Name:Anamul Haque

ID:IT-18037

Ping:

Ping is a computer network administration software utility used to test the reachability of a host on an Internet Protocol (IP) network. It is available for virtually all operating systems that have networking capability, including most embedded network administration software.

Ping measures the round-trip time for messages sent from the originating host to a destination

computer that are echoed back to the source. The name comes from active sonar terminology that sends a pulse of sound and listens for the echo to detect objects under water.

```
anamul@anamul-VirtualBox:~$ ping
Usage: ping [-aAbBdDfhLnOqrRUvV64] [-c count] [-i interval] [-I interface]
            [-m mark] [-M pmtudisc_option] [-l preload] [-p pattern] [-Q tos]
            [-s packetsize] [-S sndbuf] [-t ttl] [-T timestamp_option]
            [-w deadline] [-W timeout] [hop1 ...] destination
Usage: ping -6 [-aAbBdDfhLnOqrRUvV] [-c count] [-i interval] [-I interface]
             [-l preload] [-m mark] [-M pmtudisc_option]
             [-N nodeinfo_option] [-p pattern] [-Q tclass] [-s packetsize]
             [-S sndbuf] [-t ttl] [-T timestamp_option] [-w deadline]
             [-W timeout] destination
anamul@anamul-VirtualBox:~$
```

Dig:

dig is a network administration command-line tool for querying the Domain Name System(DNS). dig is useful for network troubleshooting and for educational purposes. It can operate based on command line option and flag arguments, or in batch mode by reading requests from an operating system file. When a specific name server is not specified in the command invocation, it uses the operating system's default resolver, usually configured in the file resolv.conf. Without

any arguments it queries the DNS root zone.

dig supports Internationalized domain name (IDN) queries.

```
anamul@anamul-VirtualBox:~$ dig google.com

; <<>> DiG 9.11.3-1ubuntu1.3-Ubuntu <<>> google.com
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 18431
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;google.com.                    IN      A

;; ANSWER SECTION:
google.com.             61      IN      A       142.250.76.46

;; Query time: 10 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Wed Nov 25 09:25:43 EST 2020
;; MSG SIZE  rcvd: 55

anamul@anamul-VirtualBox:~$
```

IP Address:

An **Internet Protocol address** (**IP address**) is a numerical label assigned to each device connected to a computer network that uses the Internet Protocol for communication. An IP address serves two main functions: host or network interface identification and location addressing

Internet Protocol version 4(IPv4) defines an IP address as a 32-bit number.[2] However, because of the growth of the Internet and the depletion of available IPv4 addresses a new version of IP (IPv6, using 128 bits for the IP address, was standardized in 1998.IPv6 deployment has been ongoing since the mid-2000s.

IP addresses are written and displayed in human-readable notations, such as *172.16.254.1* in IPv4, and *2001:db8:0:1234:0:567:8:1* in IPv6. The size of the routing prefix of the address is designated in CIDR notation by suffixing the address with the number of significant

bitse.g., *192.168.1.15/24*, which is equivalent to the historically used subne mask *255.255.255.0*.

```
anamul@anamul-VirtualBox:~$ ip address
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group defau
lt qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP g
roup default qlen 1000
    link/ether 08:00:27:70:2c:97 brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
       valid_lft 85209sec preferred_lft 85209sec
    inet6 fe80::bbe:da5e:b17e:7c7d/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
anamul@anamul-VirtualBox:~$
```

tracepath:

`traceroute` and `tracert` are computer network diagnostic commands for displaying possible routes (paths) and measuring transit delays of packets across an Internet Protocol(IP) network. The history of the route is recorded as the round-trip times of the packets received from each successive host (remote node) in the route (path); the sum of the mean times in each hop is a measure of the total time spent to establish the connection. Traceroute proceeds unless all (usually three) sent packets are lost more than twice; then the connection is lost and the route cannot be evaluated. Pingon the other hand, only computes the final round-trip times from the destination point.

```
anamul@anamul-VirtualBox:~$ tracepath google.com
 1?: [LOCALHOST]                      pmtu 1500
 1:  _gateway                                              1.071ms
 1:  _gateway                                              0.510ms
 2:  no reply
 3:  _gateway                                             51.754ms !N
     Resume: pmtu 1500
anamul@anamul-VirtualBox:~$
```

Host name:

The "www." before the domain name is (often) a name of a host, so you would have to change your DNS records (the A record, I think) to include a server named "www". So "www"

does **not** mean anything special, and is not possible to just write "www." before. You have to name some computer "www". It is a common misthough (or mistake) to think that "www" is special in any kind other than it is often used as the left-most part of a Domain name for a web

host. So dns://www.mysite.webhoster.com would either point to the same site (configure youre DNS records to make www point to same IP address or redirect to dns://mysite.webhoster.com.

There isn't always possible to write "www." at the beginning og the domain name, not even at the third stage (for example http://linux.org/ and http://www.linux.org/ point to different webpages). —

Preceding unsigned comment added by SvartMan (talk • contribs 17:54, 18 February 2009 (UTC)

```
anamul@anamul-VirtualBox:~$ hostname
anamul-VirtualBox
anamul@anamul-VirtualBox:~$
```

twconfig:

The presence of a `tsconfig.json` file in a directory indicates that the directory is the root of a TypeScript project. The `tsconfig.json` file specifies the root files and the compiler options required to compile the project.

JavaScript projects can use a `jsconfig.json` file instead, which acts almost the same but has some JavaScript-related compiler flags enabled by default.

```
anamul@anamul-VirtualBox:~$ iwconfig
enp0s3    no wireless extensions.

lo        no wireless extensions.

anamul@anamul-VirtualBox:~$
```

W:

w command in **Linux** is used to show who is logged on and what they are doing. This command shows the information about the users currently on the machine and their

processes. ... The PCPU time is the time used by the current process, named in the “what” field

```
anamul@anamul-VirtualBox:~$ w
 09:36:21 up 28 min,  1 user,  load average: 0.02, 0.03, 0.08
USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
anamul   :0       :0               09:09    ?xdm?  22.13s  0.01s /usr/lib/gdm3/
anamul@anamul-VirtualBox:~$
```

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.

```
anamul@anamul-VirtualBox:~$ wget https://www.google.com
--2020-11-25 09:39:42--  https://www.google.com/
Resolving www.google.com (www.google.com)... 172.217.163.68, 2404:6800:4007:815
::2004
Connecting to www.google.com (www.google.com)|172.217.163.68|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: unspecified [text/html]
Saving to: 'index.html'

index.html              [ <=>                ]  14.62K  --.-KB/s    in 0.001s

2020-11-25 09:39:42 (26.6 MB/s) - 'index.html' saved [14975]

anamul@anamul-VirtualBox:~$
```

whois:

In **Linux**, the **whois** command line utility is a **WHOIS** client for communicating with

the **WHOIS** server (or database host) which listen to requests on the well-known port

number 43, which stores and delivers database content in a human-readable format.

```
anamul@anamul-VirtualBox:~$ sudo apt install whois
[sudo] password for anamul:
Reading package lists... Done
Building dependency tree
Reading state information... Done
Package whois is not available, but is referred to by another package.
This may mean that the package is missing, has been obsoleted, or
is only available from another source

E: Package 'whois' has no installation candidate
anamul@anamul-VirtualBox:~$
```