

Ping:

Ping uses the ICMP protocol's mandatory ECHO_REQUEST datagram to elicit an ICMP ECHO_RESPONSE from a host or gateway. ECHO_REQUEST datagrams ("pings") have an IP and ICMP header, followed by a struct timeval and then an arbitrary number of "pad" bytes used to fill out the packet.

```
[AfrinZamanRima@webminal.org ~]$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
```

```
[AfrinZamanRima@webminal.org ~]$sudo apt update
```

```
Err:1 http://us.archive.ubuntu.com/ubuntu bionic InRelease
  Could not resolve 'us.archive.ubuntu.com'
Err:2 http://dl.google.com/linux/chrome/deb stable InRelease
  Could not resolve 'dl.google.com'
Err:3 http://security.ubuntu.com/ubuntu bionic-security InRelease
  Could not resolve 'security.ubuntu.com'
Err:4 http://us.archive.ubuntu.com/ubuntu bionic-updates InRelease
  Could not resolve 'us.archive.ubuntu.com'
Err:5 http://us.archive.ubuntu.com/ubuntu bionic-backports InRelease
  Could not resolve 'us.archive.ubuntu.com'
Err:6 http://ppa.launchpad.net/danielrichter2007/grub-customizer/ubuntu bionic InRelease
  Could not resolve 'ppa.launchpad.net'
Reading package lists... Done
Building dependency tree
Reading state information... Done
388 packages can be upgraded. Run 'apt list --upgradable' to see them.
W: Failed to fetch http://us.archive.ubuntu.com/ubuntu/dists/bionic/InRelease Could not resolve 'us.archive.ubuntu.com'
W: Failed to fetch http://us.archive.ubuntu.com/ubuntu/dists/bionic-updates/InRelease Could not resolve 'us.archive.ubuntu.com'
W: Failed to fetch http://us.archive.ubuntu.com/ubuntu/dists/bionic-backports/InRelease Could not resolve 'us.archive.ubuntu.com'
W: Failed to fetch http://security.ubuntu.com/ubuntu/dists/bionic-security/InRelease Could not resolve 'security.ubuntu.com'
W: Failed to fetch http://ppa.launchpad.net/danielrichter2007/grub-customizer/ubuntu/dists/bionic/InRelease Could not resolve 'ppa.launchpad.net'
W: Failed to fetch http://dl.google.com/linux/chrome/deb/dists/stable/InRelease Could not resolve 'dl.google.com'
W: Some index files failed to download. They have been ignored, or old ones used instead.
```

sudo apt upgrade:

The sudo apt-get update command is used to download package information from all configured sources. The sources often defined in /etc/apt/sources.list file and other files located in /etc/apt/sources.

```
[AfrinZamanRima@webminal.org ~]$sudo apt upgrade
```

[illegible]

```

Do you want to continue? [Y/n] y
Err:1 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 base-files amd64 10.1ubuntu2.10
  Could not resolve 'us.archive.ubuntu.com'
Ign:2 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 bsdutils amd64 1:2.31.1-0.4ubuntu3.7
Err:3 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 dpkg amd64 1.19.0.5ubuntu2.3
  Could not resolve 'us.archive.ubuntu.com'
Err:4 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 initramfs-tools-bin amd64 0.130ubuntu3.11
  Could not resolve 'us.archive.ubuntu.com'
Ign:5 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 initramfs-tools-core all 0.130ubuntu3.11
Ign:6 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 initramfs-tools all 0.130ubuntu3.11
Err:7 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libext2fs2 amd64 1.44.1-1ubuntu1.3
  Could not resolve 'us.archive.ubuntu.com'
Ign:8 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 e2fsprogs amd64 1.44.1-1ubuntu1.3
Ign:9 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 busybox-initramfs amd64 1:1.27.2-2ubuntu3.3
Ign:10 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 cpio amd64 2.12+dfsg-6ubuntu0.18.04.1
Err:11 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 kmod amd64 24-1ubuntu3.5
  Could not resolve 'us.archive.ubuntu.com'
Err:12 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libknod2 amd64 24-1ubuntu3.5
  Could not resolve 'us.archive.ubuntu.com'
Ign:13 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 linux-base all 4.5ubuntu1.2
Err:14 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 grep amd64 3.1-2build1
  Could not resolve 'us.archive.ubuntu.com'
Err:2 http://security.ubuntu.com/ubuntu bionic-updates/main amd64 bsdutils amd64 1:2.31.1-0.4ubuntu3.7
  Could not resolve 'us.archive.ubuntu.com'
Ign:15 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libperl5.26 amd64 5.26.1-6ubuntu0.5
Ign:16 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 perl amd64 5.26.1-6ubuntu0.5
Err:7 http://security.ubuntu.com/ubuntu bionic-updates/main amd64 libext2fs2 amd64 1.44.1-1ubuntu1.3
  Could not resolve 'us.archive.ubuntu.com'
Err:8 http://security.ubuntu.com/ubuntu bionic-updates/main amd64 e2fsprogs amd64 1.44.1-1ubuntu1.3
  Could not resolve 'us.archive.ubuntu.com'
Ign:17 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 perl-base amd64 5.26.1-6ubuntu0.5
Ign:18 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 perl-modules-5.26 all 5.26.1-6ubuntu0.5
Err:9 http://security.ubuntu.com/ubuntu bionic-updates/main amd64 busybox-initramfs amd64 1:1.27.2-2ubuntu3.3
  Could not resolve 'us.archive.ubuntu.com'
Ign:19 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libuuid1 amd64 2.31.1-0.4ubuntu3.7
Err:10 http://security.ubuntu.com/ubuntu bionic-updates/main amd64 cpio amd64 2.12+dfsg-6ubuntu0.18.04.1
  Could not resolve 'us.archive.ubuntu.com'
Ign:20 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libblkid1 amd64 2.31.1-0.4ubuntu3.7
Err:15 http://security.ubuntu.com/ubuntu bionic-updates/main amd64 libperl5.26 amd64 5.26.1-6ubuntu0.5
  Could not resolve 'us.archive.ubuntu.com'
Ign:21 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libfdisk1 amd64 2.31.1-0.4ubuntu3.7
Err:16 http://security.ubuntu.com/ubuntu bionic-updates/main amd64 perl amd64 5.26.1-6ubuntu0.5
  Could not resolve 'us.archive.ubuntu.com'
Ign:22 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libmount1 amd64 2.31.1-0.4ubuntu3.7
Err:17 http://security.ubuntu.com/ubuntu bionic-updates/main amd64 perl-base amd64 5.26.1-6ubuntu0.5
  Could not resolve 'us.archive.ubuntu.com'
Ign:23 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libsmartcols1 amd64 2.31.1-0.4ubuntu3.7
Err:19 http://security.ubuntu.com/ubuntu bionic-updates/main amd64 libuuid1 amd64 2.31.1-0.4ubuntu3.7
  Could not resolve 'us.archive.ubuntu.com'

```

Curl-version:

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).

```
[AfrinZamanRima@webminal.org ~]$curl -version
```

Command 'curl' not found, but can be installed with:

```
sudo apt install curl
```

```
[AfrinZamanRima@webminal.org ~]$curl http://www.javatpoint.com/linux-
```

```
Command 'curl' not found, but can be installed with:
```

tutorial

```
sudo apt install curl
```

wget:

wget is a robust **command** line application for downloading URL-specified resources. It was designed to work excellently even when connections are poor. Its unique feature, compared to curl which ships with macOS, for example, is that it is non-interactive so it can run in the background.

```
[AfrinZamanRima@webminal.org ~]$wget
```

<https://cdn.kernel.org/pub/linux/linux-4.17.2.tar.xz>

```
--2020-11-22 03:12:36-- https://cdn.kernel.org/pub/linux/kernel/v4.x/linux-4.17.2.tar.xz
```

```
--2020-11-13 07:42:58-- https://cdn.kernel.org/pub/linux/kernel/v4.x/linux-4.17.2.tar.xz
Resolving cdn.kernel.org (cdn.kernel.org)... 151.101.9.176, 2a04:4e42:2::1432
Connecting to cdn.kernel.org (cdn.kernel.org)|151.101.9.176|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 102167060 (97M) [application/x-xz]
Saving to: 'linux-4.17.2.tar.xz'
```

```
linux-4.17.2.tar.xz
```

0%[

119.16K 13.1KB/s eta 3d 16h

Tc:

The Traffic Control command (**tc**) is a tool that every network admin should know. What **tc** does is allow the admin to configure the kernel packet schedule to either simulate packet delay and loss for UDP/TCP applications or to limit bandwidth usage for a specific service.

```
[AfrinZamanRima@webminal.org ~]$tc
Usage: tc [ OPTIONS ] OBJECT { COMMAND | help }
       tc [-force] [-OK] -batch filename
where  OBJECT := { qdisc | class | filter | action | monitor }
       OPTIONS := { -s[tatistics] | -d[etails] | -r[aw] | -p[retty] | -b[atch] [filena
me] | -n[etns] name }
[AfrinZamanRima@webminal.org ~]$dig
```

```
; <<>> DiG 9.11.3-1ubuntu1.8-Ubuntu <<>>
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: SERVFAIL, id: 58050
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
;; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;; .                                IN      NS

;; Query time: 0 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Sun Nov 22 03:17:09 +06 2020
;; MSG SIZE rcvd: 28
```

WHOIS:

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.

```
[AfrinZamanRima@webminal.org ~]$whois
```



```
Usage: whois [OPTION]... OBJECT...

-h HOST, --host HOST    connect to server HOST
-p PORT, --port PORT    connect to PORT
-H                      hide legal disclaimers
    --verbose           explain what is being done
    --help              display this help and exit
    --version           output version information and exit

These flags are supported by whois.ripe.net and some RIPE-like servers:
-l                      find the one level less specific match
-L                      find all levels less specific matches
-m                      find all one level more specific matches
-M                      find all levels of more specific matches
-c                      find the smallest match containing a mnt-irt attribute
-x                      exact match
-b                      return brief IP address ranges with abuse contact
-B                      turn off object filtering (show email addresses)
-G                      turn off grouping of associated objects
-d                      return DNS reverse delegation objects too
-i ATTR[,ATTR]...      do an inverse look-up for specified ATTRibutes
-T TYPE[,TYPE]...      only look for objects of TYPE
-K                      only primary keys are returned
-r                      turn off recursive look-ups for contact information
-R                      force to show local copy of the domain object even
                        if it contains referral
-a                      also search all the mirrored databases
-s SOURCE[,SOURCE]...  search the database mirrored from SOURCE
-g SOURCE:FIRST-LAST   find updates from SOURCE from serial FIRST to LAST
-t TYPE                request template for object of TYPE
-v TYPE                request verbose template for object of TYPE
-q [version|sources|types] query specified server info
```

SSH:

ssh command consists of 3 different parts:

- **ssh command** instructs the system to establish an encrypted secure connection with the host machine.
- **user_name** represents the account that is being accessed on the host.
- **host** refers to the machine which can be a computer or a router that is being accessed.

```
[AfrinZamanRima@webminal.org ~]$ssh
usage: ssh [-1246AaCfGKkMnQsTtVvXxYy] [-b bind_address] [-c cipher_spec]
          [-D [bind_address:]port] [-E log_file] [-e escape_char]
          [-F configfile] [-I pkcs11] [-i identity_file]
          [-L [bind_address:]port:host:hostport] [-l login_name] [-m mac_spec]
          [-O ctl_cmd] [-o option] [-p port]
          [-Q cipher | cipher-auth | mac | kex | key]
          [-R [bind_address:]port:host:hostport] [-S ctl_path] [-W host:port]
          [-w local_tun[:remote_tun]] [user@]hostname [command]
```

```
[AfrinZamanRima@webminal.org ~]$scp
usage: scp [-12346BCpqrV] [-c cipher] [-F ssh_config] [-i identity_file]
          [-l limit] [-o ssh_option] [-P port] [-S program]
          [[user@]host1:]file1 ... [[user@]host2:]file2
```

rsync:

Rsync (Remote Sync) is a most commonly used command for copying and synchronizing files and directories remotely as well as locally in Linux/Unix systems.

```
[AfrinZamanRima@webminal.org ~]$rsync
rsync version 3.0.9 protocol version 30
Copyright (C) 1996-2011 by Andrew Tridgell, Wayne Davison, and others.
Web site: http://rsync.samba.org/
```

Capabilities:

64-bit files, 64-bit inums, 64-bit timestamps, 64-bit long ints,
socketpairs, hardlinks, symlinks, IPv6, batchfiles, inplace,
append, ACLs, xattrs, iconv, symtimes

rsync comes with ABSOLUTELY NO WARRANTY. This is free software, and you
are welcome to redistribute it under certain conditions. See the GNU
General Public Licence for details.

rsync is a file transfer program capable of efficient remote update
via a fast differencing algorithm.

```
Usage: rsync [OPTION]... SRC [SRC]... DEST
or rsync [OPTION]... SRC [SRC]... [USER@]HOST:DEST
or rsync [OPTION]... SRC [SRC]... [USER@]HOST::DEST
or rsync [OPTION]... SRC [SRC]... rsync://[USER@]HOST[:PORT]/DEST
or rsync [OPTION]... [USER@]HOST:SRC [DEST]
or rsync [OPTION]... [USER@]HOST::SRC [DEST]
or rsync [OPTION]... rsync://[USER@]HOST[:PORT]/SRC [DEST]
```

The ':' usages connect via remote shell, while '::' & 'rsync:/' usages connect
to an rsync daemon, and require SRC or DEST to start with a module name.

Options

-v, --verbose	increase verbosity
-q, --quiet	suppress non-error messages
--no-motd	suppress daemon-mode MOTD (see manpage caveat)
-c, --checksum	skip based on checksum, not mod-time & size
-a, --archive	archive mode; equals -rlptgoD (no -H,-A,-X)
--no-OPTION	turn off an implied OPTION (e.g. --no-D)
-r, --recursive	recurse into directories

-R, --relative	use relative path names
--no-implied-dirs	don't send implied dirs with --relative
-b, --backup	make backups (see --suffix & --backup-dir)
--backup-dir=DIR	make backups into hierarchy based in DIR
--suffix=SUFFIX	set backup suffix (default ~ w/o --backup-dir)
-u, --update	skip files that are newer on the receiver
--inplace	update destination files in-place (SEE MAN PAGE)
--append	append data onto shorter files
--append-verify	like --append, but with old data in file checksum
-d, --dirs	transfer directories without recursing
-l, --links	copy symlinks as symlinks
-L, --copy-links	transform symlink into referent file/dir
--copy-unsafe-links	only "unsafe" symlinks are transformed
--safe-links	ignore symlinks that point outside the source tree
-k, --copy-dirlinks	transform symlink to a dir into referent dir
-K, --keep-dirlinks	treat symlinked dir on receiver as dir
-H, --hard-links	preserve hard links
-p, --perms	preserve permissions
-E, --executability	preserve the file's executability
--chmod=CHMOD	affect file and/or directory permissions
-A, --acls	preserve ACLs (implies --perms)
-X, --xattrs	preserve extended attributes
-o, --owner	preserve owner (super-user only)
-g, --group	preserve group
--devices	preserve device files (super-user only)
--copy-devices	copy device contents as regular file
--specials	preserve special files
-D	same as --devices --specials
-t, --times	preserve modification times
-O, --omit-dir-times	omit directories from --times
--super	receiver attempts super-user activities
--fake-super	store/recover privileged attrs using xattrs
-S, --sparse	handle sparse files efficiently
-n, --dry-run	perform a trial run with no changes made

-W, --whole-file	copy files whole (without delta-xfer algorithm)
-x, --one-file-system	don't cross filesystem boundaries
-B, --block-size=SIZE	force a fixed checksum block-size
-e, --rsh=COMMAND	specify the remote shell to use
--rsync-path=PROGRAM	specify the rsync to run on the remote machine
--existing	skip creating new files on receiver
--ignore-existing	skip updating files that already exist on receiver
--remove-source-files	sender removes synchronized files (non-dirs)
--del	an alias for --delete-during
--delete	delete extraneous files from destination dirs
--delete-before	receiver deletes before transfer, not during
--delete-during	receiver deletes during the transfer
--delete-delay	find deletions during, delete after
--delete-after	receiver deletes after transfer, not during
--delete-excluded	also delete excluded files from destination dirs
--ignore-errors	delete even if there are I/O errors
--force	force deletion of directories even if not empty
--max-delete=NUM	don't delete more than NUM files
--max-size=SIZE	don't transfer any file larger than SIZE
--min-size=SIZE	don't transfer any file smaller than SIZE
--partial	keep partially transferred files
--partial-dir=DIR	put a partially transferred file into DIR
--delay-updates	put all updated files into place at transfer's end
-m, --prune-empty-dirs	prune empty directory chains from the file-list
--numeric-ids	don't map uid/gid values by user/group name
--timeout=SECONDS	set I/O timeout in seconds
--contimeout=SECONDS	set daemon connection timeout in seconds
-I, --ignore-times	don't skip files that match in size and mod-time
--size-only	skip files that match in size
--modify-window=NUM	compare mod-times with reduced accuracy
-T, --temp-dir=DIR	create temporary files in directory DIR
-y, --fuzzy	find similar file for basis if no dest file
--compare-dest=DIR	also compare destination files relative to DIR
--copy-dest=DIR	... and include copies of unchanged files

	--link-dest=DIR	hardlink to files in DIR when unchanged
-z,	--compress	compress file data during the transfer
	--compress-level=NUM	explicitly set compression level
	--skip-compress=LIST	skip compressing files with a suffix in LIST
-C,	--cvs-exclude	auto-ignore files the same way CVS does
-f,	--filter=RULE	add a file-filtering RULE
-F		same as --filter='dir-merge /.rsync-filter'
		repeated: --filter='- .rsync-filter'
	--exclude=PATTERN	exclude files matching PATTERN
	--exclude-from=FILE	read exclude patterns from FILE
	--include=PATTERN	don't exclude files matching PATTERN
	--include-from=FILE	read include patterns from FILE
	--files-from=FILE	read list of source-file names from FILE
-0,	--from0	all *-from/filter files are delimited by 0s
-s,	--protect-args	no space-splitting; only wildcard special-chars
	--address=ADDRESS	bind address for outgoing socket to daemon
	--port=PORT	specify double-colon alternate port number
	--sockopts=OPTIONS	specify custom TCP options
	--blocking-io	use blocking I/O for the remote shell
	--stats	give some file-transfer stats
-8,	--8-bit-output	leave high-bit chars unescaped in output
-h,	--human-readable	output numbers in a human-readable format
	--progress	show progress during transfer
-P		same as --partial --progress
-i,	--itemize-changes	output a change-summary for all updates
	--out-format=FORMAT	output updates using the specified FORMAT
	--log-file=FILE	log what we're doing to the specified FILE
	--log-file-format=FMT	log updates using the specified FMT
	--password-file=FILE	read daemon-access password from FILE
	--list-only	list the files instead of copying them
	--bwlimit=KBPS	limit I/O bandwidth; KBytes per second
	--write-batch=FILE	write a batched update to FILE
	--only-write-batch=FILE	like --write-batch but w/o updating destination
	--read-batch=FILE	read a batched update from FILE

```

password=FILE=FILE read daemon access password from FILE
--list-only          list the files instead of copying them
--bwlimit=KBPS       limit I/O bandwidth; KBytes per second
--write-batch=FILE   write a batched update to FILE
--only-write-batch=FILE like --write-batch but w/o updating destination
--read-batch=FILE     read a batched update from FILE
--protocol=NUM       force an older protocol version to be used
--iconv=CONVERT_SPEC request charset conversion of filenames
--checksum-seed=NUM  set block/file checksum seed (advanced)
-4, --ipv4           prefer IPv4
-6, --ipv6           prefer IPv6
--version            print version number
(-h) --help          show this help (-h is --help only if used alone)

Use "rsync --daemon --help" to see the daemon-mode command-line options.
Please see the rsync(1) and rsyncd.conf(5) man pages for full documentation.
See http://rsync.samba.org/ for updates, bug reports, and answers
rsync error: syntax or usage error (code 1) at main.c(1420) [client=3.0.9]
[AfrinZamanRima@webminal.org ~]$

```

Ngrep:

'ngrep' is packet analyzer or packet sniffer which is used to monitor network traffic. ngrep also can be used to capture traffic on the wire and store pcap dump files, or to read files generated by other sniffer applications, like tcpdump, or Wireshark. ngrep has various options or command line arguments.

```

-H, --hard-links      preserve hard links
-p, --perms           preserve permissions
-E, --executability   preserve the file's executability
    --chmod=CHMOD     affect file and/or directory permissions
-A, --acls            preserve ACLs (implies --perms)
-X, --xattrs          preserve extended attributes
-o, --owner            preserve owner (super-user only)
-g, --group           preserve group
    --devices         preserve device files (super-user only)
    --copy-devices    copy device contents as regular file
    --specials        preserve special files
-D                   same as --devices --specials
-t, --times           preserve modification times
-O, --omit-dir-times  omit directories from --times
-J, --omit-link-times omit symlinks from --times
    --super           receiver attempts super-user activities
    --fake-super      store/recover privileged attrs using xattrs
-S, --sparse          handle sparse files efficiently
    --preallocate     allocate dest files before writing them
-n, --dry-run         perform a trial run with no changes made
-W, --whole-file      copy files whole (without delta-xfer algorithm)
-x, --one-file-system don't cross filesystem boundaries
-B, --block-size=SIZE force a fixed checksum block-size
-e, --rsh=COMMAND     specify the remote shell to use
    --rsync-path=PROGRAM specify the rsync to run on the remote machine
    --existing         skip creating new files on receiver
    --ignore-existing  skip updating files that already exist on receiver
    --remove-source-files sender removes synchronized files (non-dirs)
    --del             an alias for --delete-during
    --delete          delete extraneous files from destination dirs
    --delete-before   receiver deletes before transfer, not during
    --delete-during   receiver deletes during the transfer
    --delete-delay    find deletions during, delete after
    --delete-after    receiver deletes after transfer, not during

```

update:

The `sudo apt-get update` command is used to download package information from all configured sources. The sources often defined in `/etc/apt/sources.list` file and other files located in `/etc/apt/sources`. ... So when you run update command, it downloads the package information from the Internet.


```

Err:1 http://us.archive.ubuntu.com/ubuntu bionic InRelease
       Could not resolve 'us.archive.ubuntu.com'
Err:2 http://security.ubuntu.com/ubuntu bionic-security InRelease
       Could not resolve 'security.ubuntu.com'
Err:3 http://ppa.launchpad.net/danielrichter2007/grub-customizer/ubuntu bionic InRelease
       Could not resolve 'ppa.launchpad.net'
Err:4 http://us.archive.ubuntu.com/ubuntu bionic-updates InRelease
       Could not resolve 'us.archive.ubuntu.com'
Err:5 http://us.archive.ubuntu.com/ubuntu bionic-backports InRelease
       Could not resolve 'us.archive.ubuntu.com'
Err:6 http://dl.google.com/linux/chrome/deb stable InRelease
       Could not resolve 'dl.google.com'
Reading package lists... Done
Building dependency tree
Reading state information... Done
388 packages can be upgraded. Run 'apt list --upgradable' to see them.
W: Failed to fetch http://us.archive.ubuntu.com/ubuntu/dists/bionic/InRelease Could not resolve 'us.archive.ubuntu.com'
W: Failed to fetch http://us.archive.ubuntu.com/ubuntu/dists/bionic-updates/InRelease Could not resolve 'us.archive.ubuntu.com'
W: Failed to fetch http://us.archive.ubuntu.com/ubuntu/dists/bionic-backports/InRelease Could not resolve 'us.archive.ubuntu.com'
W: Failed to fetch http://security.ubuntu.com/ubuntu/dists/bionic-security/InRelease Could not resolve 'security.ubuntu.com'
W: Failed to fetch http://ppa.launchpad.net/danielrichter2007/grub-customizer/ubuntu/dists/bionic/InRelease Could not resolve 'ppa.launchpad.net'
W: Failed to fetch http://dl.google.com/linux/chrome/deb/dists/stable/InRelease Could not resolve 'dl.google.com'
W: Some index files failed to download. They have been ignored, or old ones used instead.

```

[AfrinZamanRima@webminal.org ~]\$sudo apt update wireshark

```

Reading package lists... Done
Building dependency tree
Reading state information... Done

```

```

Reading state information... Done
The following additional packages will be installed:
  libc-ares2 libmaxminddb0 libnl-route-3-200 libqstools-p1 libqt5multimedia5
  libqt5multimedia5-plugins libqt5multimediawidgets5 libqt5opengl5
  libqt5sprintsupport5 libsmi2ldbl libwireshark-data libwireshark11 libwiretap8
  libwscodec2 libwsutil9 wireshark-common wireshark-qt
Suggested packages:
  mmdb-bin snmp-mibs-downloader wireshark-doc
The following NEW packages will be installed:
  libc-ares2 libmaxminddb0 libnl-route-3-200 libqstools-p1 libqt5multimedia5
  libqt5multimedia5-plugins libqt5multimediawidgets5 libqt5opengl5
  libqt5sprintsupport5 libsmi2ldbl libwireshark-data libwireshark11 libwiretap8
  libwscodec2 libwsutil9 wireshark-common wireshark-qt
0 upgraded, 18 newly installed, 0 to remove and 0 not upgraded.
Need to get 20.3 MB of archives.
After this operation, 106 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://us.archive.ubuntu.com/ubuntu bionic/universe amd64 libmaxminddb0 amd64 1.3.1-1 [25.6 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 libnl-route-3-200 amd64 3.2.29-0ubuntu3 [146 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu bionic/universe amd64 libqt5multimedia5 amd64 5.9.5-0ubuntu1 [293 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libqt5opengl5 amd64 5.9.5+dfsg-0ubuntu2.5 [132 kB]
Get:5 http://us.archive.ubuntu.com/ubuntu bionic/universe amd64 libqt5multimediawidgets5 amd64 5.9.5-0ubuntu1 [36.6 kB]
Get:6 http://us.archive.ubuntu.com/ubuntu bionic/universe amd64 libqstools-p1 amd64 5.9.5-0ubuntu1 [72.4 kB]
Get:7 http://us.archive.ubuntu.com/ubuntu bionic/universe amd64 libqt5multimedia5-plugins amd64 5.9.5-0ubuntu1 [194 kB]
Get:8 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libqt5sprintsupport5 amd64 5.9.5+dfsg-0ubuntu2.5 [178 kB]
Get:9 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 libsmi2ldbl amd64 0.4.8+dfsg2-15 [100 kB]
Get:10 http://us.archive.ubuntu.com/ubuntu bionic-updates/universe amd64 libwireshark-data all 2.6.10-1-ubuntu18.04.0 [1,425 kB]
Get:11 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 libc-ares2 amd64 1.14.0-1 [37.1 kB]
Get:12 http://us.archive.ubuntu.com/ubuntu bionic-updates/universe amd64 libwsutil9 amd64 2.6.10-1-ubuntu18.04.0 [55.5 kB]
Get:13 http://us.archive.ubuntu.com/ubuntu bionic-updates/universe amd64 libwiretap8 amd64 2.6.10-1-ubuntu18.04.0 [177 kB]
Get:14 http://us.archive.ubuntu.com/ubuntu bionic-updates/universe amd64 libwscodec2 amd64 2.6.10-1-ubuntu18.04.0 [17.8 kB]
Get:15 http://us.archive.ubuntu.com/ubuntu bionic-updates/universe amd64 libwireshark11 amd64 2.6.10-1-ubuntu18.04.0 [13.6 MB]

```


File Edit View Search Terminal Help

```
Unpacking libwireshark-data (2.6.10-1~ubuntu18.04.0) ...
Selecting previously unselected package libc-ares2:amd64.
Preparing to unpack .../10-libc-ares2_1.14.0-1_amd64.deb ...
Unpacking libc-ares2:amd64 (1.14.0-1) ...
Selecting previously unselected package libwsutil9:amd64.
Preparing to unpack .../11-libwsutil9_2.6.10-1~ubuntu18.04.0_amd64.deb ...
Unpacking libwsutil9:amd64 (2.6.10-1~ubuntu18.04.0) ...
Selecting previously unselected package libwiretap8:amd64.
Preparing to unpack .../12-libwiretap8_2.6.10-1~ubuntu18.04.0_amd64.deb ...
Unpacking libwiretap8:amd64 (2.6.10-1~ubuntu18.04.0) ...
Selecting previously unselected package libwscodecs2:amd64.
Preparing to unpack .../13-libwscodecs2_2.6.10-1~ubuntu18.04.0_amd64.deb ...
Unpacking libwscodecs2:amd64 (2.6.10-1~ubuntu18.04.0) ...
Selecting previously unselected package libwireshark11:amd64.
Preparing to unpack .../14-libwireshark11_2.6.10-1~ubuntu18.04.0_amd64.deb ...
Unpacking libwireshark11:amd64 (2.6.10-1~ubuntu18.04.0) ...
Selecting previously unselected package wireshark-common.
Preparing to unpack .../15-wireshark-common_2.6.10-1~ubuntu18.04.0_amd64.deb ...
Unpacking wireshark-common (2.6.10-1~ubuntu18.04.0) ...
Selecting previously unselected package wireshark-qt.
Preparing to unpack .../16-wireshark-qt_2.6.10-1~ubuntu18.04.0_amd64.deb ...
Unpacking wireshark-qt (2.6.10-1~ubuntu18.04.0) ...
Selecting previously unselected package wireshark.
Preparing to unpack .../17-wireshark_2.6.10-1~ubuntu18.04.0_amd64.deb ...
Unpacking wireshark (2.6.10-1~ubuntu18.04.0) ...
Setting up libnl-route-3-200:amd64 (3.2.29-0ubuntu3) ...
Setting up libqt5printsupport5:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Setting up libqt5opengl5:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Setting up libqt5multimedia5:amd64 (5.9.5-0ubuntu1) ...
Setting up libsmi2ldbl:amd64 (0.4.8+dfsg2-15) ...
Setting up libwsutil9:amd64 (2.6.10-1~ubuntu18.04.0) ...
Setting up libwireshark-data (2.6.10-1~ubuntu18.04.0) ...
Setting up libwscodecs2:amd64 (2.6.10-1~ubuntu18.04.0) ...
Setting up libc-ares2:amd64 (1.14.0-1) ...
Setting up libmaxminddb0:amd64 (1.3.1-1) ...
Setting up libqt5multimediawidgets5:amd64 (5.9.5-0ubuntu1) ...
Setting up libqgsttools-p1:amd64 (5.9.5-0ubuntu1) ...
Setting up libwiretap8:amd64 (2.6.10-1~ubuntu18.04.0) ...
```

```
Preparing to unpack .../14-libwireshark11_2.6.10-1~ubuntu18.04.0_amd64.deb ...
Unpacking libwireshark11:amd64 (2.6.10-1~ubuntu18.04.0) ...
Selecting previously unselected package wireshark-common.
Preparing to unpack .../15-wireshark-common_2.6.10-1~ubuntu18.04.0_amd64.deb ...
Unpacking wireshark-common (2.6.10-1~ubuntu18.04.0) ...
Selecting previously unselected package wireshark-qt.
Preparing to unpack .../16-wireshark-qt_2.6.10-1~ubuntu18.04.0_amd64.deb ...
Unpacking wireshark-qt (2.6.10-1~ubuntu18.04.0) ...
Selecting previously unselected package wireshark.
Preparing to unpack .../17-wireshark_2.6.10-1~ubuntu18.04.0_amd64.deb ...
Unpacking wireshark (2.6.10-1~ubuntu18.04.0) ...
Setting up libnl-route-3-200:amd64 (3.2.29-0ubuntu3) ...
Setting up libqt5priprietarysupport5:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Setting up libqt5opengl5:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Setting up libqt5multimedia5:amd64 (5.9.5-0ubuntu1) ...
Setting up libsmi2ltdb:amd64 (0.4.8+dfsg2-15) ...
Setting up libwsutil9:amd64 (2.6.10-1~ubuntu18.04.0) ...
Setting up libwireshark-data (2.6.10-1~ubuntu18.04.0) ...
Setting up libwscodect2:amd64 (2.6.10-1~ubuntu18.04.0) ...
Setting up libc-ares2:amd64 (1.14.0-1) ...
Setting up libmaxminddb0:amd64 (1.3.1-1) ...
Setting up libqt5multimediawidgets5:amd64 (5.9.5-0ubuntu1) ...
Setting up libqgsttools-p1:amd64 (5.9.5-0ubuntu1) ...
Setting up libwiretap8:amd64 (2.6.10-1~ubuntu18.04.0) ...
Setting up libqt5multimedia5-plugins:amd64 (5.9.5-0ubuntu1) ...
Setting up libwireshark11:amd64 (2.6.10-1~ubuntu18.04.0) ...
Setting up wireshark-common (2.6.10-1~ubuntu18.04.0) ...
Setting up wireshark-qt (2.6.10-1~ubuntu18.04.0) ...
Setting up wireshark (2.6.10-1~ubuntu18.04.0) ...
Processing triggers for desktop-file-utils (0.23-1ubuntu3.18.04.2) ...
Processing triggers for libc-bin (2.27-3ubuntu1.3) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
Processing triggers for shared-mime-info (1.9-2) ...
Processing triggers for gnome-menus (3.13.3-11ubuntu1.1) ...
Processing triggers for hicolor-icon-theme (0.17-2) ...
Processing triggers for mime-support (3.60ubuntu1) ...
```

ifconfig :

ifconfig stands for "interface configuration." It is used to view and change the configuration of the network interfaces on your system.

```
[AfrinZamanRima@webminal.org ~]$ifconfig
```

```
enp1s0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
        ether 54:e1:ad:96:bf:2e txqueuelen 1000 (Ethernet)
        RX packets 0 bytes 0 (0.0 B)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 0 bytes 0 (0.0 B)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 1272 bytes 72220 (72.2 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 1272 bytes 72220 (72.2 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlp2s0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
        ether f8:94:c2:56:7a:39 txqueuelen 1000 (Ethernet)
        RX packets 0 bytes 0 (0.0 B)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 0 bytes 0 (0.0 B)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

Route:

In computing, route is a command used to view and manipulate the IP routing table in Unix-like and Microsoft Windows operating systems and also in IBM OS/2 and ReactOS. Manual manipulation of the routing table is characteristic of static routing.

```
[AfrinZamanRima@webminal.org ~]$route
```

```
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
```

```
[AfrinZamanRima@webminal.org ~]$ip
Usage: ip [ OPTIONS ] OBJECT { COMMAND | help }
       ip [ -force ] -batch filename
where  OBJECT := { link | address | addrlabel | route | rule | neigh | ntable |
                  tunnel | tuntap | maddress | mroute | mrule | monitor | xfrm |
                  netns | l2tp | macsec | tcp_metrics | token }
       OPTIONS := { -V[ersion] | -s[tatistics] | -d[etails] | -r[esolve] |
                   -h[uman-readable] | -iec |
                   -f[amily] { inet | inet6 | ipx | dnet | bridge | link } |
                   -4 | -6 | -I | -D | -B | -0 |
                   -l[oops] { maximum-addr-flush-attempts } |
                   -o[neline] | -t[imestamp] | -ts[hort] | -b[atch] [filename] |
                   -rc[vbuf] [size] | -n[etns] name | -a[ll] }
```

```
[AfrinZamanRima@webminal.org ~]$tw
```

```
Usage: iw [options] command
Options:
  --debug          enable netlink debugging
  --version        show version (4.14)
Commands:
  help [command]
  event [-t|-r] [-f]
  features
  commands
  phy
  list
  phy <phyname> info
  dev <devname> cac channel <channel> [NOHT|HT20|HT40+|HT40-|5MHz|10MHz|80MHz]
  dev <devname> cac freq <freq> [NOHT|HT20|HT40+|HT40-|5MHz|10MHz|80MHz]
  dev <devname> cac freq <control freq> [5|10|20|40|80|80+80|160] [<center1_freq> [<center2_freq>]]
  dev <devname> cac trigger channel <channel> [NOHT|HT20|HT40+|HT40-|5MHz|10MHz|80MHz]
  dev <devname> cac trigger freq <frequency> [NOHT|HT20|HT40+|HT40-|5MHz|10MHz|80MHz]
  dev <devname> cac trigger freq <frequency> [5|10|20|40|80|80+80|160] [<center1_freq> [<center2_freq>]]
  phy <phyname> channels
  dev <devname> switch channel <channel> [NOHT|HT20|HT40+|HT40-|5MHz|10MHz|80MHz] [beacons <count>] [block-tx]
  dev <devname> swlth freq <freq> [NOHT|HT20|HT40+|HT40-|5MHz|10MHz|80MHz] [beacons <count>] [block-tx]
  dev <devname> switch freq <control freq> [5|10|20|40|80|80+80|160] [<center1_freq> [<center2_freq>]] [beacons <count>] [block-tx]
  dev
  dev <devname> info
  dev <devname> del
  dev <devname> interface add <name> type <type> [mesh_id <meshid>] [4addr on/off] [flags <flag*>] [addr <mac-addr>]
  phy <phyname> interface add <name> type <type> [mesh_id <meshid>] [4addr on/off] [flags <flag*>] [addr <mac-addr>]
  dev <devname> ibss join <SSID> <freq in MHz> [NOHT|HT20|HT40+|HT40-|5MHz|10MHz|80MHz] [fixed-freq] [<fixed_bssid>] [beacon-interval <TU>]
  dev <devname> [basic-rates <rate in Mbps,rate2,...>] [mcast-rate <rate in Mbps>] [key d:0:abcde]
  dev <devname> ibss leave
  dev <devname> station dump [-v]
  dev <devname> station set <MAC address> mesh_power_mode <active|light|deep>
  dev <devname> station set <MAC address> vlan <vlanindex>
  dev <devname> station set <MAC address> plink_action <open|block>
  dev <devname> station del <MAC address> [subtype <subtype>] [reason-code <code>]
```

```
[AfrinZamanRima@webminal.org ~]$sysctl
```

Usage:

```
sysctl [options] [variable[=value] ...]
```

Options:

-a, --all	display all variables
-A	alias of -a
-X	alias of -a
--deprecated	include deprecated parameters to listing
-b, --binary	print value without new line
-e, --ignore	ignore unknown variables errors
-N, --names	print variable names without values
-n, --values	print only values of a variables
-p, --load[=<file>]	read values from file
-f	alias of -p
--system	read values from all system directories
-r, --pattern <expression>	select setting that match expression
-q, --quiet	do not echo variable set
-w, --write	enable writing a value to variable
-o	does nothing
-x	does nothing
-d	alias of -h
-h, --help	display this help and exit
-V, --version	output version information and exit

For more details see sysctl(8).

```
[AfrinZamanRima@webminal.org ~]$
```

```
[AfrinZamanRima@webminal.org ~]$nsenter
```

```
[AfrinZamanRima@webminal.org ~]$
```