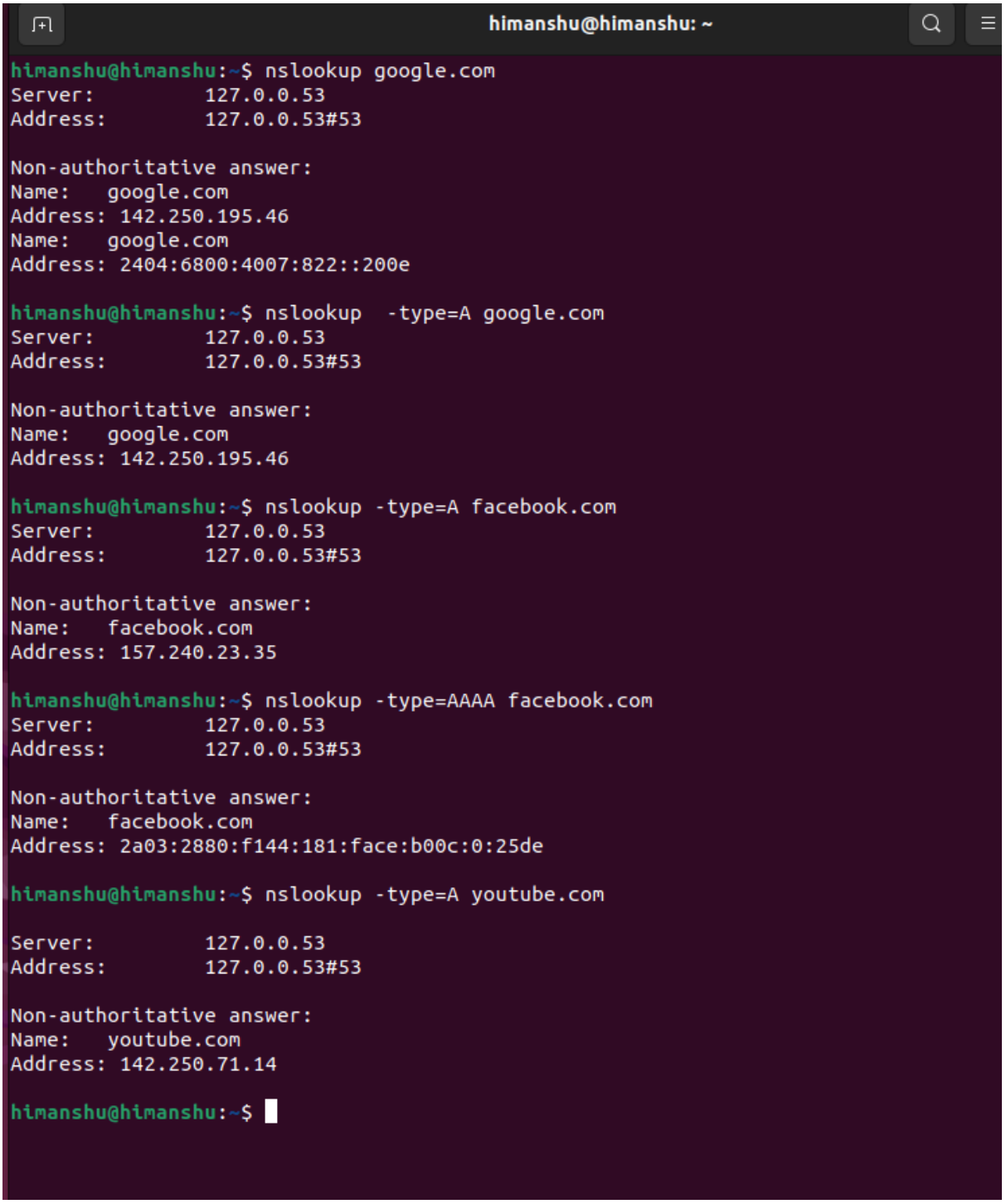
.NSLOOKUP (NAME SERVER LOOKUP) COMMAND

NSLOOKUP is a program to query internet domain name servers , NSLOOKUP has two modes ; interactive and non-interactive . Interactive mode allows the user to query name servers for information about various hosts and domains or to print a list of hosts in a domain . Non-interactive mode is used to print just the name and requested information for a host or domain .


himanshu@himanshu: ~
himanshu@himanshu:~$ nslookup google.com
Server: 127.0.0.53
Address: 127.0.0.53#53
Non-authoritative answer:
Name: google.com
Address: 142.250.195.46
Name: google.com
Address: 2404:6800:4007:822::200e
himanshu@himanshu:~$ nslookup -type=A google.com
Server: 127.0.0.53
Address: 127.0.0.53#53
Non-authoritative answer:
Name: google.com
Address: 142.250.195.46
himanshu@himanshu:~$ nslookup -type=A facebook.com
Server: 127.0.0.53
Address: 127.0.0.53#53
Non-authoritative answer:
Name: facebook.com
Address: 157.240.23.35
himanshu@himanshu:~$ nslookup -type=AAAA facebook.com
Server: 127.0.0.53
Address: 127.0.0.53#53
Non-authoritative answer:
Name: facebook.com
Address: 2a03:2880:f144:181:face:b00c:0:25de
himanshu@himanshu:~$ nslookup -type=A youtube.com
Server: 127.0.0.53
Address: 127.0.0.53#53
Non-authoritative answer:
Name: youtube.com
Address: 142.250.71.14
himanshu@himanshu:~$

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himanshu@himanshu:~$ nslookup -type=A youtube.com

Server:         127.0.0.53
Address:        127.0.0.53#53

Non-authoritative answer:
Name:   youtube.com
Address: 142.250.71.14

himanshu@himanshu:~$ nslookup -type=txt youtube.com

Server:         127.0.0.53
Address:        127.0.0.53#53

Non-authoritative answer:
youtube.com     text = "facebook-domain-verification=64jdes7le4h7e7lfpi22rijygx58j1"
youtube.com     text = "v=spf1 include:google.com mx -all"
youtube.com     text = "google-site-verification=QtQWEwHWM8tHiJ4s-jJWzEQrD_fF3luPnpzNDH-Nw-w"

Authoritative answers can be found from:

himanshu@himanshu:~$
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himanshu@himanshu: ~
himanshu@himanshu:~$ nslookup -type=txt facebook.com
Server:         127.0.0.53
Address:        127.0.0.53#53

Non-authoritative answer:
facebook.com    text = "ghfksmtc0x74q6g76g8nnw3psmx8zkwp"
facebook.com    text = "google-site-verification=wdH5DTJTc9AYNwVunSVFeK0hYDGUIEOGb-RReU6pJlY"
facebook.com    text = "v=spf1 redirect=_spf.facebook.com"
facebook.com    text = "google-site-verification=A2WZWCNQHrGV_TWwKh6KHY90tY0SHZo_RnyMJoDaG0s"
facebook.com    text = "google-site-verification=sK6uY9x7eaMoEMfn3OILqwTFYgaNp4llmguKI-C3_iA"

Authoritative answers can be found from:

himanshu@himanshu:~$ nslookup -type=txt google.com
;; Truncated, retrying in TCP mode.
Server:         127.0.0.53
Address:        127.0.0.53#53

Non-authoritative answer:
google.com      text = "google-site-verification=TV9-DBe4R80X4v0M4U_bd_J9cpOJM0nikft0jAgjmsQ"
google.com      text = "facebook-domain-verification=22rm551cu4k0ab0bxsw536tlds4h95"
google.com      text = "onetrust-domain-verification=de01ed21f2fa4d8781cbc3ffb89cf4ef"
google.com      text = "google-site-verification=wD8N7i1JTNTkezJ49swvWW48f8_9xveREV4oB-0Hf5o"
google.com      text = "v=spf1 include:_spf.google.com ~all"
google.com      text = "MS=E4A68B9AB2BB9670BCE15412F62916164C0B20BB"
google.com      text = "globalsign-smime-dv=CDYX+XFHUw2wml6/Gb8+59BsH31KzUr6c1l2BPvqKX8="
google.com      text = "webexdomainverification.8YX6G=6e6922db-e3e6-4a36-904e-a805c28087fa"
google.com      text = "apple-domain-verification=30afIBcvSuDV2PLX"
google.com      text = "docusign=1b0a6754-49b1-4db5-8540-d2c12664b289"
google.com      text = "atlassian-domain-verification=5YjTmWmjI92ewqkx2oXmBaD60Td9zWon9r6eakvHX6
B77zzkFQto8PQ9QsKnbf4I"
google.com      text = "docusign=05958488-4752-4ef2-95eb-aa7ba8a3bd0e"

Authoritative answers can be found from:

himanshu@himanshu:~$
```

```
himanshu@himanshu:~$ nslookup -type=txt google.com
;; Truncated, retrying in TCP mode.
Server:         127.0.0.53
Address:        127.0.0.53#53

Non-authoritative answer:
google.com      text = "google-site-verification=TV9-DBe4R80X4v0M4U_bd_J9cpOJM0nikft0jAgjmsQ"
google.com      text = "facebook-domain-verification=22rm551cu4k0ab0bxsw536tlds4h95"
google.com      text = "onetrust-domain-verification=de01ed21f2fa4d8781cbc3ffb89cf4ef"
google.com      text = "google-site-verification=wD8N7i1JTNTkezJ49swvWW48f8_9xveREV4oB-0Hf5o"
google.com      text = "v=spf1 include:_spf.google.com ~all"
google.com      text = "MS=E4A68B9AB2BB9670BCE15412F62916164C0B20BB"
google.com      text = "globalsign-smime-dv=CDYX+XFHUw2wml6/Gb8+59BsH31KzUr6c1l2BPvqKX8="
google.com      text = "webexdomainverification.8YX6G=6e6922db-e3e6-4a36-904e-a805c28087fa"
google.com      text = "apple-domain-verification=30afIBcvSuDV2PLX"
google.com      text = "docusign=1b0a6754-49b1-4db5-8540-d2c12664b289"
google.com      text = "atlassian-domain-verification=5YjTmWmjI92ewqkx2oXmBaD60Td9zWon9r6eakvHX6
B77zzkFQto8PQ9QsKnbf4I"
google.com      text = "docusign=05958488-4752-4ef2-95eb-aa7ba8a3bd0e"

Authoritative answers can be found from:

himanshu@himanshu:~$ nslookup -type=mx google.com
Server:         127.0.0.53
Address:        127.0.0.53#53

Non-authoritative answer:
google.com      mail exchanger = 10 smtp.google.com.

Authoritative answers can be found from:
smtp.google.com internet address = 142.251.10.26
smtp.google.com internet address = 142.251.10.27
smtp.google.com internet address = 142.251.12.27
smtp.google.com internet address = 142.251.12.26
smtp.google.com internet address = 172.217.194.27
smtp.google.com has AAAA address 2404:6800:4003:c0f::1b
smtp.google.com has AAAA address 2404:6800:4003:c0f::1a
smtp.google.com has AAAA address 2404:6800:4003:c11::1b
smtp.google.com has AAAA address 2404:6800:4003:c11::1a

himanshu@himanshu:~$
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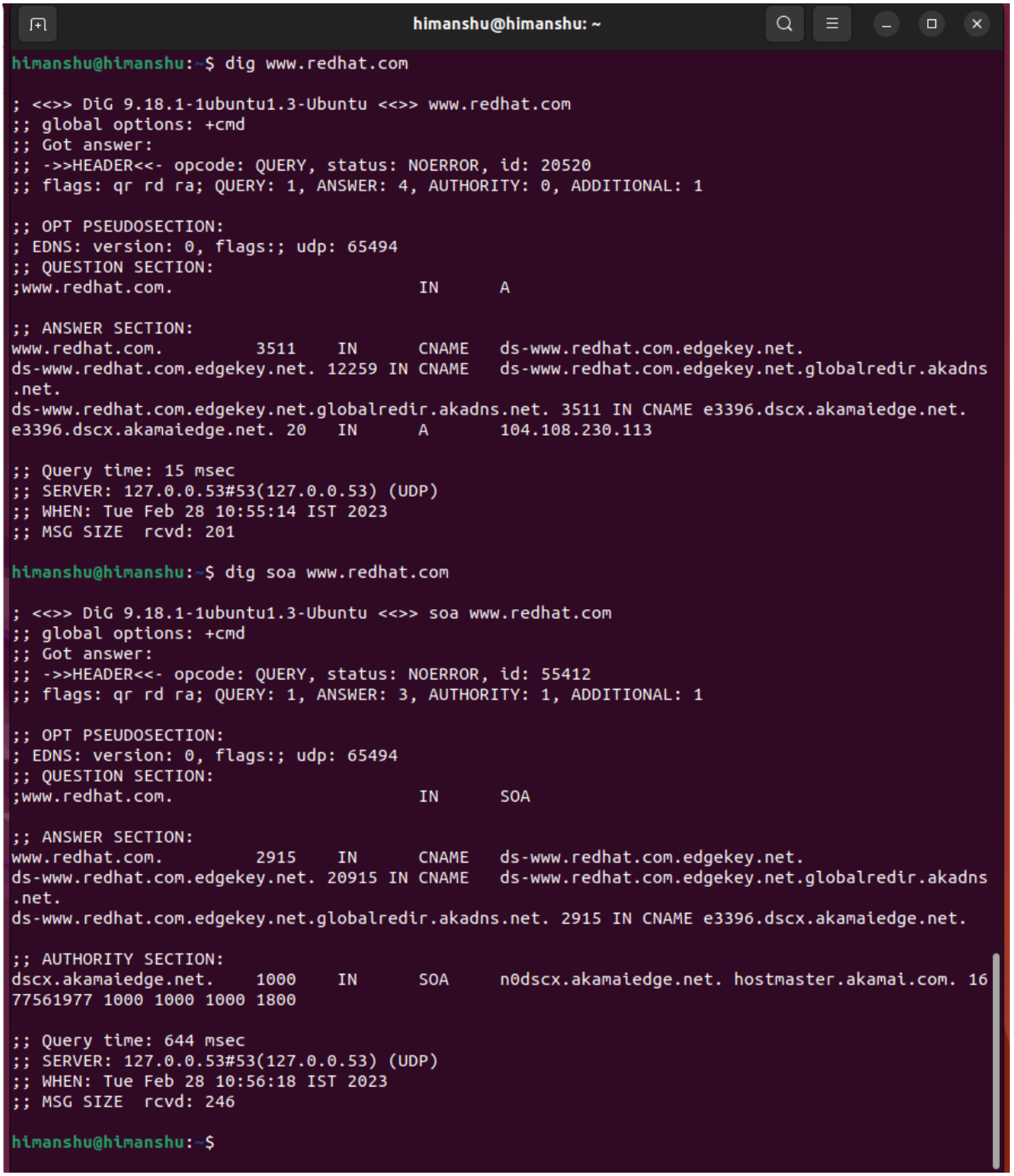
himanshu@himanshu: ~
himanshu@himanshu:~$ nslookup -type=A javatpoint.com
Server:         127.0.0.53
Address:        127.0.0.53#53

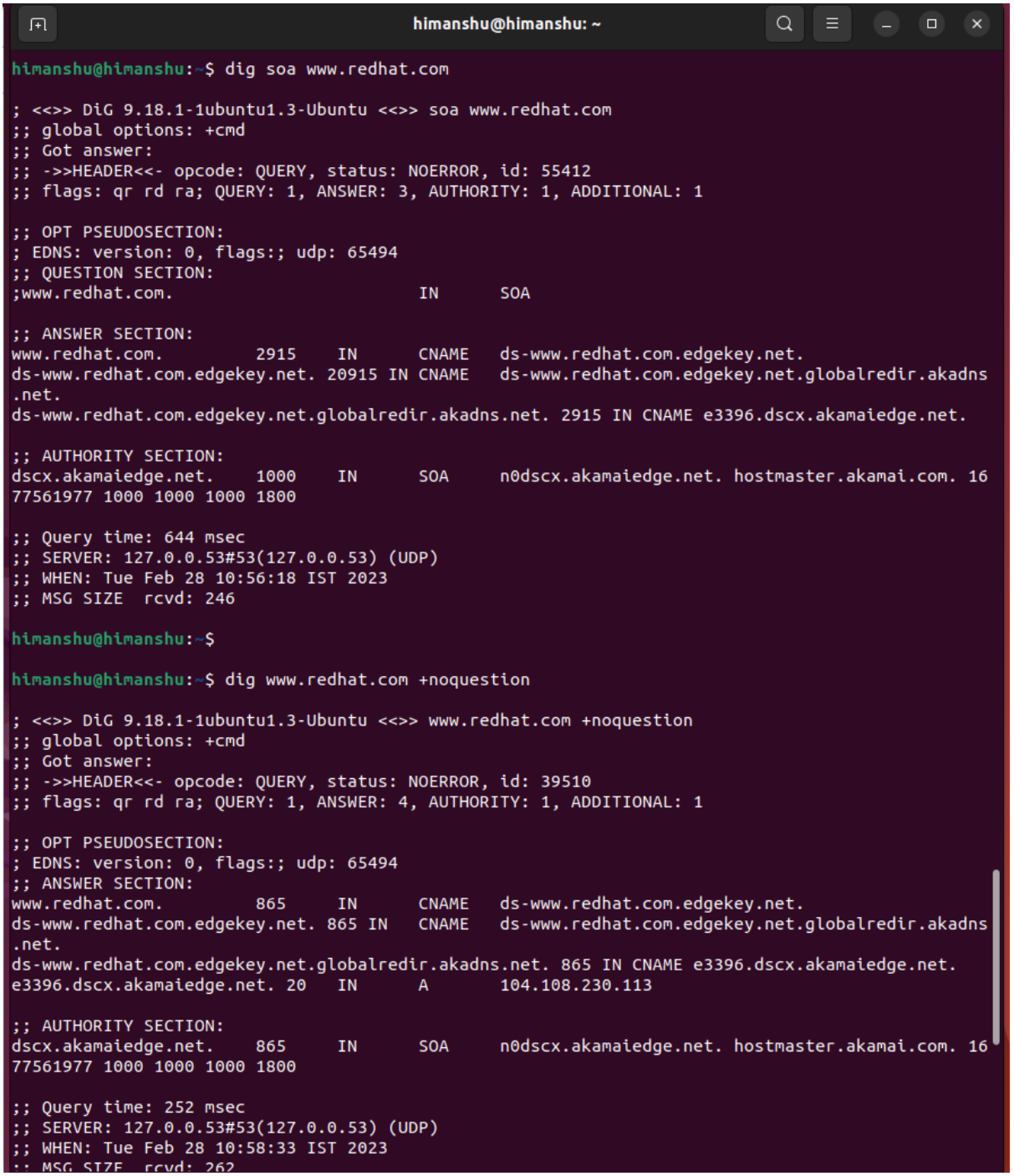
Non-authoritative answer:
Name:   javatpoint.com
Address: 104.21.23.133
Name:   javatpoint.com
Address: 172.67.211.76

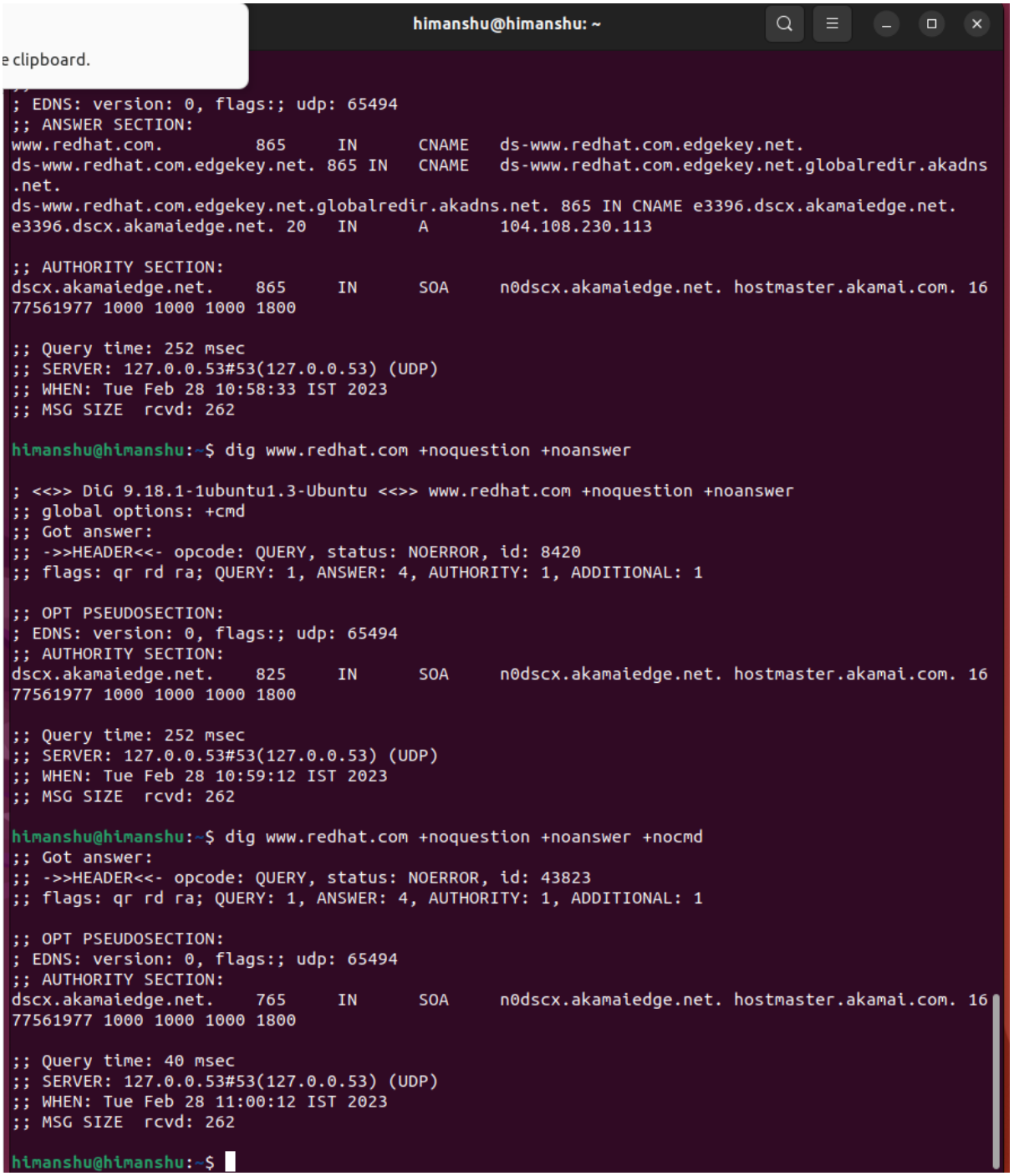
himanshu@himanshu:~$
```

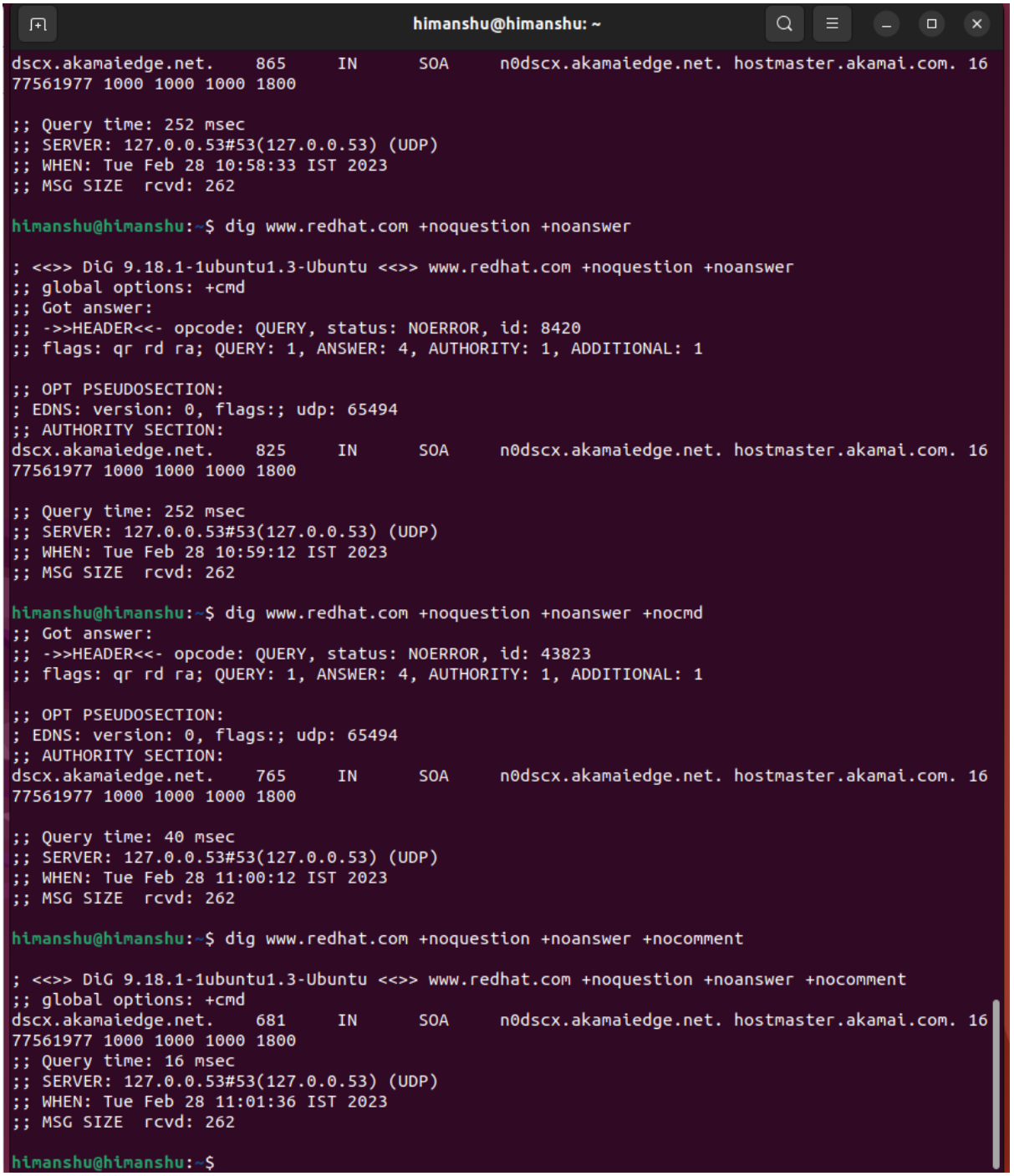
.DIG (DOMAIN INFORMATION GROPER) COMMAND

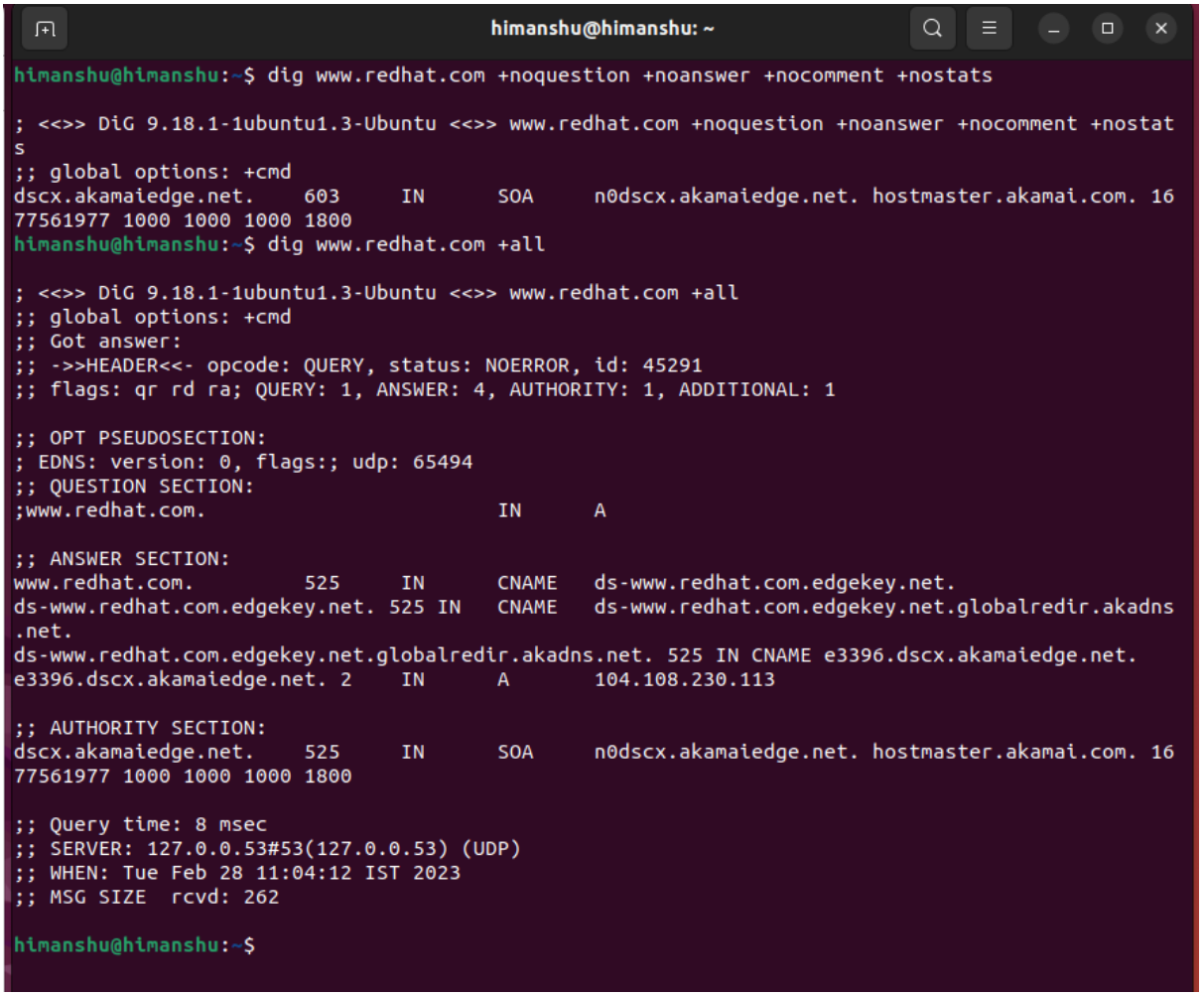
It is used for retrieving information about DNS name servers . It is basically used by network administrators , it is used for verifying and troubleshooting DNS problems and to perform DNS LOOKUPS .

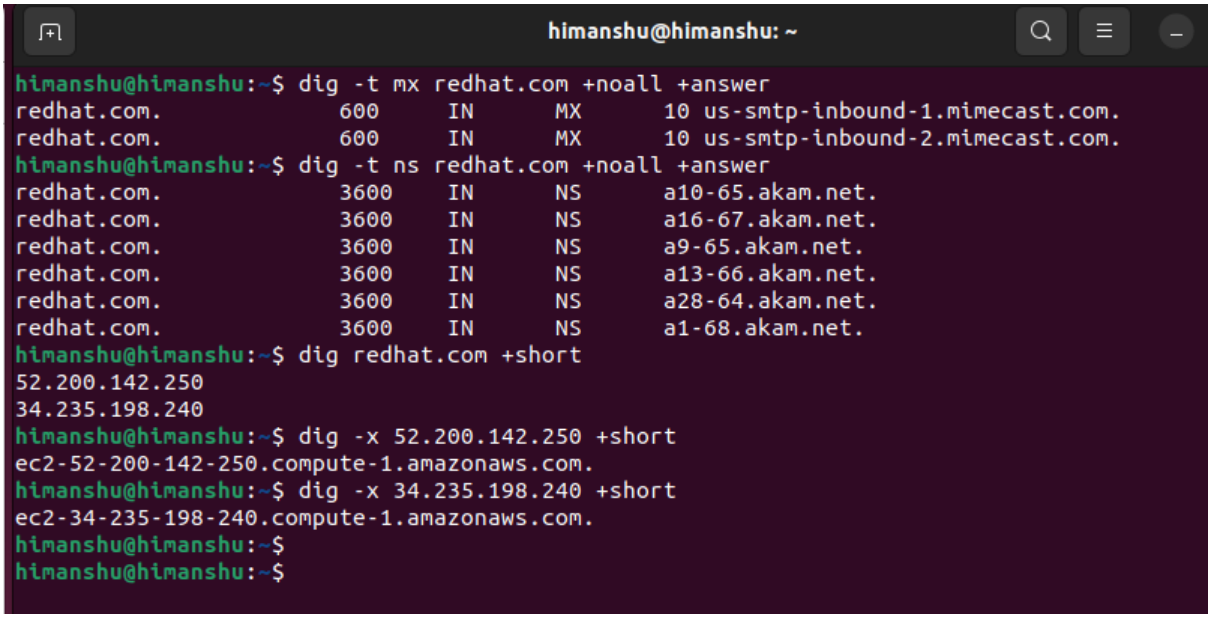

himanshu@himanshu: ~
himanshu@himanshu:~$ dig www.redhat.com
; <<>> DiG 9.18.1-1ubuntu1.3-Ubuntu <<>> www.redhat.com
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 20520
;; flags: qr rd ra; QUERY: 1, ANSWER: 4, AUTHORITY: 0, ADDITIONAL: 1
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;www.redhat.com. IN A
;; ANSWER SECTION:
www.redhat.com. 3511 IN CNAME ds-www.redhat.com.edgekey.net.
ds-www.redhat.com.edgekey.net. 12259 IN CNAME ds-www.redhat.com.edgekey.net.globalredir.akadns
.net.
ds-www.redhat.com.edgekey.net.globalredir.akadns.net. 3511 IN CNAME e3396.dscx.akamaiedge.net.
e3396.dscx.akamaiedge.net. 20 IN A 104.108.230.113
;; Query time: 15 msec
;; SERVER: 127.0.0.53#53(127.0.0.53) (UDP)
;; WHEN: Tue Feb 28 10:55:14 IST 2023
;; MSG SIZE rcvd: 201
himanshu@himanshu:~$ dig soa www.redhat.com
; <<>> DiG 9.18.1-1ubuntu1.3-Ubuntu <<>> soa www.redhat.com
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 55412
;; flags: qr rd ra; QUERY: 1, ANSWER: 3, AUTHORITY: 1, ADDITIONAL: 1
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;www.redhat.com. IN SOA
;; ANSWER SECTION:
www.redhat.com. 2915 IN CNAME ds-www.redhat.com.edgekey.net.
ds-www.redhat.com.edgekey.net. 20915 IN CNAME ds-www.redhat.com.edgekey.net.globalredir.akadns
.net.
ds-www.redhat.com.edgekey.net.globalredir.akadns.net. 2915 IN CNAME e3396.dscx.akamaiedge.net.
;; AUTHORITY SECTION:
dscx.akamaiedge.net. 1000 IN SOA n0dscx.akamaiedge.net. hostmaster.akamai.com. 16
77561977 1000 1000 1000 1800
;; Query time: 644 msec
;; SERVER: 127.0.0.53#53(127.0.0.53) (UDP)
;; WHEN: Tue Feb 28 10:56:18 IST 2023
;; MSG SIZE rcvd: 246
himanshu@himanshu:~$


himanshu@himanshu: ~
himanshu@himanshu:~$ dig soa www.redhat.com
; <<>> DiG 9.18.1-1ubuntu1.3-Ubuntu <<>> soa www.redhat.com
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 55412
;; flags: qr rd ra; QUERY: 1, ANSWER: 3, AUTHORITY: 1, ADDITIONAL: 1
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;www.redhat.com. IN SOA
;; ANSWER SECTION:
www.redhat.com. 2915 IN CNAME ds-www.redhat.com.edgekey.net.
ds-www.redhat.com.edgekey.net. 20915 IN CNAME ds-www.redhat.com.edgekey.net.globalredir.akadns.net.
ds-www.redhat.com.edgekey.net.globalredir.akadns.net. 2915 IN CNAME e3396.dscx.akamaiedge.net.
;; AUTHORITY SECTION:
dscx.akamaiedge.net. 1000 IN SOA n0dscx.akamaiedge.net. hostmaster.akamai.com. 1677561977 1000 1000 1000 1800
;; Query time: 644 msec
;; SERVER: 127.0.0.53#53(127.0.0.53) (UDP)
;; WHEN: Tue Feb 28 10:56:18 IST 2023
;; MSG SIZE rcvd: 246
himanshu@himanshu:~$
himanshu@himanshu:~$ dig www.redhat.com +noquestion
; <<>> DiG 9.18.1-1ubuntu1.3-Ubuntu <<>> www.redhat.com +noquestion
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 39510
;; flags: qr rd ra; QUERY: 1, ANSWER: 4, AUTHORITY: 1, ADDITIONAL: 1
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; ANSWER SECTION:
www.redhat.com. 865 IN CNAME ds-www.redhat.com.edgekey.net.
ds-www.redhat.com.edgekey.net. 865 IN CNAME ds-www.redhat.com.edgekey.net.globalredir.akadns.net.
ds-www.redhat.com.edgekey.net.globalredir.akadns.net. 865 IN CNAME e3396.dscx.akamaiedge.net.
e3396.dscx.akamaiedge.net. 20 IN A 104.108.230.113
;; AUTHORITY SECTION:
dscx.akamaiedge.net. 865 IN SOA n0dscx.akamaiedge.net. hostmaster.akamai.com. 1677561977 1000 1000 1000 1800
;; Query time: 252 msec
;; SERVER: 127.0.0.53#53(127.0.0.53) (UDP)
;; WHEN: Tue Feb 28 10:58:33 IST 2023


e clipboard.
himanshu@himanshu: ~
; EDNS: version: 0, flags:; udp: 65494
;; ANSWER SECTION:
www.redhat.com. 865 IN CNAME ds-www.redhat.com.edgekey.net.
ds-www.redhat.com.edgekey.net. 865 IN CNAME ds-www.redhat.com.edgekey.net.globalredir.akadns
.net.
ds-www.redhat.com.edgekey.net.globalredir.akadns.net. 865 IN CNAME e3396.dscx.akamaiedge.net.
e3396.dscx.akamaiedge.net. 20 IN A 104.108.230.113
;; AUTHORITY SECTION:
dscx.akamaiedge.net. 865 IN SOA n0dscx.akamaiedge.net. hostmaster.akamai.com. 16
77561977 1000 1000 1000 1800
;; Query time: 252 msec
;; SERVER: 127.0.0.53#53(127.0.0.53) (UDP)
;; WHEN: Tue Feb 28 10:58:33 IST 2023
;; MSG SIZE rcvd: 262
himanshu@himanshu:~$ dig www.redhat.com +noquestion +noanswer
; <<>> DiG 9.18.1-1ubuntu1.3-Ubuntu <<>> www.redhat.com +noquestion +noanswer
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 8420
;; flags: qr rd ra; QUERY: 1, ANSWER: 4, AUTHORITY: 1, ADDITIONAL: 1
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; AUTHORITY SECTION:
dscx.akamaiedge.net. 825 IN SOA n0dscx.akamaiedge.net. hostmaster.akamai.com. 16
77561977 1000 1000 1000 1800
;; Query time: 252 msec
;; SERVER: 127.0.0.53#53(127.0.0.53) (UDP)
;; WHEN: Tue Feb 28 10:59:12 IST 2023
;; MSG SIZE rcvd: 262
himanshu@himanshu:~$ dig www.redhat.com +noquestion +noanswer +nocmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 43823
;; flags: qr rd ra; QUERY: 1, ANSWER: 4, AUTHORITY: 1, ADDITIONAL: 1
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; AUTHORITY SECTION:
dscx.akamaiedge.net. 765 IN SOA n0dscx.akamaiedge.net. hostmaster.akamai.com. 16
77561977 1000 1000 1000 1800
;; Query time: 40 msec
;; SERVER: 127.0.0.53#53(127.0.0.53) (UDP)
;; WHEN: Tue Feb 28 11:00:12 IST 2023
;; MSG SIZE rcvd: 262
himanshu@himanshu:~$

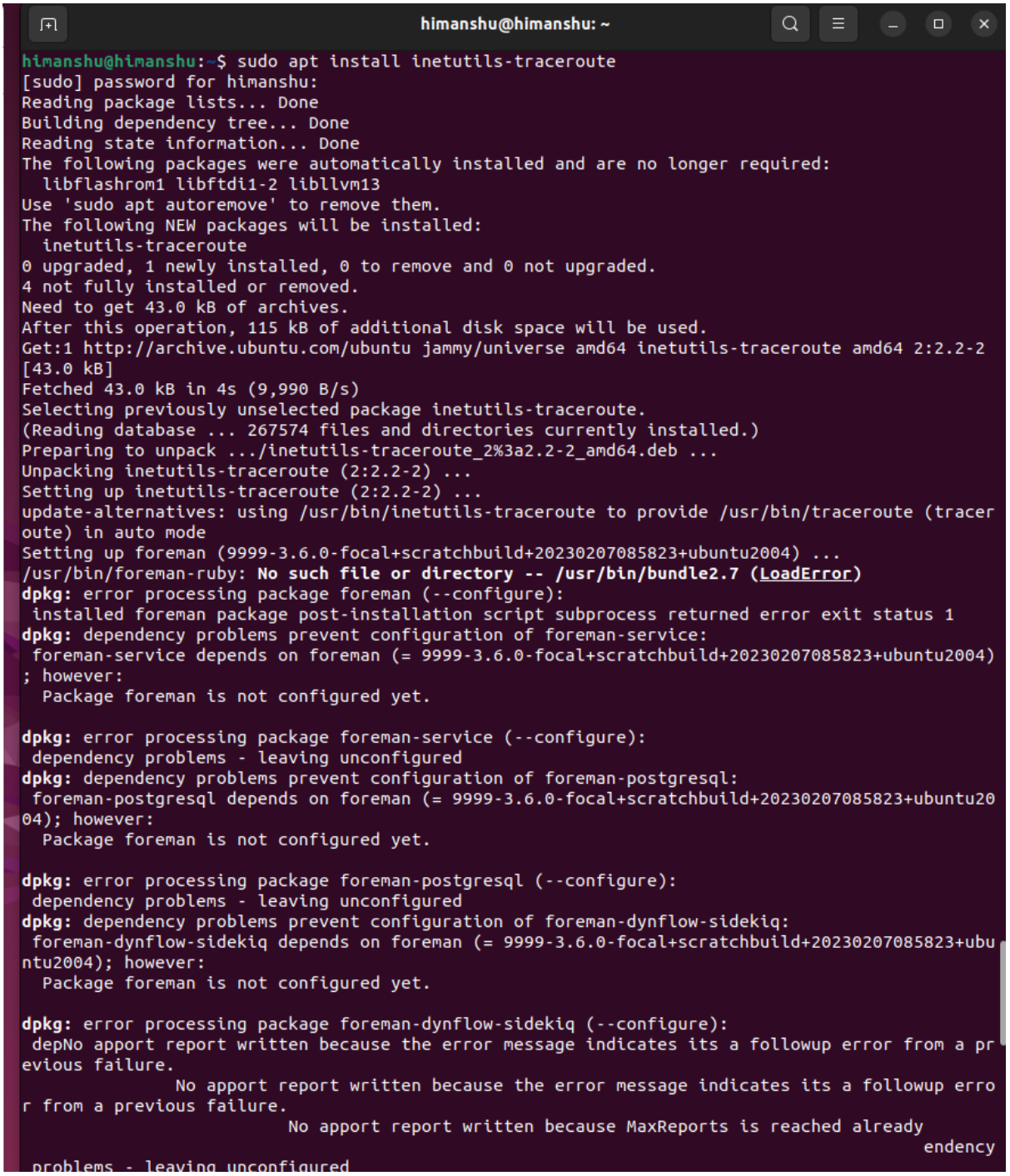

himanshu@himanshu: ~
dscx.akamaiedge.net. 865 IN SOA n0dscx.akamaiedge.net. hostmaster.akamai.com. 16
77561977 1000 1000 1000 1800
;; Query time: 252 msec
;; SERVER: 127.0.0.53#53(127.0.0.53) (UDP)
;; WHEN: Tue Feb 28 10:58:33 IST 2023
;; MSG SIZE rcvd: 262
himanshu@himanshu:~$ dig www.redhat.com +noquestion +noanswer
; <<>> DiG 9.18.1-1ubuntu1.3-Ubuntu <<>> www.redhat.com +noquestion +noanswer
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 8420
;; flags: qr rd ra; QUERY: 1, ANSWER: 4, AUTHORITY: 1, ADDITIONAL: 1
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; AUTHORITY SECTION:
dscx.akamaiedge.net. 825 IN SOA n0dscx.akamaiedge.net. hostmaster.akamai.com. 16
77561977 1000 1000 1000 1800
;; Query time: 252 msec
;; SERVER: 127.0.0.53#53(127.0.0.53) (UDP)
;; WHEN: Tue Feb 28 10:59:12 IST 2023
;; MSG SIZE rcvd: 262
himanshu@himanshu:~$ dig www.redhat.com +noquestion +noanswer +nocmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 43823
;; flags: qr rd ra; QUERY: 1, ANSWER: 4, AUTHORITY: 1, ADDITIONAL: 1
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; AUTHORITY SECTION:
dscx.akamaiedge.net. 765 IN SOA n0dscx.akamaiedge.net. hostmaster.akamai.com. 16
77561977 1000 1000 1000 1800
;; Query time: 40 msec
;; SERVER: 127.0.0.53#53(127.0.0.53) (UDP)
;; WHEN: Tue Feb 28 11:00:12 IST 2023
;; MSG SIZE rcvd: 262
himanshu@himanshu:~$ dig www.redhat.com +noquestion +noanswer +nocomment
; <<>> DiG 9.18.1-1ubuntu1.3-Ubuntu <<>> www.redhat.com +noquestion +noanswer +nocomment
;; global options: +cmd
dscx.akamaiedge.net. 681 IN SOA n0dscx.akamaiedge.net. hostmaster.akamai.com. 16
77561977 1000 1000 1000 1800
;; Query time: 16 msec
;; SERVER: 127.0.0.53#53(127.0.0.53) (UDP)
;; WHEN: Tue Feb 28 11:01:36 IST 2023
;; MSG SIZE rcvd: 262
himanshu@himanshu:~$


himanshu@himanshu: ~
himanshu@himanshu:~$ dig www.redhat.com +noquestion +noanswer +nocomment +nostats
; <<>> DiG 9.18.1-1ubuntu1.3-Ubuntu <<>> www.redhat.com +noquestion +noanswer +nocomment +nostat
s
;; global options: +cmd
dscx.akamaiedge.net. 603 IN SOA n0dscx.akamaiedge.net. hostmaster.akamai.com. 16
77561977 1000 1000 1000 1800
himanshu@himanshu:~$ dig www.redhat.com +all
; <<>> DiG 9.18.1-1ubuntu1.3-Ubuntu <<>> www.redhat.com +all
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 45291
;; flags: qr rd ra; QUERY: 1, ANSWER: 4, AUTHORITY: 1, ADDITIONAL: 1
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;www.redhat.com. IN A
;; ANSWER SECTION:
www.redhat.com. 525 IN CNAME ds-www.redhat.com.edgekey.net.
ds-www.redhat.com.edgekey.net. 525 IN CNAME ds-www.redhat.com.edgekey.net.globalredir.akadns
.net.
ds-www.redhat.com.edgekey.net.globalredir.akadns.net. 525 IN CNAME e3396.dscx.akamaiedge.net.
e3396.dscx.akamaiedge.net. 2 IN A 104.108.230.113
;; AUTHORITY SECTION:
dscx.akamaiedge.net. 525 IN SOA n0dscx.akamaiedge.net. hostmaster.akamai.com. 16
77561977 1000 1000 1000 1800
;; Query time: 8 msec
;; SERVER: 127.0.0.53#53(127.0.0.53) (UDP)
;; WHEN: Tue Feb 28 11:04:12 IST 2023
;; MSG SIZE rcvd: 262
himanshu@himanshu:~$


himanshu@himanshu: ~
himanshu@himanshu:~$ dig -t mx redhat.com +noall +answer
redhat.com. 600 IN MX 10 us-smtp-inbound-1.mimecast.com.
redhat.com. 600 IN MX 10 us-smtp-inbound-2.mimecast.com.
himanshu@himanshu:~$ dig -t ns redhat.com +noall +answer
redhat.com. 3600 IN NS a10-65.akam.net.
redhat.com. 3600 IN NS a16-67.akam.net.
redhat.com. 3600 IN NS a9-65.akam.net.
redhat.com. 3600 IN NS a13-66.akam.net.
redhat.com. 3600 IN NS a28-64.akam.net.
redhat.com. 3600 IN NS a1-68.akam.net.
himanshu@himanshu:~$ dig redhat.com +short
52.200.142.250
34.235.198.240
himanshu@himanshu:~$ dig -x 52.200.142.250 +short
ec2-52-200-142-250.compute-1.amazonaws.com.
himanshu@himanshu:~$ dig -x 34.235.198.240 +short
ec2-34-235-198-240.compute-1.amazonaws.com.
himanshu@himanshu:~$
himanshu@himanshu:~$

. TRACEROUTE COMMAND

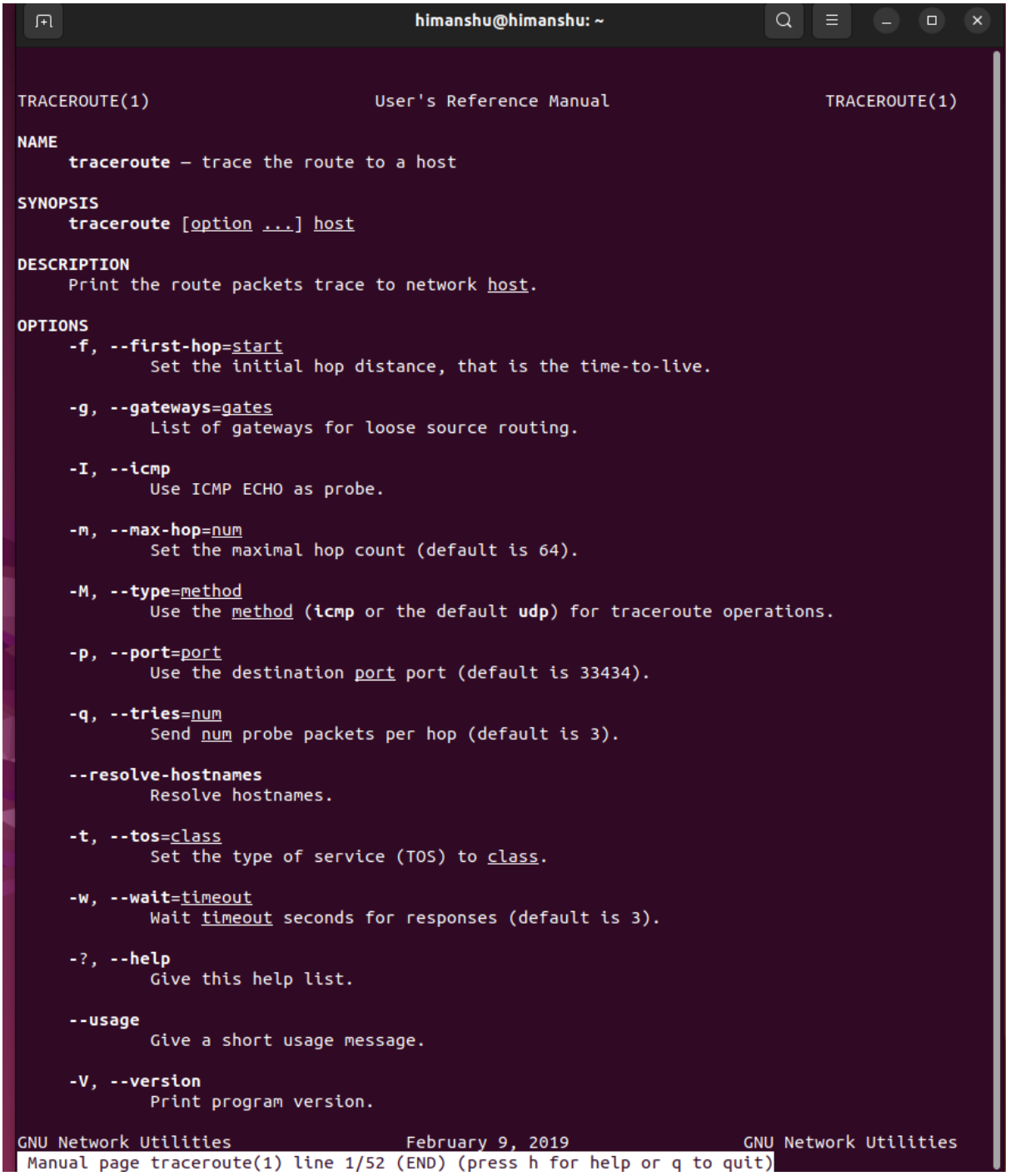
Linux TRACEROUTE command is a network troubleshooting utility that helps us determine the number of hops and packets travelling path required to reach a destination . It is used to display how the data is transmitted from a local machine to a remote machine .


himanshu@himanshu: ~
himanshu@himanshu:~$ sudo apt install inetutils-traceroute
[sudo] password for himanshu:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
libflashrom1 libftdi1-2 libllvm13
Use 'sudo apt autoremove' to remove them.
The following NEW packages will be installed:
inetutils-traceroute
0 upgraded, 1 newly installed, 0 to remove and 0 not upgraded.
4 not fully installed or removed.
Need to get 43.0 kB of archives.
After this operation, 115 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu jammy/universe amd64 inetutils-traceroute amd64 2:2.2-2
[43.0 kB]
Fetched 43.0 kB in 4s (9,990 B/s)
Selecting previously unselected package inetutils-traceroute.
(Reading database ... 267574 files and directories currently installed.)
Preparing to unpack .../inetutils-traceroute_2%3a2.2-2_amd64.deb ...
Unpacking inetutils-traceroute (2:2.2-2) ...
Setting up inetutils-traceroute (2:2.2-2) ...
update-alternatives: using /usr/bin/inetutils-traceroute to provide /usr/bin/traceroute (tracer
oute) in auto mode
Setting up foreman (9999-3.6.0-focal+scratchbuild+20230207085823+ubuntu2004) ...
/usr/bin/foreman-ruby: No such file or directory -- /usr/bin/bundle2.7 (LoadError)
dpkg: error processing package foreman (--configure):
installed foreman package post-installation script subprocess returned error exit status 1
dpkg: dependency problems prevent configuration of foreman-service:
foreman-service depends on foreman (= 9999-3.6.0-focal+scratchbuild+20230207085823+ubuntu2004)
; however:
Package foreman is not configured yet.
dpkg: error processing package foreman-service (--configure):
dependency problems - leaving unconfigured
dpkg: dependency problems prevent configuration of foreman-postgresql:
foreman-postgresql depends on foreman (= 9999-3.6.0-focal+scratchbuild+20230207085823+ubuntu20
04); however:
Package foreman is not configured yet.
dpkg: error processing package foreman-postgresql (--configure):
dependency problems - leaving unconfigured
dpkg: dependency problems prevent configuration of foreman-dynflow-sidekiq:
foreman-dynflow-sidekiq depends on foreman (= 9999-3.6.0-focal+scratchbuild+20230207085823+ubu
ntu2004); however:
Package foreman is not configured yet.
dpkg: error processing package foreman-dynflow-sidekiq (--configure):
depNo apport report written because the error message indicates its a followup error from a pr
evious failure.
No apport report written because the error message indicates its a followup erro
r from a previous failure.
No apport report written because MaxReports is reached already
endency
problems - leaving unconfigured

```
himanshu@himanshu:~$ traceroute www.google.com
traceroute to www.google.com (172.217.166.100), 64 hops max
  1   192.168.1.1  8.038ms  1.947ms  2.028ms
  2   223.177.143.255  71.242ms  94.703ms  3.755ms
  3   122.186.81.173  11.069ms  7.159ms  5.917ms
  4   74.125.51.184  5.037ms  6.791ms  5.913ms
  5   *  *  *
  6   142.251.76.196  5.251ms  12.918ms  19.255ms
  7   74.125.244.197  20.198ms  6.709ms  6.845ms
  8   72.14.239.11  48.712ms  47.701ms  57.027ms
  9   74.125.242.129  42.501ms  42.755ms  42.092ms
 10   74.125.252.215  47.632ms  46.040ms  49.884ms
 11   74.125.252.215  47.703ms  48.152ms  48.453ms
 12   172.217.166.100  60.015ms  74.125.252.215  48.530ms  46.069ms
```

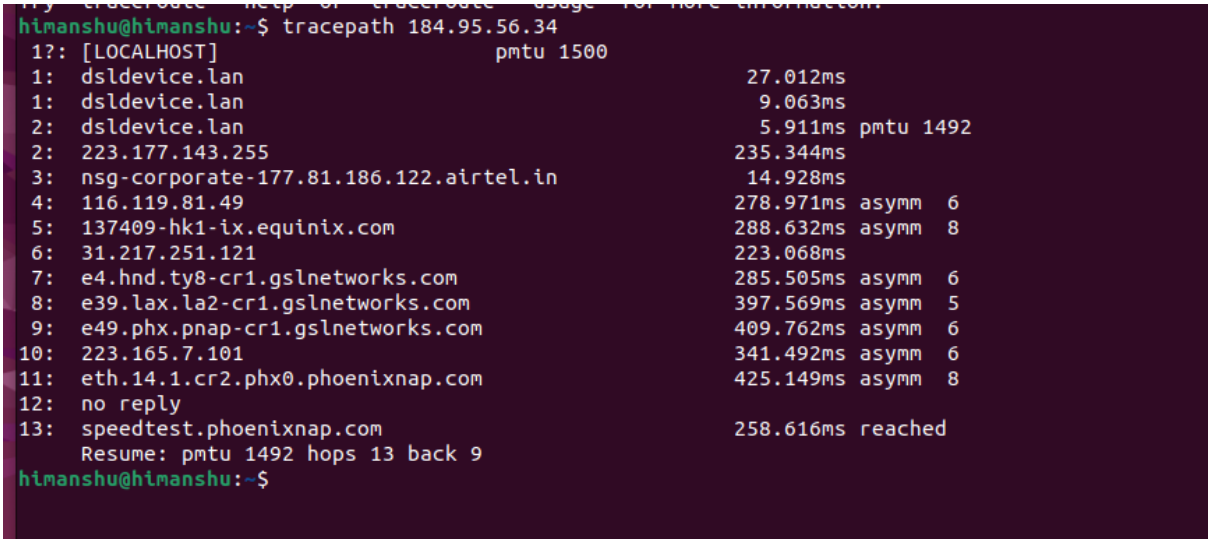
himanshu@himanshu: ~

```
himanshu@himanshu:~$ sudo traceroute -T 184.95.56.34
[sudo] password for himanshu:
traceroute: invalid option -- 'T'
Try 'traceroute --help' or 'traceroute --usage' for more information.
himanshu@himanshu:~$ traceroute 184.95.56.34
traceroute to 184.95.56.34 (184.95.56.34), 64 hops max
  1   192.168.1.1  2.109ms  *  2.124ms
  2   223.177.143.255  127.083ms  40.024ms  4.840ms
  3   122.186.81.177  58.359ms  6.293ms  7.266ms
  4   116.119.81.47  125.690ms  152.179ms  112.230ms
  5   36.255.57.100  1773.078ms  2531.591ms  2591.465ms
  6   31.217.251.121  223.494ms  235.889ms  222.989ms
  7   31.217.251.161  250.988ms  248.645ms  247.828ms
  8   *  31.217.251.124  625.438ms  453.445ms
  9   *  223.165.7.59  438.605ms  374.563ms
 10   223.165.7.101  469.921ms  561.470ms  531.207ms
 11   108.170.0.29  364.416ms  360.452ms  361.877ms
 12   *  *  *
 13   184.95.56.34  358.893ms  375.339ms  400.865ms
himanshu@himanshu:~$
```


himanshu@himanshu: ~
TRACEROUTE(1) User's Reference Manual TRACEROUTE(1)
NAME
traceroute – trace the route to a host
SYNOPSIS
traceroute [option ...] host
DESCRIPTION
Print the route packets trace to network host.
OPTIONS
-f, --first-hop=start
Set the initial hop distance, that is the time-to-live.
-g, --gateways=gates
List of gateways for loose source routing.
-I, --icmp
Use ICMP ECHO as probe.
-m, --max-hop=num
Set the maximal hop count (default is 64).
-M, --type=method
Use the method (icmp or the default udp) for traceroute operations.
-p, --port=port
Use the destination port port (default is 33434).
-q, --tries=num
Send num probe packets per hop (default is 3).
--resolve-hostnames
Resolve hostnames.
-t, --tos=class
Set the type of service (TOS) to class.
-w, --wait=timeout
Wait timeout seconds for responses (default is 3).
-?, --help
Give this help list.
--usage
Give a short usage message.
-V, --version
Print program version.
GNU Network Utilities February 9, 2019 GNU Network Utilities
Manual page traceroute(1) line 1/52 (END) (press h for help or q to quit)

. TRACEPATH COMMAND

The TRACEPATH command in linux allows the trace the path to the destination path determining MTU along this path using UDP port or any other ports that will not require any superuser permissions . TRACEPATH are the path traces to host a network detecting MTU along with its path .



```
NAME
       tracepath - traces path to a network host discovering MTU along this path

SYNOPSIS
       tracepath [-4] [-6] [-n] [-b] [-l pktlen] [-m max_hops] [-p port] [-V] {destination}

DESCRIPTION
       It traces the network path to destination discovering MTU along this path. It uses
       UDP port port or some random port. It is similar to traceroute. However, it does not
       require superuser privileges and has no fancy options.

       tracepath -6 is a good replacement for traceroute6 and classic example of application
       of Linux error queues. The situation with IPv4 is worse, because commercial IP
       routers do not return enough information in ICMP error messages. Probably, it will
       change, when they are updated. For now it uses Van Jacobson's trick, sweeping a range
       of UDP ports to maintain trace history.

OPTIONS
       -4
           Use IPv4 only.

       -6
           Use IPv6 only.

       -n
           Print primarily IP addresses numerically.

       -b
           Print both: Host names and IP addresses.

       -l
           Sets the initial packet length to pktlen instead of 65535 for IPv4 or 128000 for
           IPv6.

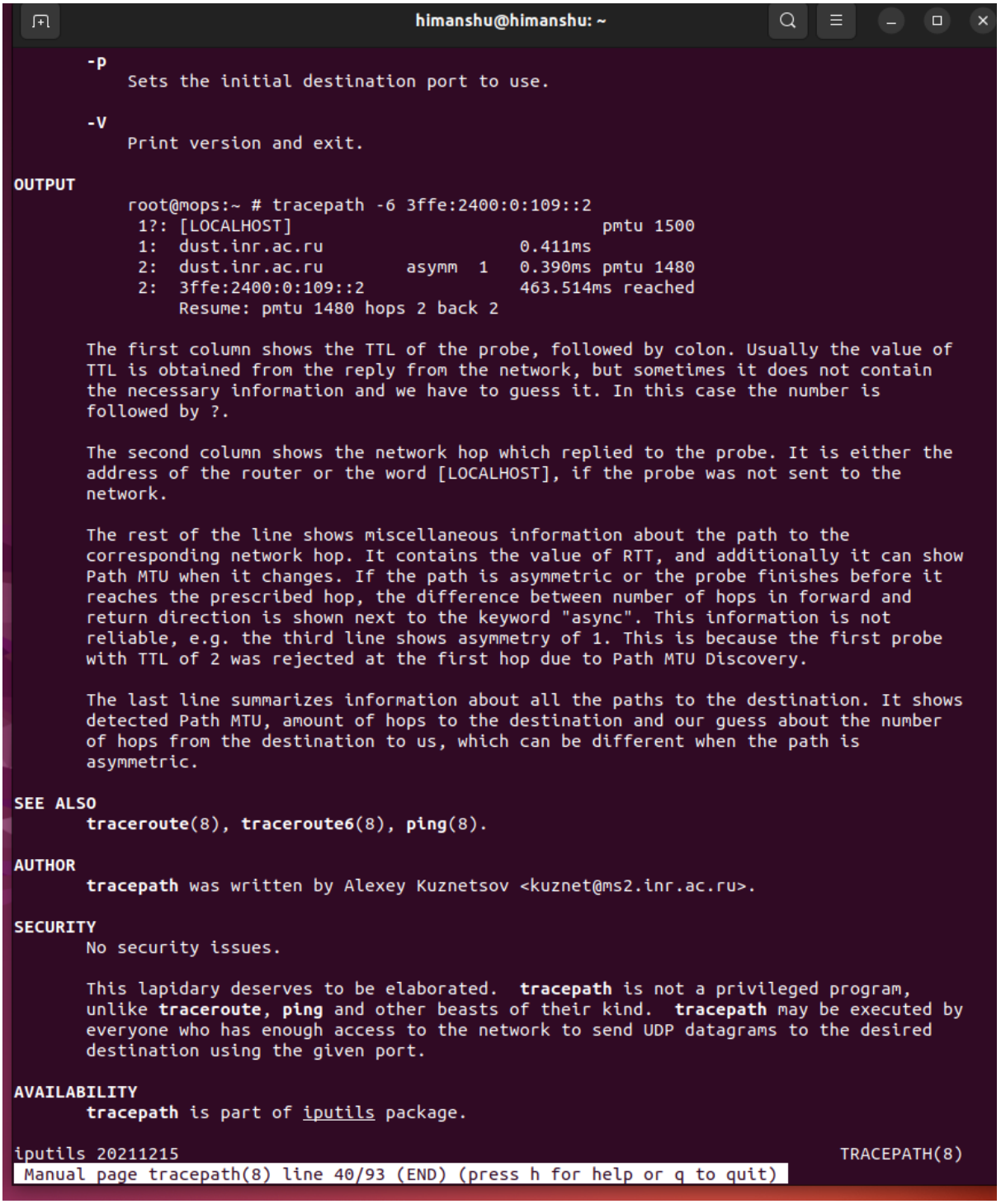
       -m
           Set maximum hops (or maximum TTLs) to max_hops instead of 30.

       -p
           Sets the initial destination port to use.

       -V
           Print version and exit.

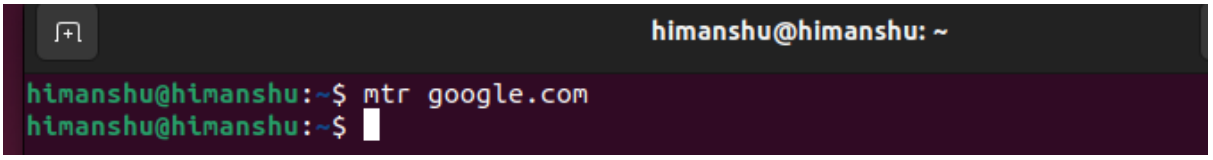
OUTPUT
           root@mops:~ # tracepath -6 3ffe:2400:0:109::2
            1?: [LOCALHOST]                                pmtu 1500
            1:  dust.inr.ac.ru                    0.411ms
            2:  dust.inr.ac.ru         asymm  1   0.390ms pmtu 1480
            2:  3ffe:2400:0:109::2                463.514ms reached
                Resume: pmtu 1480 hops 2 back 2

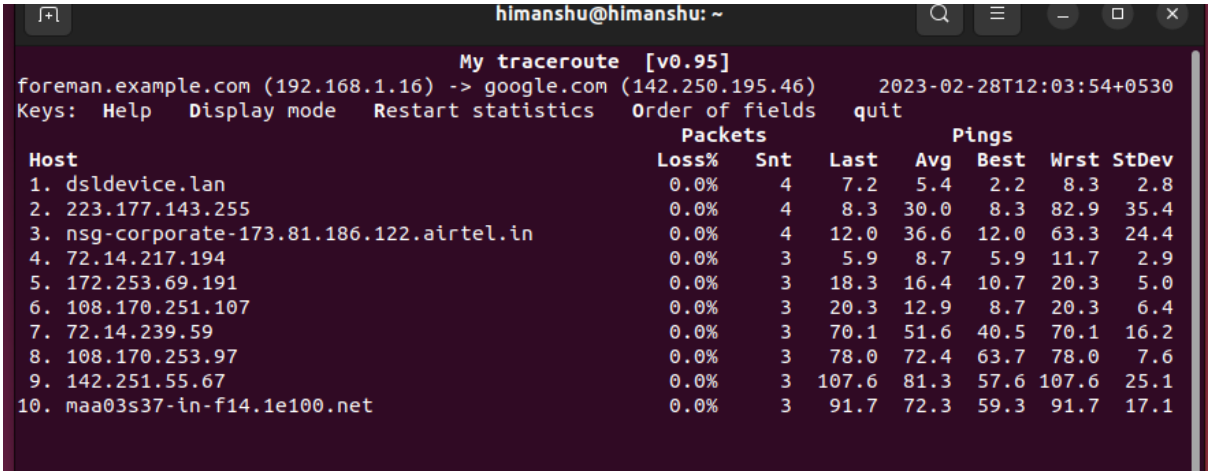
       The first column shows the TTL of the probe, followed by colon. Usually the value of
 Manual page tracepath(8) line 1/93 51% (press h for help or q to quit)
```

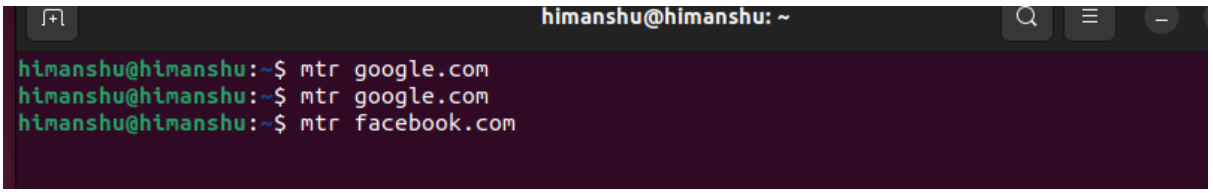

himanshu@himanshu: ~
-p
Sets the initial destination port to use.
-V
Print version and exit.
OUTPUT
root@mops:~ # tracepath -6 3ffe:2400:0:109::2
1?: [LOCALHOST] pmtu 1500
1: dust.inr.ac.ru 0.411ms
2: dust.inr.ac.ru asymm 1 0.390ms pmtu 1480
2: 3ffe:2400:0:109::2 463.514ms reached
Resume: pmtu 1480 hops 2 back 2
The first column shows the TTL of the probe, followed by colon. Usually the value of TTL is obtained from the reply from the network, but sometimes it does not contain the necessary information and we have to guess it. In this case the number is followed by ?.
The second column shows the network hop which replied to the probe. It is either the address of the router or the word [LOCALHOST], if the probe was not sent to the network.
The rest of the line shows miscellaneous information about the path to the corresponding network hop. It contains the value of RTT, and additionally it can show Path MTU when it changes. If the path is asymmetric or the probe finishes before it reaches the prescribed hop, the difference between number of hops in forward and return direction is shown next to the keyword "async". This information is not reliable, e.g. the third line shows asymmetry of 1. This is because the first probe with TTL of 2 was rejected at the first hop due to Path MTU Discovery.
The last line summarizes information about all the paths to the destination. It shows detected Path MTU, amount of hops to the destination and our guess about the number of hops from the destination to us, which can be different when the path is asymmetric.
SEE ALSO
traceroute(8), traceroute6(8), ping(8).
AUTHOR
tracepath was written by Alexey Kuznetsov <kuznet@ms2.inr.ac.ru>.
SECURITY
No security issues.
This lapidary deserves to be elaborated. tracepath is not a privileged program, unlike traceroute, ping and other beasts of their kind. tracepath may be executed by everyone who has enough access to the network to send UDP datagrams to the desired destination using the given port.
AVAILABILITY
tracepath is part of iputils package.
iputils 20211215 TRACEPATH(8)
Manual page tracepath(8) line 40/93 (END) (press h for help or q to quit)

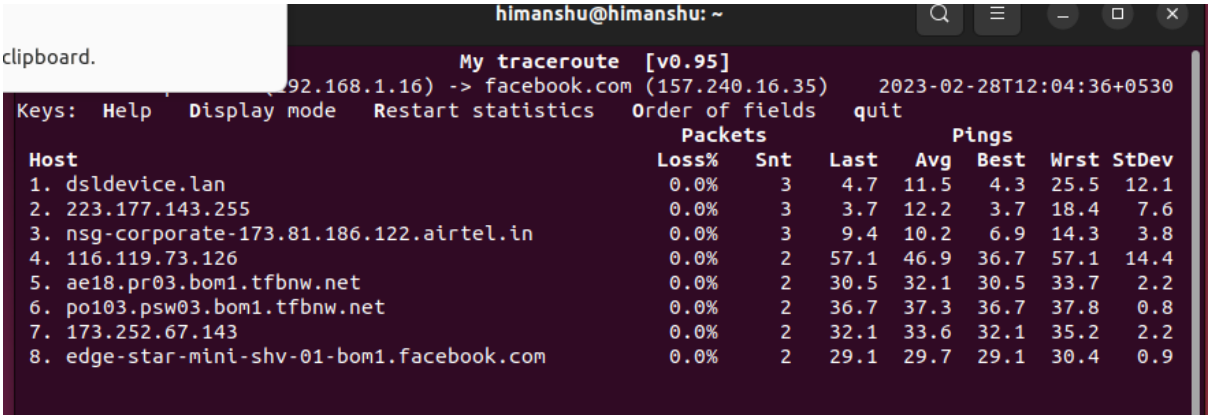
. MTR (MY TRACEROUTE) COMMAND

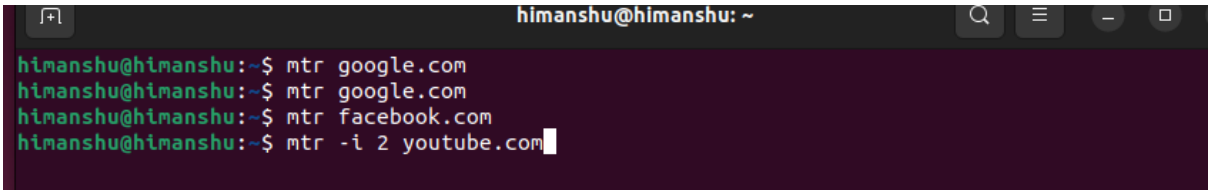
MTR combines the functionality of the traceroute and ping programs in a single network diagnostic tool . As MTR starts , It investigates the network connection between the host MTR runs on and hostname by sending packets with purposely law TTLS .

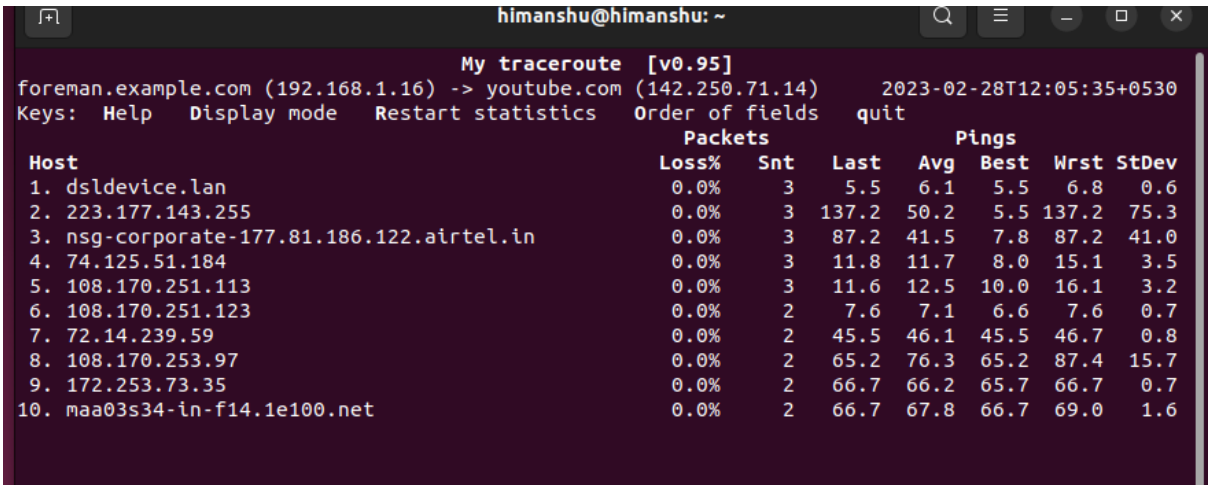


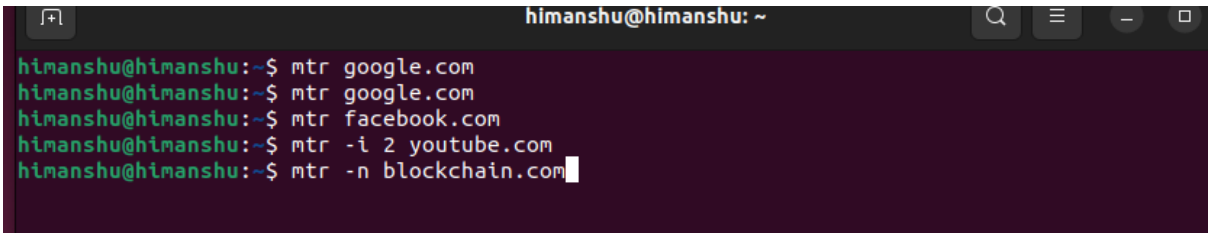


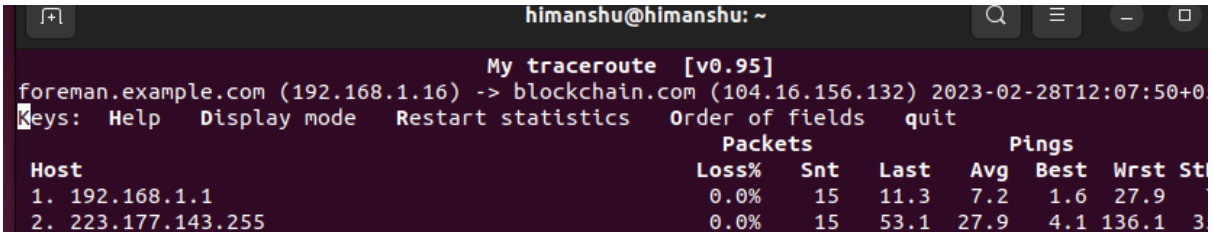

himanshu@himanshu: ~
himanshu@himanshu:~$ mtr google.com
himanshu@himanshu:~$ mtr google.com
himanshu@himanshu:~$ mtr facebook.com

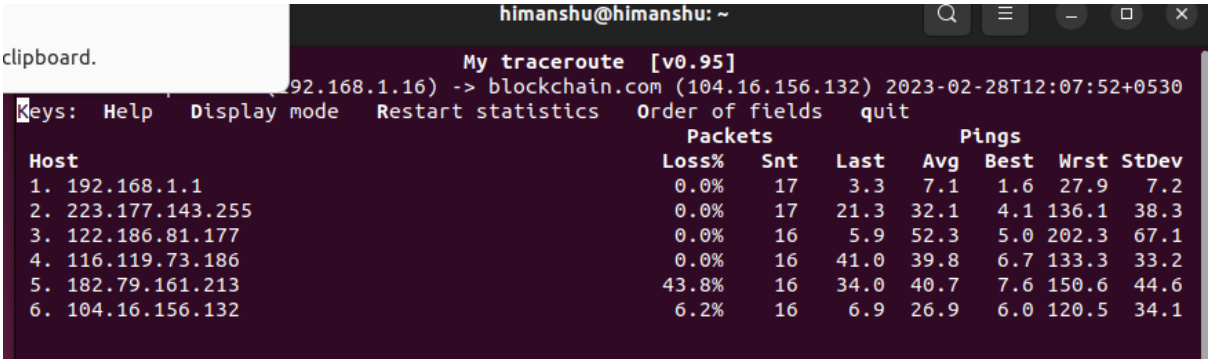

himanshu@himanshu: ~
clipboard.
My traceroute [v0.95]
92.168.1.16) -> facebook.com (157.240.16.35) 2023-02-28T12:04:36+0530
Keys: Help Display mode Restart statistics Order of fields quit
Packets Pings
Host Loss% Snt Last Avg Best Wrst StDev
1. dsldevice.lan 0.0% 3 4.7 11.5 4.3 25.5 12.1
2. 223.177.143.255 0.0% 3 3.7 12.2 3.7 18.4 7.6
3. nsg-corporate-173.81.186.122.airtel.in 0.0% 3 9.4 10.2 6.9 14.3 3.8
4. 116.119.73.126 0.0% 2 57.1 46.9 36.7 57.1 14.4
5. ae18.pr03.bom1.tfbnw.net 0.0% 2 30.5 32.1 30.5 33.7 2.2
6. po103.psw03.bom1.tfbnw.net 0.0% 2 36.7 37.3 36.7 37.8 0.8
7. 173.252.67.143 0.0% 2 32.1 33.6 32.1 35.2 2.2
8. edge-star-mini-shv-01-bom1.facebook.com 0.0% 2 29.1 29.7 29.1 30.4 0.9

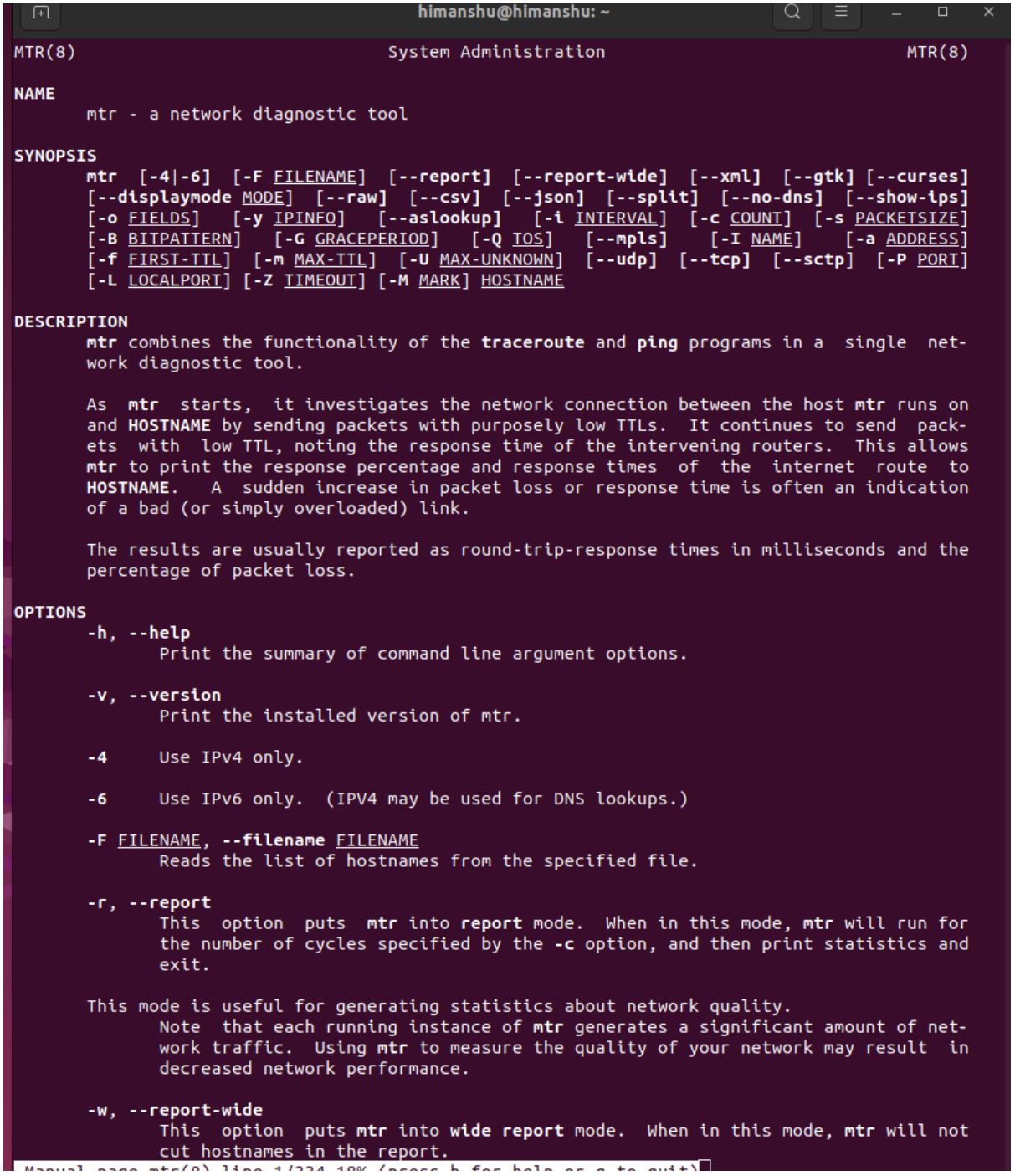

himanshu@himanshu: ~
himanshu@himanshu:~$ mtr google.com
himanshu@himanshu:~$ mtr google.com
himanshu@himanshu:~$ mtr facebook.com
himanshu@himanshu:~$ mtr -i 2 youtube.com


himanshu@himanshu: ~
My traceroute [v0.95]
foreman.example.com (192.168.1.16) -> youtube.com (142.250.71.14) 2023-02-28T12:05:35+0530
Keys: Help Display mode Restart statistics Order of fields quit
Packets Pings
Host Loss% Snt Last Avg Best Wrst StDev
1. dsldevice.lan 0.0% 3 5.5 6.1 5.5 6.8 0.6
2. 223.177.143.255 0.0% 3 137.2 50.2 5.5 137.2 75.3
3. nsg-corporate-177.81.186.122.airtel.in 0.0% 3 87.2 41.5 7.8 87.2 41.0
4. 74.125.51.184 0.0% 3 11.8 11.7 8.0 15.1 3.5
5. 108.170.251.113 0.0% 3 11.6 12.5 10.0 16.1 3.2
6. 108.170.251.123 0.0% 2 7.6 7.1 6.6 7.6 0.7
7. 72.14.239.59 0.0% 2 45.5 46.1 45.5 46.7 0.8
8. 108.170.253.97 0.0% 2 65.2 76.3 65.2 87.4 15.7
9. 172.253.73.35 0.0% 2 66.7 66.2 65.7 66.7 0.7
10. maa03s34-in-f14.1e100.net 0.0% 2 66.7 67.8 66.7 69.0 1.6


himanshu@himanshu: ~
himanshu@himanshu:~$ mtr google.com
himanshu@himanshu:~$ mtr google.com
himanshu@himanshu:~$ mtr facebook.com
himanshu@himanshu:~$ mtr -i 2 youtube.com
himanshu@himanshu:~$ mtr -n blockchain.com


himanshu@himanshu: ~
My traceroute [v0.95]
foreman.example.com (192.168.1.16) -> blockchain.com (104.16.156.132) 2023-02-28T12:07:50+0
Keys: Help Display mode Restart statistics Order of fields quit
Packets Pings
Host Loss% Snt Last Avg Best Wrst St
1. 192.168.1.1 0.0% 15 11.3 7.2 1.6 27.9
2. 223.177.143.255 0.0% 15 53.1 27.9 4.1 136.1 3


clipboard.
himanshu@himanshu: ~
My traceroute [v0.95]
92.168.1.16) -> blockchain.com (104.16.156.132) 2023-02-28T12:07:52+0530
Keys: Help Display mode Restart statistics Order of fields quit
Packets Pings
Host Loss% Snt Last Avg Best Wrst StDev
1. 192.168.1.1 0.0% 17 3.3 7.1 1.6 27.9 7.2
2. 223.177.143.255 0.0% 17 21.3 32.1 4.1 136.1 38.3
3. 122.186.81.177 0.0% 16 5.9 52.3 5.0 202.3 67.1
4. 116.119.73.186 0.0% 16 41.0 39.8 6.7 133.3 33.2
5. 182.79.161.213 43.8% 16 34.0 40.7 7.6 150.6 44.6
6. 104.16.156.132 6.2% 16 6.9 26.9 6.0 120.5 34.1


himanshu@himanshu: ~
MTR(8) System Administration MTR(8)
NAME
mtr - a network diagnostic tool
SYNOPSIS
mtr [-4|-6] [-F FILENAME] [--report] [--report-wide] [--xml] [--gtk] [--curses]
[--displaymode MODE] [--raw] [--csv] [--json] [--split] [--no-dns] [--show-ips]
[-o FIELDS] [-y IPINFO] [--aslookup] [-i INTERVAL] [-c COUNT] [-s PACKETSIZE]
[-B BITPATTERN] [-G GRACEPERIOD] [-Q TOS] [--mpls] [-I NAME] [-a ADDRESS]
[-f FIRST-TTL] [-m MAX-TTL] [-U MAX-UNKNOWN] [--udp] [--tcp] [--sctp] [-P PORT]
[-L LOCALPORT] [-Z TIMEOUT] [-M MARK] HOSTNAME
DESCRIPTION
mtr combines the functionality of the traceroute and ping programs in a single net-
work diagnostic tool.
As mtr starts, it investigates the network connection between the host mtr runs on
and HOSTNAME by sending packets with purposely low TTLs. It continues to send pack-
ets with low TTL, noting the response time of the intervening routers. This allows
mtr to print the response percentage and response times of the internet route to
HOSTNAME. A sudden increase in packet loss or response time is often an indication
of a bad (or simply overloaded) link.
The results are usually reported as round-trip-response times in milliseconds and the
percentage of packet loss.
OPTIONS
-h, --help
Print the summary of command line argument options.
-v, --version
Print the installed version of mtr.
-4 Use IPv4 only.
-6 Use IPv6 only. (IPV4 may be used for DNS lookups.)
-F FILENAME, --filename FILENAME
Reads the list of hostnames from the specified file.
-r, --report
This option puts mtr into report mode. When in this mode, mtr will run for
the number of cycles specified by the -c option, and then print statistics and
exit.
This mode is useful for generating statistics about network quality.
Note that each running instance of mtr generates a significant amount of net-
work traffic. Using mtr to measure the quality of your network may result in
decreased network performance.
-w, --report-wide
This option puts mtr into wide report mode. When in this mode, mtr will not
cut hostnames in the report.

```
manmtr: command not found
himanshu@himanshu:~$ man mtr
himanshu@himanshu:~$ mkdir blockchain
himanshu@himanshu:~$ cd blockchain
himanshu@himanshu:~/blockchain$ ls
himanshu@himanshu:~/blockchain$ ls
himanshu@himanshu:~/blockchain$ mtr --csv ggogle.com
mtr: Failed to resolve host: ggogle.com: Name or service not known
himanshu@himanshu:~/blockchain$ mtr --csv google.com
Mtr_Version,Start_Time,Status,Host,Hop,Ip,Loss%,Snt, ,Last,Avg,Best,Wrst,StDev,
MTR.0.95,1677566682,OK,google.com,1,dsldevice.lan,0.00,10,0,20.40,25.44,5.61,90.22,25.43
MTR.0.95,1677566682,OK,google.com,2,223.177.143.255,10.00,10,1,824.70,1170.46,488.69,2355.95,68
1.94
MTR.0.95,1677566682,OK,google.com,3,nsg-corporate-177.81.186.122.airtel.in,0.00,10,0,741.34,110
0.81,405.15,2272.33,638.85
MTR.0.95,1677566682,OK,google.com,4,74.125.51.184,0.00,10,0,657.69,1131.80,314.71,2188.82,704.1
7
MTR.0.95,1677566682,OK,google.com,5,142.251.66.173,10.00,10,1,9.85,27.19,7.82,61.08,22.02
MTR.0.95,1677566682,OK,google.com,6,74.125.244.196,10.00,10,1,868.06,1203.96,392.06,2348.74,753
.34
MTR.0.95,1677566682,OK,google.com,7,142.251.248.249,20.00,10,2,784.50,1178.62,399.38,2417.97,77
3.09
MTR.0.95,1677566682,OK,google.com,8,172.253.72.136,0.00,10,0,700.90,1173.48,315.88,2428.64,684.
36
MTR.0.95,1677566682,OK,google.com,9,172.253.73.230,0.00,10,0,100.42,85.46,65.73,126.67,19.13
MTR.0.95,1677566682,OK,google.com,10,74.125.242.129,10.00,10,1,533.75,1138.21,509.56,2338.11,73
2.75
MTR.0.95,1677566682,OK,google.com,11,142.251.55.239,10.00,10,1,450.21,1160.45,450.21,2254.58,68
5.45
MTR.0.95,1677566682,OK,google.com,12,maa05s19-in-f14.1e100.net,10.00,10,1,587.70,1172.80,476.25
,2343.60,686.41
himanshu@himanshu:~/blockchain$
```

```
himanshu@himanshu:~/blockchain$ mtr --xml google.com
<?xml version="1.0"?>
<MTR SRC="foreman.example.com" DST="google.com" TOS="0x0" PSIZE="64" BITPATTERN="0x00" TESTS="1
0">
    <HUB COUNT="1" HOST="dsldevice.lan">
        <Loss>  0.0%</Loss>
        <Snt>    10</Snt>
        <Last>   1.9</Last>
        <Avg>   6.6</Avg>
        <Best>   1.6</Best>
        <Wrst>  26.7</Wrst>
        <StDev>   8.2</StDev>
    </HUB>
    <HUB COUNT="2" HOST="223.177.143.255">
        <Loss>  0.0%</Loss>
        <Snt>    10</Snt>
        <Last>  68.6</Last>
        <Avg>  45.5</Avg>
        <Best>   4.6</Best>
        <Wrst> 125.8</Wrst>
        <StDev>  51.6</StDev>
    </HUB>
    <HUB COUNT="3" HOST="nsg-corporate-177.81.186.122.airtel.in">
        <Loss>  0.0%</Loss>
        <Snt>    10</Snt>
        <Last>  52.6</Last>
        <Avg>  50.2</Avg>
        <Best>   4.9</Best>
        <Wrst> 193.6</Wrst>
        <StDev>  56.8</StDev>
    </HUB>
    <HUB COUNT="4" HOST="74.125.51.184">
        <Loss>  0.0%</Loss>
        <Snt>    10</Snt>
        <Last>  24.3</Last>
        <Avg>  27.5</Avg>
        <Best>   7.6</Best>
        <Wrst> 110.1</Wrst>
        <StDev>  31.5</StDev>
    </HUB>
    <HUB COUNT="5" HOST="142.251.66.173">
        <Loss>  0.0%</Loss>
        <Snt>    10</Snt>
        <Last>   7.7</Last>
        <Avg>   7.4</Avg>
        <Best>   5.1</Best>
        <Wrst>   9.7</Wrst>
        <StDev>   1.4</StDev>
    </HUB>
    <HUB COUNT="6" HOST="74.125.244.196">
        <Loss>  0.0%</Loss>
        <Snt>    10</Snt>
        <Last>  15.6</Last>
        <Avg>  17.1</Avg>
```

```
                                My traceroute  [v0.95]
foreman.example.com (192.168.1.16) -> google.com (142.250.195.46)     2023-02-28T12:21:44+0530
Keys:  Help   Display mode   Restart statistics   Order of fields   quit
                                                 Packets               Pings
 Host                                         Loss%   Snt   Last   Avg  Best  Wrst StDev
 1. dsldevice.lan                              0.0%    21    2.4   4.2   1.7  21.1   4.4
 2. 223.177.143.255                            0.0%    21    7.1  16.4   4.2  86.9  19.1
 3. nsg-corporate-173.81.186.122.airtel.in     0.0%    20    5.2  14.7   3.7  74.0  16.3
 4. 72.14.217.194                              0.0%    20    5.3   9.6   4.3  26.3   6.0
 5. 172.253.69.191                             0.0%    20    8.3  10.8   7.0  26.0   4.9
 6. 108.170.251.107                            0.0%    20    8.3   9.2   5.7  26.0   4.3
 7. 72.14.239.59                               0.0%    20   42.3  63.9  38.5 337.6  67.2
 8. 108.170.253.97                             0.0%    20   51.9  69.5  48.4 321.9  61.3
 9. 142.251.55.67                              0.0%    20   49.5  61.6  47.5 221.4  38.5
10. maa03s37-in-f14.1e100.net                  0.0%    20   49.5  61.7  46.5 222.8  38.5
```

```
                                My traceroute  [v0.95]
foreman.example.com (192.168.1.16) -> google.com (142.250.195.46)     2023-02-28T12:22:46+0530
Keys:  Help   Display mode   Restart statistics   Order of fields   quit
                                                 Packets               Pings
 Host                                         Loss%   Snt   Last   Avg  Best  Wrst StDev
 1. dsldevice.lan                              0.0%     5   20.0  10.2   2.5  20.0   7.3
 2. 223.177.143.255                            0.0%     5   25.3 241.9   4.3 734.7 332.3
 3. nsg-corporate-173.81.186.122.airtel.in     0.0%     5   12.3 222.6   4.7 684.1 292.1
 4. 72.14.217.194                              0.0%     5   12.1 185.8   6.1 633.9 268.4
 5. 172.253.69.191                             0.0%     5   19.6 159.5   8.1 583.6 242.6
 6. 108.170.251.107                            0.0%     5   16.1  12.5   8.2  16.1   3.1
 7. 72.14.239.59                               0.0%     5  158.5 558.6  43.9 1925. 797.7
 8. 108.170.253.97                             0.0%     5  107.8 519.9  50.1 1825. 760.1
 9. 142.251.55.67                              0.0%     5  116.3 514.3  51.1 1747. 724.9
10. maa03s37-in-f14.1e100.net                  0.0%     5   72.9 509.5  69.6 1711. 705.5
```

. TCPDUMP COMMAND

TCPDUMP is a packet sniffing and packet analysing tool for a system administrator to troubleshoot connectivity issues in linux . It is used to capture , Filter , and analyse network traffic such as TCP/IP packets going through your system . It is many times used as a security tool as well .

```
himanshu@himanshu: $ sudo tcpdump
tcpdump: verbose output suppressed, use -v[v]... for full protocol decode
listening on wlp2s0, link-type EN10MB (Ethernet), snapshot length 262144 bytes
12:41:01.117255 IP foreman.example.com.39262 > server-18-164-220-60.del54.r.cloudfront.net.http: Flags [.], ack 3718861103, win 501, options [nop,nop,TS val 3684775238 ecr 1813921944], length 0
12:41:01.117276 IP foreman.example.com.47044 > 209.54.182.161.https: Flags [.], ack 1570156696, win 501, length 0
12:41:01.207694 IP foreman.example.com.33625 > dsldevice.lan.domain: 51484+ [1au] PTR? 60.220.164.18.in-addr.arpa. (55)
12:41:01.213920 IP server-18-164-220-60.del54.r.cloudfront.net.http > foreman.example.com.39262: Flags [.], ack 1, win 133, options [nop,nop,TS val 1813932698 ecr 3684701215], length 0
12:41:01.214190 IP maa05s09-in-f4.1e100.net.https > foreman.example.com.57772: Flags [P.], seq 355733925:355733964, ack 1216216112, win 267, options [nop,nop,TS val 2385243381 ecr 2039487049], length 39
12:41:01.214232 IP foreman.example.com.57772 > maa05s09-in-f4.1e100.net.https: Flags [.], ack 39, win 501, options [nop,nop,TS val 2039487655 ecr 2385243381], length 0
12:41:01.773994 IP dsldevice.lan.domain > foreman.example.com.33625: 51484 1/5/1 PTR server-18-164-220-60.del54.r.cloudfront.net. (235)
12:41:01.773995 IP 209.54.182.161.https > foreman.example.com.47044: Flags [.], ack 1, win 964, length 0
12:41:01.780384 IP foreman.example.com.45966 > dsldevice.lan.domain: 61543+ [1au] PTR? 161.182.54.209.in-addr.arpa. (56)
12:41:02.078739 IP dsldevice.lan.domain > foreman.example.com.45966: 61543 NXDomain 0/1/1 (127)
12:41:02.078941 IP foreman.example.com.45966 > dsldevice.lan.domain: 61543+ PTR? 161.182.54.209.in-addr.arpa. (45)
12:41:02.087285 IP dsldevice.lan.domain > foreman.example.com.45966: 61543 NXDomain 0/1/0 (116)
12:41:02.088755 IP foreman.example.com.51153 > dsldevice.lan.domain: 60101+ [1au] PTR? 1.1.168.192.in-addr.arpa. (53)
12:41:02.091169 IP dsldevice.lan.domain > foreman.example.com.51153: 60101 1/0/0 PTR dsldevice.lan. (69)
12:41:02.091412 IP foreman.example.com.51153 > dsldevice.lan.domain: 63303+ PTR? 1.1.168.192.in-addr.arpa. (42)
12:41:02.094055 IP dsldevice.lan.domain > foreman.example.com.51153: 63303 1/0/0 PTR dsldevice.lan. (69)
12:41:02.100268 IP foreman.example.com.56500 > dsldevice.lan.domain: 54364+ PTR? 100.166.217.172.in-addr.arpa. (46)
12:41:02.165779 IP dsldevice.lan.domain > foreman.example.com.56500: 54364 1/0/0 PTR maa05s09-in-f4.1e100.net. (84)
12:41:03.677226 IP foreman.example.com.49240 > server-18-164-212-222.del54.r.cloudfront.net.http: Flags [.], ack 2747207264, win 501, options [nop,nop,TS val 3577166988 ecr 1852030680], length 0
12:41:03.677241 IP foreman.example.com.49216 > server-18-164-212-222.del54.r.cloudfront.net.http: Flags [.], ack 3538500810, win 501, options [nop,nop,TS val 3577166988 ecr 3811119413], length 0
12:41:03.677251 IP foreman.example.com.58880 > a23-48-245-136.deploy.static.akamaitechnologies.com.http: Flags [.], ack 1078224541, win 501, options [nop,nop,TS val 3885636772 ecr 3707786318], length 0
12:41:03.677275 IP foreman.example.com.49252 > server-18-164-212-222.del54.r.cloudfront.net.http: Flags [.], ack 1667718590, win 501, options [nop,nop,TS val 3577166988 ecr 1852030680], length 0
12:41:03.677283 IP foreman.example.com.43712 > 172.64.155.188.http: Flags [.], ack 1952499996, win 501, options [nop,nop,TS val 4196374687 ecr 230687105], length 0
12:41:03.677288 IP foreman.example.com.49232 > server-18-164-212-222.del54.r.cloudfront.net.http: Flags [.], ack 2205847672, win 501, options [nop,nop,TS val 3577166988 ecr 3819492671], length 0
12:41:03.677296 IP foreman.example.com.45832 > 104.18.20.226.http: Flags [.], ack 655434100, win 501, options [nop,nop,TS val 2115494077 ecr 2421755950], length 0
12:41:03.677302 IP foreman.example.com.33176 > 117.18.237.29.http: Flags [.], ack 4281554818, win 501, options [nop,nop,TS val 3475274309 ecr 1876748368], length 0
12:41:03.705855 IP foreman.example.com.53787 > dsldevice.lan.domain: 49051+ PTR? 222.212.164.18.in-addr.arpa. (45)
12:41:04.331559 ARP, Request who-has foreman.example.com tell dsldevice.lan, length 46
12:41:04.331579 ARP, Reply foreman.example.com is-at 3c:55:76:cf:20:23 (oui Unknown), length 28
12:41:04.331560 IP server-18-164-212-222.del54.r.cloudfront.net.http > foreman.example.com.49216: Flags [.], ack 1, win 131, options [nop,nop,TS val 381123178 ecr 3577084318], length 0
12:41:04.335441 IP server-18-164-212-222.del54.r.cloudfront.net.http > foreman.example.com.49240: Flags [.], ack 1, win 131, options [nop,nop,TS val 1852040914 ecr 3577084358], length 0
12:41:04.335442 IP server-18-164-212-222.del54.r.cloudfront.net.http > foreman.example.com.49232: Flags [.], ack 1, win 131, options [nop,nop,TS val 3819502906 ecr 3577084280], length 0
12:41:04.335442 IP 117.18.237.29.http > foreman.example.com.33176: Flags [.], ack 1, win 145, options [nop,nop,TS val 1876758603 ecr 3475263692], length 0
12:41:04.335442 IP a23-48-245-136.deploy.static.akamaitechnologies.com.http > foreman.example.com.58880: Flags [.], ack 1, win 503, options [nop,nop,TS val 3707796552 ecr 3085564006], length 0
12:41:04.335442 IP server-18-164-212-222.del54.r.cloudfront.net.http > foreman.example.com.49252: Flags [.], ack 1, win 131, options [nop,nop,TS val 1852040915 ecr 3577084354], length 0
12:41:04.335442 IP 172.64.155.188.http > foreman.example.com.43712: Flags [.], ack 1, win 8, options [nop,nop,TS val 230697604 ecr 4196290282], length 0
12:41:04.335442 IP 104.18.20.226.http > foreman.example.com.45832: Flags [.], ack 1, win 8, options [nop,nop,TS val 2421766449 ecr 2115398344], length 0
12:41:04.335442 IP dsldevice.lan.domain > foreman.example.com.53787: 49051 1/5/0 PTR server-18-164-212-222.del54.r.cloudfront.net. (226)
12:41:04.336821 IP foreman.example.com.49646 > dsldevice.lan.domain: 48539+ PTR? 136.245.48.23.in-addr.arpa. (44)
12:41:04.701278 IP foreman.example.com.46914 > a23-48-245-129.deploy.static.akamaitechnologies.com.http: Flags [.], ack 3451642064, win 501, options [nop,nop,TS val 574431198 ecr 3311631016], length 0
12:41:05.032417 IP dsldevice.lan.domain > foreman.example.com.49646: 48539 1/0/0 PTR a23-48-245-136.deploy.static.akamaitechnologies.com. (109)
12:41:05.032418 IP a23-48-245-129.deploy.static.akamaitechnologies.com.http > foreman.example.com.46914: Flags [.], ack 1, win 503, options [nop,nop,TS val 3311641512 ecr 574335911], length 0
12:41:05.033570 IP foreman.example.com.37567 > dsldevice.lan.domain: 27999+ PTR? 188.155.64.172.in-addr.arpa. (45)
12:41:05.213282 IP foreman.example.com.55966 > server-18-164-220-60.del54.r.cloudfront.net.http: Flags [.], ack 2033162888, win 501, options [nop,nop,TS val 3684779334 ecr 2070965660], length 0
12:41:05.213313 IP foreman.example.com.39256 > server-18-164-220-60.del54.r.cloudfront.net.http: Flags [.], ack 3305172798, win 501, options [nop,nop,TS val 3684779334 ecr 2445149886], length 0
12:41:05.213319 IP foreman.example.com.55950 > server-18-164-220-60.del54.r.cloudfront.net.http: Flags [.], ack 3691071822, win 501, options [nop,nop,TS val 3684779334 ecr 1737173478], length 0
12:41:05.216874 IP dsldevice.lan.domain > foreman.example.com.37567: 27999 NXDomain 0/1/0 (107)
12:41:05.218058 IP foreman.example.com.35101 > dsldevice.lan.domain: 15643+ PTR? 226.20.18.104.in-addr.arpa. (44)
12:41:05.609582 IP foreman.example.com.52048 > 123.208.120.34.bc.googleusercontent.com.https: Flags [P.], seq 1652992320:1652992366, ack 3898005821, win 501, options [nop,nop,TS val 1704167369 ecr 379929
4712], length 46
12:41:05.754358 IP 123.208.120.34.bc.googleusercontent.com.https > foreman.example.com.52048: Flags [.], ack 46, win 352, options [nop,nop,TS val 3799353461 ecr 1704167369], length 0
12:41:05.754359 IP 123.208.120.34.bc.googleusercontent.com.https > foreman.example.com.52048: Flags [P.], seq 1:47, ack 46, win 352, options [nop,nop,TS val 3799353461 ecr 1704167369], length 46
12:41:05.754427 IP foreman.example.com.52048 > 123.208.120.34.bc.googleusercontent.com.https: Flags [.], ack 47, win 501, options [nop,nop,TS val 1704167514 ecr 3799353461], length 0
```

```
ngth 0
12:43:28.639477 IP foreman.example.com.49262 > maa03s39-in-f3.1e100.net.ht                                    op,nop,TS val 2512728873 ecr 931003341], length 39
12:43:28.639531 IP foreman.example.com.35098 > maa03s43-in-f14.1e100.net.https: Flags [P.], seq 78:117, ack 79, win 501, options [nop,nop,TS val 1541582022 ecr 2915276606], length 39
12:43:28.639763 IP foreman.example.com.49262 > maa03s39-in-f3.1e100.net.https: Flags [P.], seq 117:141, ack 79, win 501, options [nop,nop,TS val 2512728873 ecr 931003341], length 24
12:43:28.639786 IP foreman.example.com.49262 > maa03s39-in-f3.1e100.net.https: Flags [F.], seq 141, ack 79, win 501, options [nop,nop,TS val 2512728873 ecr 931003341], length 0
12:43:28.640123 IP foreman.example.com.35098 > maa03s43-in-f14.1e100.net.https: Flags [P.], seq 117:141, ack 79, win 501, options [nop,nop,TS val 1541582023 ecr 2915276606], length 24
12:43:28.640140 IP foreman.example.com.35098 > maa03s43-in-f14.1e100.net.https: Flags [F.], seq 141, ack 79, win 501, options [nop,nop,TS val 1541582023 ecr 2915276606], length 0
12:43:28.829281 IP foreman.example.com.41084 > 103.229.206.241.https: Flags [.], ack 1, win 501, options [nop,nop,TS val 3797825711 ecr 4272404900], length 0
12:43:29.085381 IP foreman.example.com.49262 > maa03s39-in-f3.1e100.net.https: Flags [F.], seq 141, ack 79, win 501, options [nop,nop,TS val 2512729319 ecr 931003341], length 0
12:43:29.149273 IP foreman.example.com.35098 > maa03s43-in-f14.1e100.net.https: Flags [F.], seq 141, ack 79, win 501, options [nop,nop,TS val 1541582532 ecr 2915276606], length 0
12:43:29.639896 IP foreman.example.com.56532 > maa05s15-in-f2.1e100.net.https: Flags [P.], seq 39:78, ack 40, win 501, options [nop,nop,TS val 2307107053 ecr 3193682729], length 39
12:43:29.640163 IP foreman.example.com.56532 > maa05s15-in-f2.1e100.net.https: Flags [P.], seq 78:102, ack 40, win 501, options [nop,nop,TS val 2307107054 ecr 3193682729], length 24
12:43:29.640187 IP foreman.example.com.56532 > maa05s15-in-f2.1e100.net.https: Flags [F.], seq 102, ack 40, win 501, options [nop,nop,TS val 2307107054 ecr 3193682729], length 0
12:43:30.013277 IP foreman.example.com.56532 > maa05s15-in-f2.1e100.net.https: Flags [F.], seq 102, ack 40, win 501, options [nop,nop,TS val 2307107427 ecr 3193682729], length 0
12:43:30.301281 IP foreman.example.com.35098 > maa03s43-in-f14.1e100.net.https: Flags [FP.], seq 78:141, ack 79, win 501, options [nop,nop,TS val 1541583684 ecr 2915276606], length 63
12:43:30.301310 IP foreman.example.com.49262 > maa03s39-in-f3.1e100.net.https: Flags [FP.], seq 78:141, ack 79, win 501, options [nop,nop,TS val 2512730535 ecr 931003341], length 63
12:43:30.747409 IP maa03s39-in-f3.1e100.net.https > foreman.example.com.49262: Flags [F.], seq 79, ack 142, win 269, options [nop,nop,TS val 931057845 ecr 2512730535], length 0
12:43:30.747473 IP foreman.example.com.49262 > maa03s39-in-f3.1e100.net.https: Flags [.], ack 80, win 501, options [nop,nop,TS val 2512730981 ecr 931057845], length 0
12:43:30.877254 IP foreman.example.com.56532 > maa05s15-in-f2.1e100.net.https: Flags [FP.], seq 39:102, ack 40, win 501, options [nop,nop,TS val 2307108291 ecr 3193682729], length 63
12:43:31.188084 IP maa03s39-in-f3.1e100.net.https > foreman.example.com.49262: Flags [.], ack 117, win 269, options [nop,nop,TS val 931056132 ecr 2512728873], length 0
12:43:31.188144 IP foreman.example.com.49262 > maa03s39-in-f3.1e100.net.https: Flags [.], ack 80, win 501, options [nop,nop,TS val 2512731422 ecr 931057845], length 0
12:43:31.188084 IP maa03s43-in-f14.1e100.net.https > foreman.example.com.35098: Flags [.], ack 117, win 271, options [nop,nop,TS val 2915329455 ecr 1541582022], length 0
12:43:31.188084 IP maa03s39-in-f3.1e100.net.https > foreman.example.com.49262: Flags [.], ack 141, win 269, options [nop,nop,TS val 931056135 ecr 2512728873], length 0
12:43:31.188084 IP maa03s39-in-f3.1e100.net.https > foreman.example.com.49262: Flags [F.], seq 79, ack 142, win 269, options [nop,nop,TS val 931056135 ecr 2512728873], length 0
12:43:31.188195 IP foreman.example.com.49262 > maa03s39-in-f3.1e100.net.https: Flags [.], ack 80, win 501, options [nop,nop,TS val 2512731422 ecr 931057845], length 0
12:43:31.188084 IP maa03s43-in-f14.1e100.net.https > foreman.example.com.35098: Flags [.], ack 141, win 271, options [nop,nop,TS val 2915329458 ecr 1541582023], length 0
12:43:31.188084 IP maa03s43-in-f14.1e100.net.https > foreman.example.com.35098: Flags [F.], seq 79, ack 142, win 271, options [nop,nop,TS val 2915329458 ecr 1541582023], length 0
12:43:31.188230 IP foreman.example.com.35098 > maa03s43-in-f14.1e100.net.https: Flags [.], ack 80, win 501, options [nop,nop,TS val 1541584571 ecr 2915329458], length 0
12:43:31.188085 IP 103.229.206.241.https > foreman.example.com.41004: Flags [.], ack 1, win 502, options [nop,nop,TS val 4272415865 ecr 3797608159], length 0
12:43:31.188085 ARP, Request who-has foreman.example.com tell dsldevice.lan, length 46
12:43:31.188261 ARP, Reply foreman.example.com is-at 3c:55:76:cf:20:23 (oui Unknown), length 28
12:43:31.188318 IP maa03s39-in-f3.1e100.net.https > foreman.example.com.49262: Flags [.], ack 142, win 269, options [nop,nop,TS val 931056579 ecr 2512729319,nop,nop,sack 1 {141:142}], length 0
12:43:31.188318 IP maa03s43-in-f14.1e100.net.https > foreman.example.com.35098: Flags [.], ack 142, win 271, options [nop,nop,TS val 2915329975 ecr 1541582532,nop,nop,sack 1 {141:142}], length 0
12:43:31.188318 IP maa03s43-in-f14.1e100.net.https > foreman.example.com.35098: Flags [F.], seq 79, ack 142, win 271, options [nop,nop,TS val 2915330030 ecr 1541582532], length 0
12:43:31.188338 IP foreman.example.com.35098 > maa03s43-in-f14.1e100.net.https: Flags [.], ack 80, win 501, options [nop,nop,TS val 1541584571 ecr 2915329975], length 0
12:43:31.188318 IP maa03s39-in-f3.1e100.net.https > foreman.example.com.49262: Flags [F.], seq 79, ack 142, win 269, options [nop,nop,TS val 931056757 ecr 2512729319], length 0
12:43:31.188351 IP foreman.example.com.49262 > maa03s39-in-f3.1e100.net.https: Flags [.], ack 80, win 501, options [nop,nop,TS val 2512731422 ecr 931057845], length 0
12:43:31.188318 IP maa05s15-in-f2.1e100.net.https > foreman.example.com.56532: Flags [.], ack 78, win 302, options [nop,nop,TS val 3193735475 ecr 2307107053], length 0
12:43:31.188318 IP maa05s15-in-f2.1e100.net.https > foreman.example.com.56532: Flags [.], ack 102, win 302, options [nop,nop,TS val 3193735475 ecr 2307107054], length 0
12:43:31.188318 IP maa05s15-in-f2.1e100.net.https > foreman.example.com.56532: Flags [F.], seq 40, ack 102, win 302, options [nop,nop,TS val 3193735475 ecr 2307107054], length 0
12:43:31.188385 IP foreman.example.com.56532 > maa05s15-in-f2.1e100.net.https: Flags [.], ack 41, win 501, options [nop,nop,TS val 2307108602 ecr 3193735475], length 0
12:43:31.188319 IP maa05s15-in-f2.1e100.net.https > foreman.example.com.56532: Flags [.], ack 103, win 302, options [nop,nop,TS val 3193735476 ecr 2307107054], length 0
12:43:31.188431 IP maa05s15-in-f2.1e100.net.https > foreman.example.com.56532: Flags [.], ack 103, win 302, options [nop,nop,TS val 3193735849 ecr 2307107427,nop,nop,sack 1 {102:103}], length 0
12:43:31.188431 IP maa05s15-in-f2.1e100.net.https > foreman.example.com.56532: Flags [F.], seq 40, ack 103, win 302, options [nop,nop,TS val 3193736076 ecr 2307107427], length 0
12:43:31.188442 IP foreman.example.com.56532 > maa05s15-in-f2.1e100.net.https: Flags [.], ack 41, win 501, options [nop,nop,TS val 2307108602 ecr 3193735849], length 0
12:43:31.188432 IP maa03s39-in-f3.1e100.net.https > foreman.example.com.49262: Flags [.], ack 142, win 269, options [nop,nop,TS val 931057795 ecr 2512730535,nop,nop,sack 1 {78:142}], length 0
12:43:31.188432 IP maa03s43-in-f14.1e100.net.https > foreman.example.com.35098: Flags [F.], seq 79, ack 142, win 271, options [nop,nop,TS val 2915331118 ecr 1541582532], length 0
12:43:31.188455 IP foreman.example.com.35098 > maa03s43-in-f14.1e100.net.https: Flags [.], ack 80, win 501, options [nop,nop,TS val 1541584571 ecr 2915329975], length 0
12:43:34.955743 ARP, Request who-has foreman.example.com tell dsldevice.lan, length 46
12:43:34.955764 ARP, Reply foreman.example.com is-at 3c:55:76:cf:20:23 (oui Unknown), length 28
^C
1440 packets captured
1790 packets received by filter
350 packets dropped by kernel
himanshu@himanshu: $
```

You can paste the image from the clipboard.

```
(SIOCGIFHWADDR: No such device)
himanshu@himanshu:~$ sudo tcpdump -D
1.wlp2s0 [Up, Running, Wireless, Associated]
2.any (Pseudo-device that captures on all interfaces) [Up, Running]
3.lo [Up, Running, Loopback]
4.br0 [Up, Disconnected]
5.virbr0 [Up, Disconnected]
6.bluetooth0 (Bluetooth adapter number 0) [Wireless, Association status unknown]
7.bluetooth-monitor (Bluetooth Linux Monitor) [Wireless]
8.nflog (Linux netfilter log (NFLOG) interface) [none]
9.nfqueue (Linux netfilter queue (NFQUEUE) interface) [none]
10.dbus-system (D-Bus system bus) [none]
11.dbus-session (D-Bus session bus) [none]
himanshu@himanshu:~$
```

```
himanshu@himanshu:~$ sudo apt-get install tcpdump
[sudo] password for himanshu:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
tcpdump is already the newest version (4.99.1-3build2).
tcpdump set to manually installed.
The following packages were automatically installed and are no longer required:
  libflashrom1 libftdi1-2 libllvm13
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
4 not fully installed or removed.
After this operation, 0 B of additional disk space will be used.
Do you want to continue? [Y/n] y
Setting up foreman (9999-3.6.0-focal+scratchbuild+20230207085823+ubuntu2004) ...
/usr/bin/foreman-ruby: No such file or directory -- /usr/bin/bundle2.7 (LoadError)
dpkg: error processing package foreman (--configure):
 installed foreman package post-installation script subprocess returned error exit status 1
dpkg: dependency problems prevent configuration of foreman-service:
 foreman-service depends on foreman (= 9999-3.6.0-focal+scratchbuild+20230207085823+ubuntu2004)
; however:
  Package foreman is not configured yet.

dpkg: error processing package foreman-service (--configure):
 dependency problems - leaving unconfigured
dpkg: dependency problems prevent configuration of foreman-postgresql:
 foreman-postgresql depends on foreman (= 9999-3.6.0-focal+scratchbuild+20230207085823+ubuntu20
04); however:
  Package foreman is not configured yet.

dpkg: error processing package foreman-postgresql (--configure):
 dependency problems - leaving unconfigured
dpkg: dependency problems prevent configuration of foreman-dynflow-sidekiq:
 foreman-dynflow-sidekiq depends on foreman (= 9999-3.6.0-focal+scratchbuild+20230207085823+ubu
ntu2004); however:
  Package foreman is not configured yet.

dpkg: error processing package foreman-dynflow-sidekiq (--configure):
 dependency problems - leaving unconfigured
No apport report written because the error message indicates its a followup error from a previo
us failure.
           No apport report written because the error message indicates its a followup error fr
om a previous failure.
                      No apport report written because MaxReports is reached already
                                                                                Errors were
 encountered while processing:
 foreman
 foreman-service
 foreman-postgresql
 foreman-dynflow-sidekiq
E: Sub-process /usr/bin/dpkg returned an error code (1)
himanshu@himanshu:~$
```