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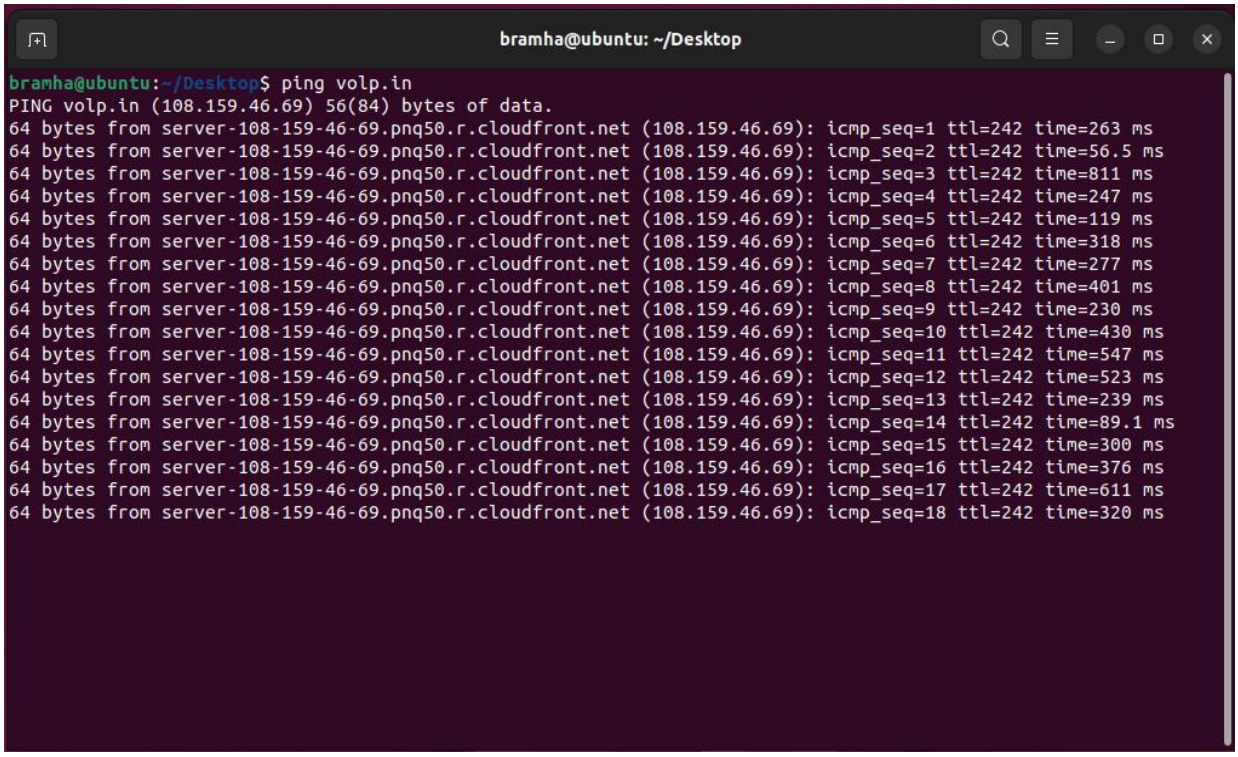
Roll no – 7

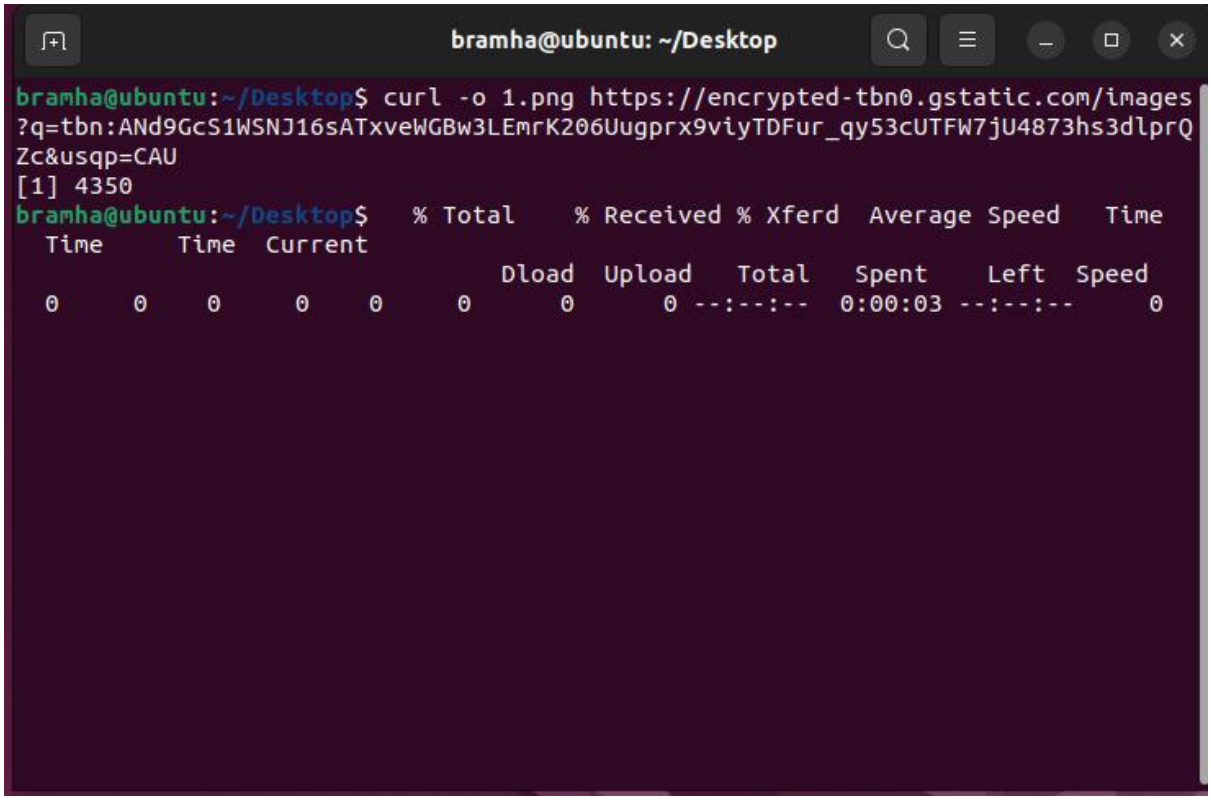
SRN – 202100381

ASSIGNMENT 2

Ping -PING (Packet Internet Groper) command is used to check the network connectivity between host and server/host. This command takes as input the IP address or the URL and sends a data packet to the specified address with the message “PING” and get a response from the server/host this time is recorded which is called latency.

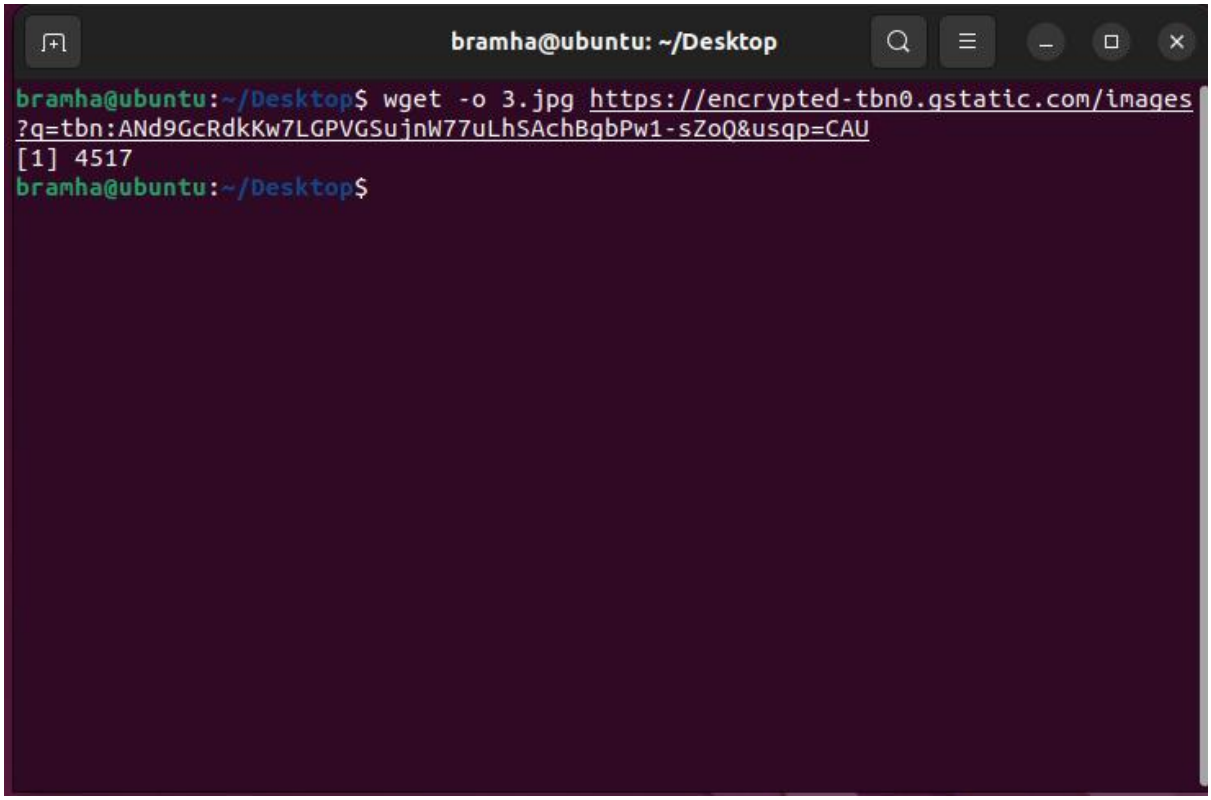


Curl - Curl is a command-line tool to transfer data to or from a server, using any of the supported protocols (HTTP, FTP, IMAP, POP3, SCP, SFTP, SMTP, TFTP, TELNET, LDAP, or FILE). *curl* is powered by Libcurl. This tool is preferred for automation since it is designed to work without user interaction. curl can transfer multiple files at once.

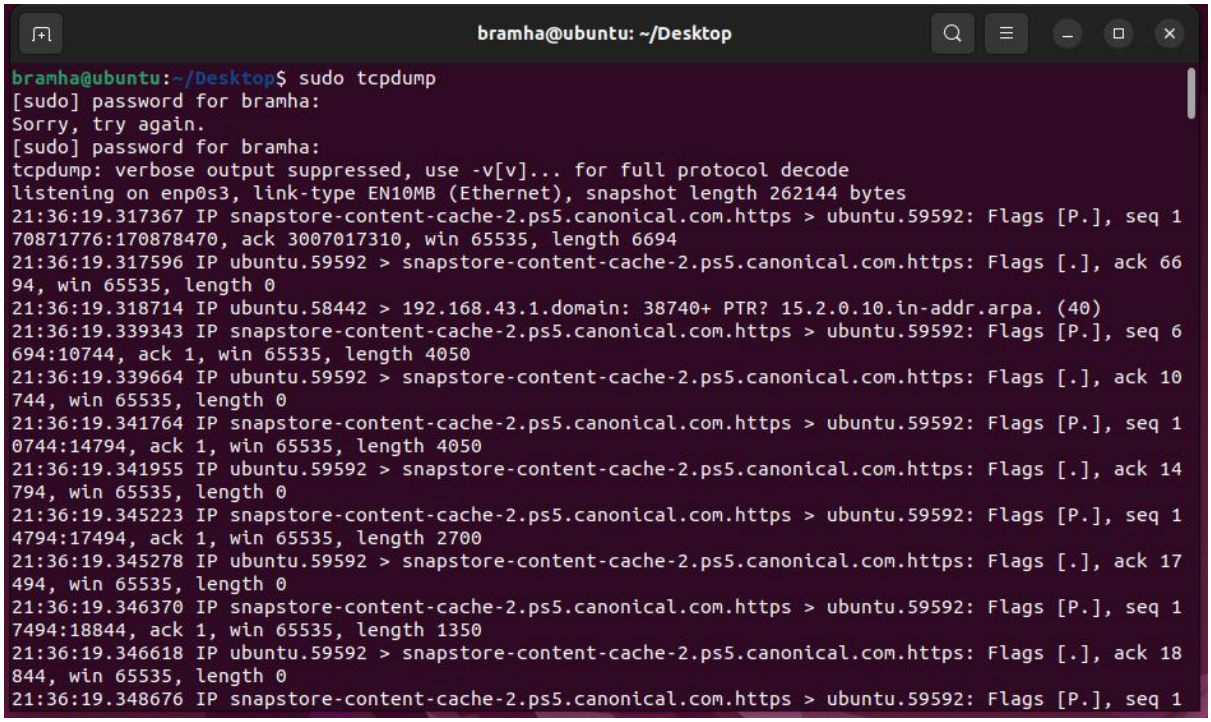


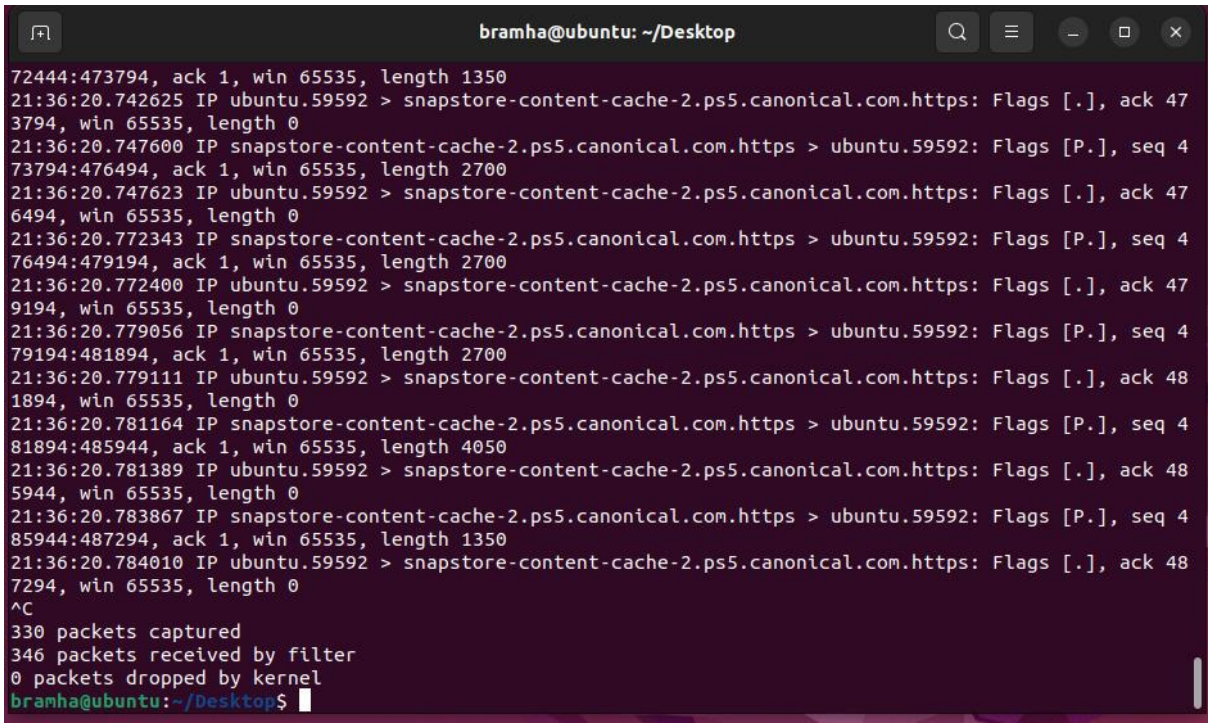
Wget - Wget is the non-interactive network downloader which is used to download files from the server even when the user has not logged on to the system and it can work in the background without hindering the current process.

wget is a free utility for non-interactive download of files from the Web. It supports HTTP, HTTPS, and FTP protocols, as well as retrieval through HTTP proxies.

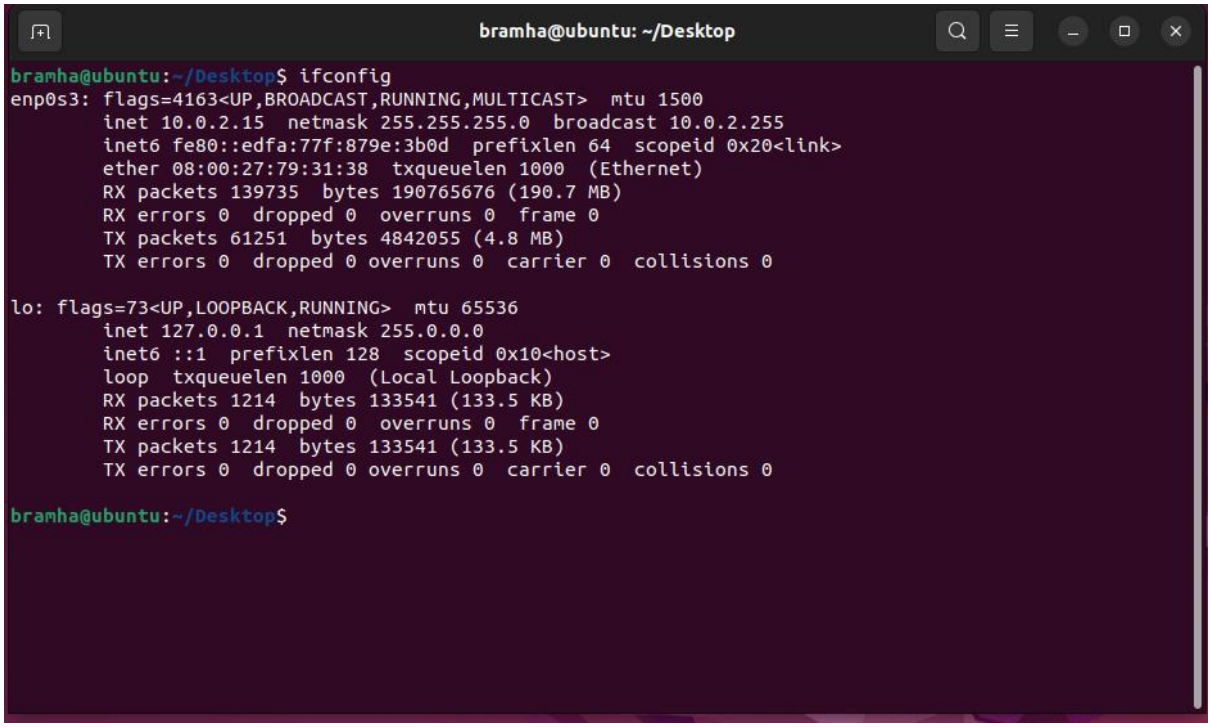


tcpdump - **tcpdump** is a packet sniffing and packet analyzing tool for a System Administrator to troubleshoot connectivity issues in Linux. It is used to capture, filter, and analyze network traffic such as TCP/IP packets going through your system. It is many times used as a security tool as well.

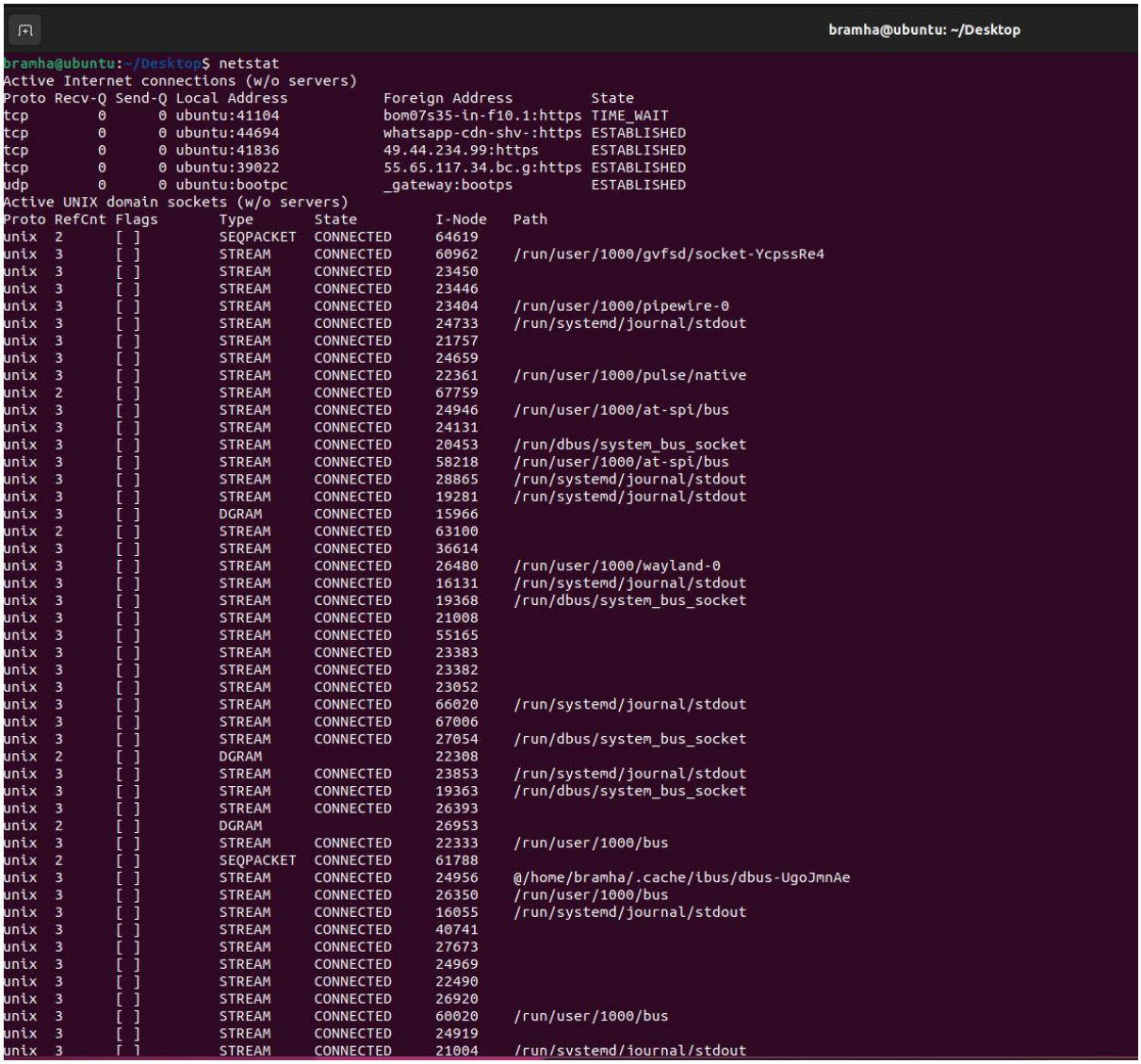

bramha@ubuntu: ~/Desktop
bramha@ubuntu:~/Desktop$ sudo tcpdump
[sudo] password for bramha:
Sorry, try again.
[sudo] password for bramha:
tcpdump: verbose output suppressed, use -v[v]... for full protocol decode
listening on enp0s3, link-type EN10MB (Ethernet), snapshot length 262144 bytes
21:36:19.317367 IP snapstore-content-cache-2.ps5.canonical.com.https > ubuntu.59592: Flags [P.], seq 1
70871776:170878470, ack 3007017310, win 65535, length 6694
21:36:19.317596 IP ubuntu.59592 > snapstore-content-cache-2.ps5.canonical.com.https: Flags [.], ack 66
94, win 65535, length 0
21:36:19.318714 IP ubuntu.58442 > 192.168.43.1.domain: 38740+ PTR? 15.2.0.10.in-addr.arpa. (40)
21:36:19.339343 IP snapstore-content-cache-2.ps5.canonical.com.https > ubuntu.59592: Flags [P.], seq 6
694:10744, ack 1, win 65535, length 4050
21:36:19.339664 IP ubuntu.59592 > snapstore-content-cache-2.ps5.canonical.com.https: Flags [.], ack 10
744, win 65535, length 0
21:36:19.341764 IP snapstore-content-cache-2.ps5.canonical.com.https > ubuntu.59592: Flags [P.], seq 1
0744:14794, ack 1, win 65535, length 4050
21:36:19.341955 IP ubuntu.59592 > snapstore-content-cache-2.ps5.canonical.com.https: Flags [.], ack 14
794, win 65535, length 0
21:36:19.345223 IP snapstore-content-cache-2.ps5.canonical.com.https > ubuntu.59592: Flags [P.], seq 1
4794:17494, ack 1, win 65535, length 2700
21:36:19.345278 IP ubuntu.59592 > snapstore-content-cache-2.ps5.canonical.com.https: Flags [.], ack 17
494, win 65535, length 0
21:36:19.346370 IP snapstore-content-cache-2.ps5.canonical.com.https > ubuntu.59592: Flags [P.], seq 1
7494:18844, ack 1, win 65535, length 1350
21:36:19.346618 IP ubuntu.59592 > snapstore-content-cache-2.ps5.canonical.com.https: Flags [.], ack 18
844, win 65535, length 0
21:36:19.348676 IP snapstore-content-cache-2.ps5.canonical.com.https > ubuntu.59592: Flags [P.], seq 1


bramha@ubuntu: ~/Desktop
72444:473794, ack 1, win 65535, length 1350
21:36:20.742625 IP ubuntu.59592 > snapstore-content-cache-2.ps5.canonical.com.https: Flags [.], ack 47
3794, win 65535, length 0
21:36:20.747600 IP snapstore-content-cache-2.ps5.canonical.com.https > ubuntu.59592: Flags [P.], seq 4
73794:476494, ack 1, win 65535, length 2700
21:36:20.747623 IP ubuntu.59592 > snapstore-content-cache-2.ps5.canonical.com.https: Flags [.], ack 47
6494, win 65535, length 0
21:36:20.772343 IP snapstore-content-cache-2.ps5.canonical.com.https > ubuntu.59592: Flags [P.], seq 4
76494:479194, ack 1, win 65535, length 2700
21:36:20.772400 IP ubuntu.59592 > snapstore-content-cache-2.ps5.canonical.com.https: Flags [.], ack 47
9194, win 65535, length 0
21:36:20.779056 IP snapstore-content-cache-2.ps5.canonical.com.https > ubuntu.59592: Flags [P.], seq 4
79194:481894, ack 1, win 65535, length 2700
21:36:20.779111 IP ubuntu.59592 > snapstore-content-cache-2.ps5.canonical.com.https: Flags [.], ack 48
1894, win 65535, length 0
21:36:20.781164 IP snapstore-content-cache-2.ps5.canonical.com.https > ubuntu.59592: Flags [P.], seq 4
81894:485944, ack 1, win 65535, length 4050
21:36:20.781389 IP ubuntu.59592 > snapstore-content-cache-2.ps5.canonical.com.https: Flags [.], ack 48
5944, win 65535, length 0
21:36:20.783867 IP snapstore-content-cache-2.ps5.canonical.com.https > ubuntu.59592: Flags [P.], seq 4
85944:487294, ack 1, win 65535, length 1350
21:36:20.784010 IP ubuntu.59592 > snapstore-content-cache-2.ps5.canonical.com.https: Flags [.], ack 48
7294, win 65535, length 0
^C
330 packets captured
346 packets received by filter
0 packets dropped by kernel
bramha@ubuntu:~/Desktop$

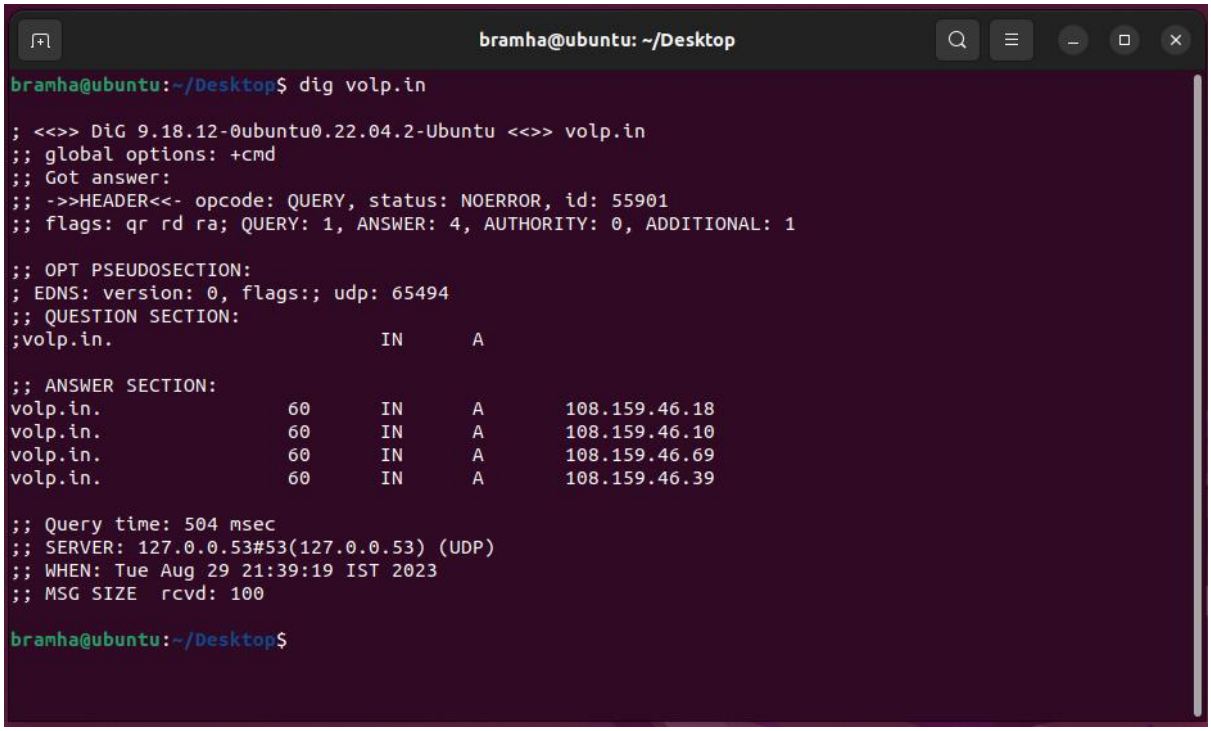
Ifconfig - **ifconfig**(interface configuration) command is used to configure the kernel-resident network interfaces. It is used at the boot time to set up the interfaces as necessary. After that, it is usually used when needed during debugging or when you need system tuning. Also, this command is used to assign the IP address and netmask to an interface or to enable or disable a given interface.



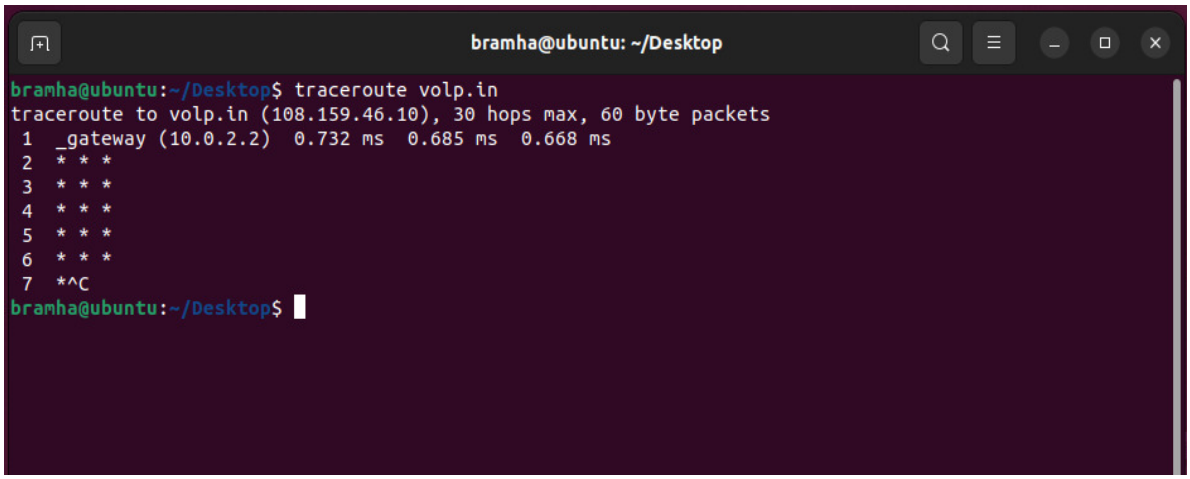
Netstat - Netstat command displays various network related information such as network connections, routing tables, interface statistics, masquerade connections, multicast memberships.



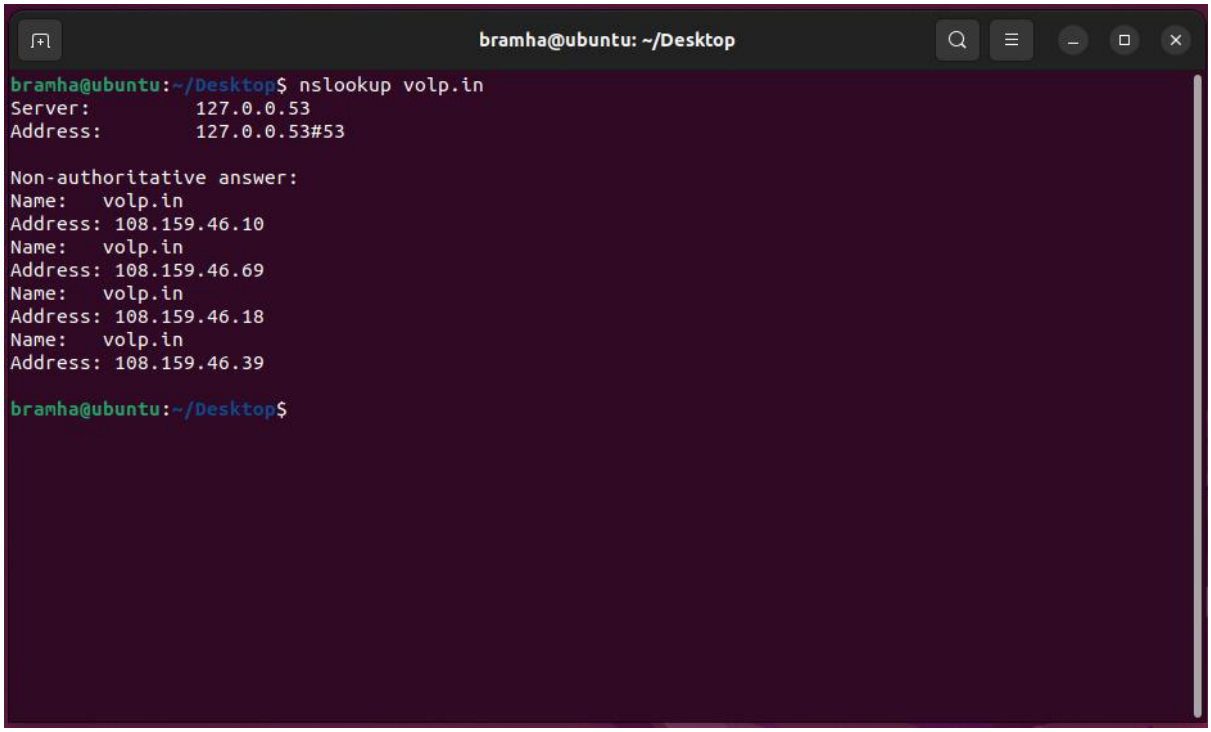
Dig - **dig** command stands for Domain Information Groper. It is used for retrieving information about DNS name servers. It is basically used by network administrators. It is used for verifying and troubleshooting DNS problems and to perform DNS lookups.



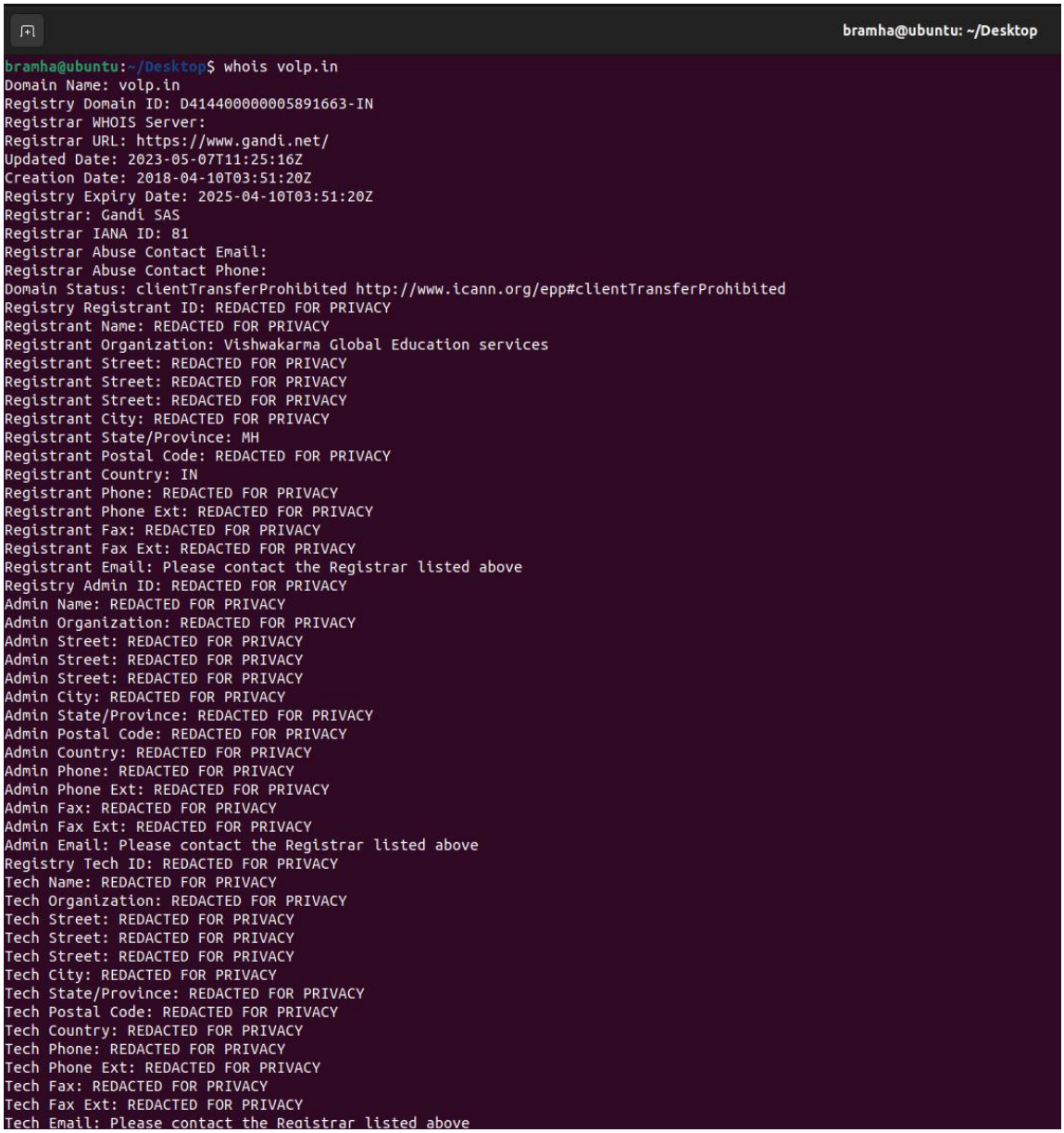
Traceroute - **traceroute** command in Linux prints the route that a packet takes to reach the host. This command is useful when you want to know about the route and about all the hops that a packet takes.



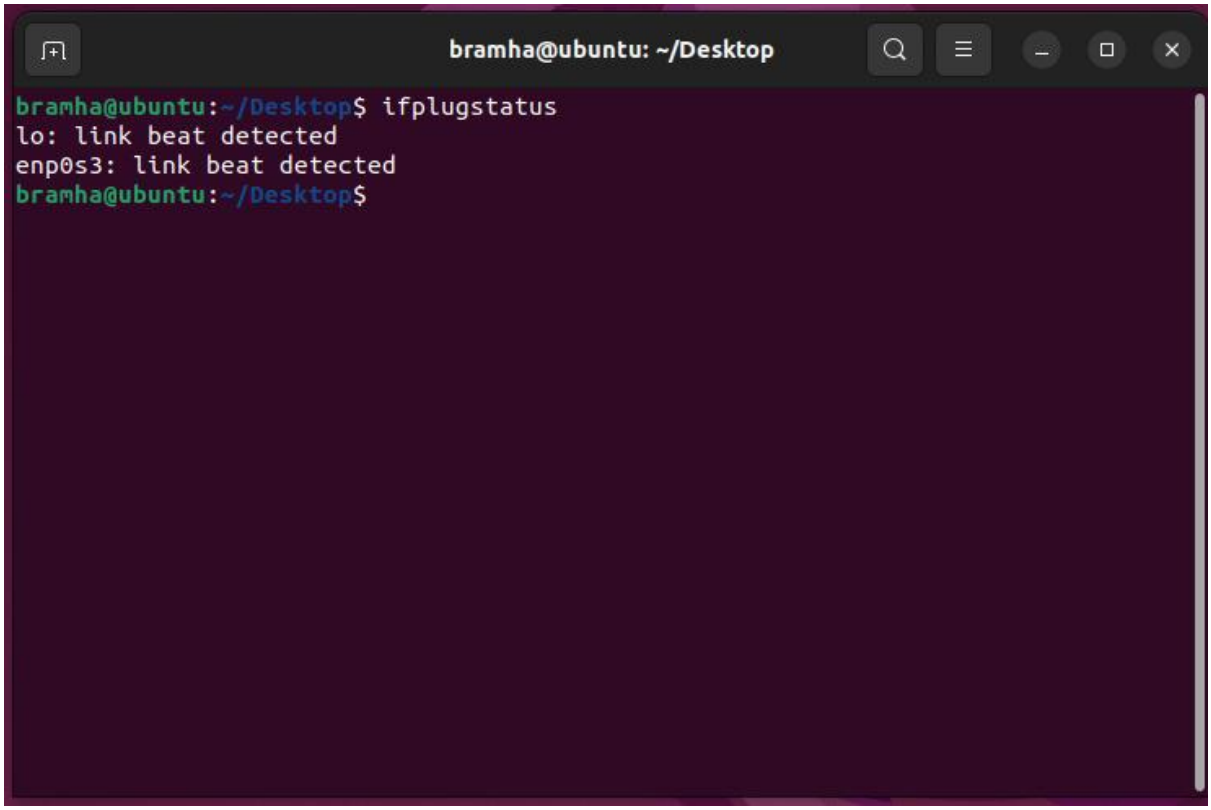
Nslookup - **Nslookup** (Name Server Lookup) is a useful command for getting information from the DNS server. It is a network administration tool for querying the Domain Name System (DNS) to obtain domain name or IP address mapping or any other specific DNS record. It is also used to troubleshoot DNS-related problems.



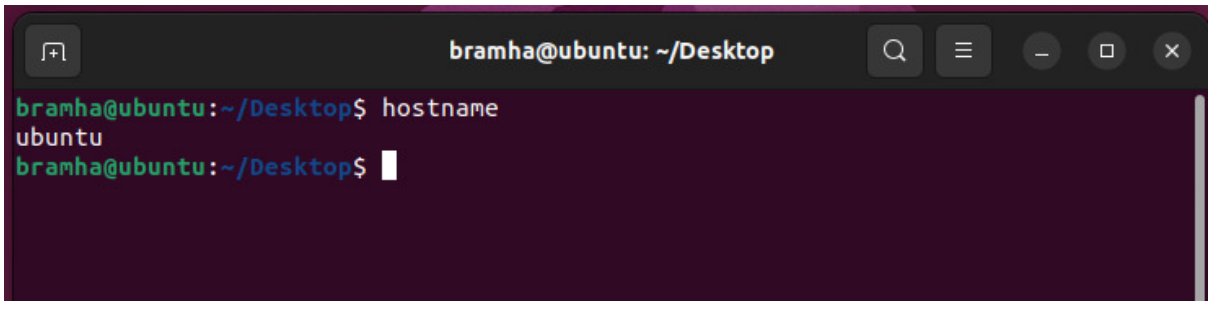
Whois - Whois is a command-line utility used in Linux systems to retrieve information about domain names, IP addresses, and network devices. The data received by Whois consists of the name and contact information of the domain or IP address owner, the registration and expiration date, the domain registrar, and the server information.



Ifplugstatus - This command tells us whether a cable is plugged into our network interface or not. In the screenshot below, **link beat detected** means it is plugged in. In our system, lo and wlan0 are plugged in while eth0 is unplugged.



Hostname - hostname command in Linux is used to obtain the DNS (Domain Name System) name and set the system's hostname or domain name. A hostname is a name given to a computer and attached to the network. Its main purpose is to uniquely identify over a network.



Host - Linux host command displays domain name for given IP address or vice-versa. It also performs DNS lookups related to the DNS query. The host command's default behavior displays a summary of its command-line arguments and supported options.