hops:
0 PGLAB-31 [192.168.6.31]
1 192.168.6.1
2 maa03s37-in-f5.1e100.net [142.250.195.37]

Computing statistics for 50 seconds...

Source to Here This Node/Link

Hop	RTT	Lost/Sent = Pct	Lost/Sent = Pct	Address
0				PGLAB-31 [192.168.6.31]
		0/ 100 = 0%		
1	0ms	0/ 100 = 0%	0/ 100 = 0%	192.168.6.1
		1/ 100 = 1%		
2	16ms	1/ 100 = 1%	0/ 100 = 0%	maa03s37-in-f5.1e100.net [142.250.195.37]

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page 4 of 46
Revision No.:0

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Trace complete.

8. netstat

C:\Users\PGLAB-002>netstat

Active Connections

Proto	Local Address	Foreign Address	State
TCP	192.168.6.31:53026	ec2-35-163-171-85:https	ESTABLISHED

9. arp

C:\Users\PGLAB-002>arp -a

Interface: 192.168.6.31 --- 0x3

Internet Address	Physical Address	Type
192.168.6.1	2c-c8-1b-69-97-12	dynamic
192.168.6.255	ff-ff-ff-ff-ff-ff	static
224.0.0.22	01-00-5e-00-00-16	static
224.0.0.251	01-00-5e-00-00-fb	static
224.0.0.252	01-00-5e-00-00-fc	static
239.255.255.250	01-00-5e-7f-ff-fa	static

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page 5 of 46
Revision No.:0