

1. Whois : whois is a client for the WHOIS directory service.

whois searches for an object in a WHOIS database. WHOIS is a query and response protocol that is widely used for querying databases that store the registered users of an Internet resource, such as a domain name or an IP address block, but is also used for a wider range of other information.

```
adminn@513-7:~$ whois linkedin.com
Domain Name: LINKEDIN.COM
Registry Domain ID: 91818680_DOMAIN_COM-VRSN
Registrar WHOIS Server: whois.markmonitor.com
Registrar URL: http://www.markmonitor.com
Updated Date: 2017-02-02T18:17:30Z
Creation Date: 2002-11-02T15:38:11Z
Registry Expiry Date: 2020-11-02T15:38:11Z
Registrar: MarkMonitor Inc.
Registrar IANA ID: 292
Registrar Abuse Contact Email: abusecomplaints@markmonitor.com
Registrar Abuse Contact Phone: +1.2083895740
Domain Status: clientDeleteProhibited https://icann.org/epp#clientDeleteProhibited
Domain Status: clientTransferProhibited https://icann.org/epp#clientTransferProhibited
Domain Status: clientUpdateProhibited https://icann.org/epp#clientUpdateProhibited
Domain Status: serverDeleteProhibited https://icann.org/epp#serverDeleteProhibited
Domain Status: serverTransferProhibited https://icann.org/epp#serverTransferProhibited
Domain Status: serverUpdateProhibited https://icann.org/epp#serverUpdateProhibited
Name Server: DNS1.P09.NSONE.NET
Name Server: DNS2.P09.NSONE.NET
Name Server: DNS3.P09.NSONE.NET
Name Server: DNS4.P09.NSONE.NET
Name Server: NS1.P43.DYNECT.NET
Name Server: NS2.P43.DYNECT.NET
Name Server: NS3.P43.DYNECT.NET
Name Server: NS4.P43.DYNECT.NET
DNSSEC: unsigned
URL of the ICANN Whois Inaccuracy Complaint Form: https://www.icann.org/wicf/
```

2. Nslookup : nslookup (which stands for name server lookup) is a network utility program used to obtain information about internet servers. As its name suggests, it finds name server information for domains by querying the Domain Name System (DNS).

```
adminn@513-7:~$ nslookup google.com
Server:          127.0.1.1
Address:         127.0.1.1#53

Non-authoritative answer:
Name:   google.com
Address: 172.217.26.238
```

3. Dig : DIG full-form/abbreviation is Domain Information Groper.

dig (domain information groper) is a flexible tool for interrogating DNS name servers. It performs DNS lookups and displays the answers that are returned from the name server(s) that were queried. Most DNS administrators use dig to troubleshoot DNS problems because of its flexibility, ease of use and clarity of output. Other lookup tools tend to have less functionality than dig.

```
adminn@513-7:~$ dig hackerrank.com
```

```
;; <<>> DiG 9.9.5-3ubuntu0.17-Ubuntu <<>> hackerrank.com
;; global options: +cmd
;; Got answer:
;; ->HEADER<- opcode: QUERY, status: NOERROR, id: 2027
;; flags: qr rd ra; QUERY: 1, ANSWER: 4, AUTHORITY: 4, ADDITIONAL: 9

;; OPT PSEUDOSECTION:
;; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
hackerrank.com.                IN      A

;; ANSWER SECTION:
hackerrank.com.                60      IN      A       54.86.114.250
hackerrank.com.                60      IN      A       18.210.114.237
hackerrank.com.                60      IN      A       54.86.231.248
hackerrank.com.                60      IN      A       52.44.218.214

;; AUTHORITY SECTION:
hackerrank.com.                109098  IN      NS      ns-431.awsdns-53.com.
hackerrank.com.                109098  IN      NS      ns-525.awsdns-01.net.
hackerrank.com.                109098  IN      NS      ns-1691.awsdns-19.co.uk.
hackerrank.com.                109098  IN      NS      ns-1314.awsdns-36.org.

;; ADDITIONAL SECTION:
ns-1314.awsdns-36.org.         104913  IN      A       205.251.197.34
ns-1314.awsdns-36.org.         104913  IN      AAAA    2600:9000:5305:2200::1
ns-1691.awsdns-19.co.uk.       104933  IN      A       205.251.198.155
ns-1691.awsdns-19.co.uk.       104933  IN      AAAA    2600:9000:5306:9b00::1
ns-431.awsdns-53.com.          34220   IN      A       205.251.193.175
ns-431.awsdns-53.com.          34220   IN      AAAA    2600:9000:5301:af00::1
ns-525.awsdns-01.net.          104886  IN      A       205.251.194.13
ns-525.awsdns-01.net.          104886  IN      AAAA    2600:9000:5302:d00::1

;; Query time: 6 msec
;; SERVER: 127.0.1.1#53(127.0.1.1)
;; WHEN: Thu Aug 30 09:58:37 IST 2018
;; MSG SIZE rcvd: 420
```

4. Host : DNS lookup (and reverse lookup) utility.

host hen no arguments or options are given, host prints a short summary of its command line arguments and options.

```
adminn@513-7:~$ host google.com
google.com has address 172.217.26.238
google.com has IPv6 address 2404:6800:4009:805::200e
google.com mail is handled by 20 alt1.aspmx.l.google.com.
google.com mail is handled by 10 aspmx.l.google.com.
google.com mail is handled by 50 alt4.aspmx.l.google.com.
google.com mail is handled by 40 alt3.aspmx.l.google.com.
google.com mail is handled by 30 alt2.aspmx.l.google.com.
adminn@513-7:~$ █
```

5. Traceroute : Traceroute is a utility that records the route (the specific gateway computers at each hop) through the Internet between your computer and a specified destination computer. It also calculates and displays the amount of time each hop took. Another utility, PING, is often used prior to using traceroute to see whether a host is present on the network.

```
adminn@513-7:~$ traceroute internshala.com
```

```
traceroute to internshala.com (52.66.171.215), 30 hops max, 60 byte packets
```

```
 1 192.168.32.1 (192.168.32.1) 0.252 ms 0.247 ms 0.273 ms
 2 103.197.221.161 (103.197.221.161) 0.752 ms 0.749 ms 0.759 ms
 3 103.197.223.17 (103.197.223.17) 2.782 ms 2.779 ms 2.796 ms
 4 * * 125-234-14-103.intechonline.net (103.14.234.125) 5.066 ms
 5 103.77.152.30 (103.77.152.30) 4.554 ms 4.533 ms 4.109 ms
 6 52.95.67.154 (52.95.67.154) 5.986 ms 52.95.67.66 (52.95.67.66) 13.059 ms 52.95.67.88 (52.95.67.88) 3.901 ms
 7 52.95.67.83 (52.95.67.83) 3.612 ms 52.95.67.61 (52.95.67.61) 3.898 ms 52.95.67.17 (52.95.67.17) 3.882 ms
 8 52.95.67.178 (52.95.67.178) 3.922 ms 52.95.67.182 (52.95.67.182) 6.836 ms 6.843 ms
 9 + + +
```