BusyBox Command Descriptions

addgroup

addgroup [**-g** GID] group_name [user_name]

Adds a group to the system

Options:

```
        -g GID          specify gid
```

---

adduser

adduser [OPTIONS] user_name

Adds a user to the system

Options:

```
        -h DIR          Assign home directory DIR
        -g GECOS        Assign gecos field GECOS
        -s SHELL        Assign login shell SHELL
        -G              Add the user to existing group GROUP
        -S              create a system user (ignored)
        -D              Do not assign a password (logins still possible via
ssh)
        -H              Do not create the home directory
```

---

adjtimex

adjtimex [**-q**] [**-o** offset] [**-f** frequency] [**-p** timeconstant] [**-t** tick]

Reads and optionally sets system timebase parameters. See adjtimex(2).

Options:

```
        -q              quiet mode - do not print
        -o offset       time offset, microseconds
        -f frequency    frequency adjust, integer kernel units (65536 is
1ppm)
                        (positive values make the system clock run fast)
        -t tick         microseconds per tick, usually 10000
        -p timeconstant
```

---

ar

ar [**-o**] [**-v**] [**-p**] [**-t**] [**-x**] ARCHIVE FILES

Extract or list FILES from an ar archive.

Options:

```
-o              preserve original dates
-p              extract to stdout
-t              list
-x              extract
-v              verbosely list files processed
```

---

arping

arping [**-fqbDUA**] [**-c** count] [**-w** timeout] [**-I** device] [**-s** sender] target

Ping hosts by ARP requests/replies.

Options:

```
-f              Quit on first ARP reply
-q              Be quiet
-b              Keep broadcasting, don't go unicast
-D              Duplicated address detection mode
-U              Unsolicited ARP mode, update your neighbours
-A              ARP answer mode, update your neighbours
-c count        Stop after sending count ARP request packets
-w timeout      Time to wait for ARP reply, in seconds
-I device       Outgoing interface name, default is eth0
-s sender       Set specific sender IP address
target          Target IP address of ARP request
```

---

ash

ash [FILE]... or: ash **-c** command [args]...

The ash shell (command interpreter)

---

awk

awk [OPTION]... [program-text] [FILE ...]

Options:

```
-v var=val              assign value 'val' to variable 'var'
-F sep          use 'sep' as field separator
-f progname             read program source from file 'progname'
```

---

basename

basename FILE [SUFFIX]

Strips directory path and suffixes from FILE. If specified, also removes any trailing SUFFIX.

Example:

```
$ basename /usr/local/bin/foo
foo
$ basename /usr/local/bin/
bin
$ basename /foo/bar.txt .txt
bar
```

---

bunzip2

bunzip2 [OPTION]... [FILE]

Uncompress FILE (or standard input if FILE is '-' or omitted).

Options:

```
-c      Write output to standard output
-f      Force
```

---

bzcat

bzcat FILE

Uncompress to stdout.

---

cal

cal [**-jy**] [[month] year]

Display a calendar.

Options:

```
-j      Use julian dates.
-y      Display the entire year.
```

---

cat

cat [**-u**] [FILE]...

Concatenates `FILE(s)` and prints them to stdout.

Options:

```
-u      ignored since unbuffered i/o is always used
```

Example:

```
$ cat /proc/uptime
110716.72 17.67
```

---

chgrp

chgrp [OPTION]... GROUP FILE...

Change the group membership of each FILE to GROUP.

Options:

```
-R      Changes files and directories recursively.
```

Example:

```
$ ls -l /tmp/foo
-r--r--r--    1 andersen andersen        0 Apr 12 18:25 /tmp/foo
$ chgrp root /tmp/foo
$ ls -l /tmp/foo
-r--r--r--    1 andersen root            0 Apr 12 18:25 /tmp/foo
```

---

chmod

chmod [**-R**] MODE[,MODE]... FILE...

Each MODE is one or more of the letters ugoa, one of the symbols +-= and one or more of the letters rwxst.

Options:

```
-R      Changes files and directories recursively.
```

Example:

```
$ ls -l /tmp/foo
-rw-rw-r--    1 root     root            0 Apr 12 18:25 /tmp/foo
$ chmod u+x /tmp/foo
$ ls -l /tmp/foo
-rwxrw-r--    1 root     root            0 Apr 12 18:25 /tmp/foo*
$ chmod 444 /tmp/foo
$ ls -l /tmp/foo
-r--r--r--    1 root     root            0 Apr 12 18:25 /tmp/foo
```

---

chown

chown [**-Rh**]... OWNER[<.|:>[GROUP]] FILE...

Change the owner and/or group of each FILE to OWNER and/or GROUP.

Options:

```
-R      Changes files and directories recursively.
-h      Do not dereference symbolic links.
```

Example:

```
$ ls -l /tmp/foo
-r--r--r--    1 andersen andersen        0 Apr 12 18:25 /tmp/foo
$ chown root /tmp/foo
$ ls -l /tmp/foo
-r--r--r--    1 root     andersen        0 Apr 12 18:25 /tmp/foo
$ chown root.root /tmp/foo
ls -l /tmp/foo
-r--r--r--    1 root     root            0 Apr 12 18:25 /tmp/foo
```

---

chroot

chroot NEWROOT [COMMAND...]

Run COMMAND with root directory set to NEWROOT.

Example:

```
$ ls -l /bin/ls

lrwxrwxrwx    1 root     root          12 Apr 13 00:46 /bin/ls ->
/BusyBox

# mount /dev/hdc1 /mnt -t minix

# chroot /mnt

# ls -l /bin/ls

-rwxr-xr-x    1 root     root        40816 Feb  5 07:45 /bin/ls*
```

---

chvt

chvt N

Changes the foreground virtual terminal to /dev/ttyN

---

clear

clear

Clear screen.

---

cmp

cmp [**-l**] [**-s**] FILE1 [FILE2]

Compare files. Compares FILE1 vs stdin if FILE2 is not specified.

Options:

```
-l      Write the byte numbers (decimal) and values (octal)
          for all differing bytes.
-s      quiet mode - do not print
```

---

cp

cp [OPTION]... SOURCE DEST

Copies SOURCE to DEST, or multiple `SOURCE(s)` to DIRECTORY.

```
-a      Same as -dpR
-d      Preserves links
-p      Preserves file attributes if possible
```

```
        -f      force (implied; ignored) - always set
        -i      interactive, prompt before overwrite
        -R,-r   Copies directories recursively
```

---

cpio

cpio -[dimtuv][F cpiofile]

Extract or list files from a cpio archive Main operation mode:

```
        d               make leading directories
        i               extract
        m               preserve mtime
        t               list
        v               verbose
        u               unconditional overwrite
        F               input from file
```

---

crond

crond **-d**[#] **-c** <crondir> **-f -b**

```
        -d [#] -l [#] -S -L logfile -f -b -c dir
        -d num  debug level
        -l num  log level (8 - default)
        -S      log to syslogd (default)
        -L file log to file
        -f      run in fordeground
        -b      run in background (default)
        -c dir  working dir
```

---

crontab

crontab [**-c** dir] {file|-}|[**-u**|**-l**|**-e**|**-d** user]

```
        file <opts>  replace crontab from file
        -    <opts>  replace crontab from stdin
        -u user      specify user
```

```
-l [user]    list crontab for user
-e [user]    edit crontab for user
-d [user]    delete crontab for user
-c dir       specify crontab directory
```

---

cut

cut [OPTION]... [FILE]...

Prints selected fields from each input FILE to standard output.

Options:

```
-b LIST         Output only bytes from LIST
-c LIST         Output only characters from LIST
-d CHAR         Use CHAR instead of tab as the field delimiter
-s              Output only the lines containing delimiter
-f N            Print only these fields
-n              Ignored
```

Example:

```
$ echo "Hello world" | cut -f 1 -d ' '
Hello
$ echo "Hello world" | cut -f 2 -d ' '
world
```

---

date

date [OPTION]... [MMDDhhmm[[CC]YY][.ss]] [+FORMAT]

Displays the current time in the given FORMAT, or sets the system date.

Options:

```
-R              Outputs RFC-822 compliant date string
-d STRING       Displays time described by STRING, not `now'
-I[TIMESPEC]    Outputs an ISO-8601 compliant date/time string.
                TIMESPEC=`date' (or missing) for date only,
                `hours', `minutes', or `seconds' for date and,
                time to the indicated precision.
```

```
        -s              Sets time described by STRING
        -r FILE         Displays the last modification time of FILE
        -u              Prints or sets Coordinated Universal Time
```

Example:

```
        $ date
        Wed Apr 12 18:52:41 MDT 2000
```

---

dc

dc expression ...

This is a Tiny RPN calculator that understands the following operations: +, add, -, sub, *, mul, /, div, %, mod, **, exp, and, or, not, eor. For example: 'dc 2 2 add' -> 4, and 'dc 8 8 * 2 2 + /' -> 16.

Options: p - Prints the value on the top of the stack, without altering the stack. f - Prints the entire contents of the stack without altering anything. o - Pops the value off the top of the stack and uses it to set the output radix.

```
    Only 10 and 16 are supported.
```

Example:

```
        $ dc 2 2 + p
        4
        $ dc 8 8 \* 2 2 + / p
        16
        $ dc 0 1 and p
        0
        $ dc 0 1 or p
        1
        $ echo 72 9 div 8 mul p | dc
        64
```

---

dd

dd [if=FILE] [of=FILE] [bs=N] [count=N] [skip=N]

[seek=N] [conv=notrunc|noerror|sync]

Copy a file, converting and formatting according to options

```
if=FILE         read from FILE instead of stdin
of=FILE         write to FILE instead of stdout
bs=N            read and write N bytes at a time
count=N         copy only N input blocks
skip=N          skip N input blocks
seek=N          skip N output blocks
conv=notrunc    don't truncate output file
conv=noerror    continue after read errors
conv=sync       pad blocks with zeros
```

Numbers may be suffixed by c (x1), w (x2), b (x512), kD (x1000), k (x1024), MD (x1000000), M (x1048576), GD (x1000000000) or G (x1073741824).

Example:

```
$ dd if=/dev/zero of=/dev/ram1 bs=1M count=4
4+0 records in
4+0 records out
```

---

deallocvt

deallocvt [N]

Deallocate unused virtual terminal /dev/ttyN

---

delgroup

delgroup GROUP

Deletes group GROUP from the system

---

deluser

deluser USER

Deletes user USER from the system

---

devfsd

devfsd mntpnt [**-v**][**-fg**][**-np**]

Optional daemon for managing devfs permissions and old device name symlinks.

Options:

```
mntpnt  The mount point where devfs is mounted.
-v      Print the protocol version numbers for devfsd
        and the kernel-side protocol version and exits.
-fg     Run the daemon in the foreground.
-np     Exit  after  parsing  the configuration file
        and processing synthetic REGISTER events.
        Do not poll for events.
```

---

df

df [**-hmk**] [FILESYSTEM ...]

Print the filesystem space used and space available.

Options:

```
-h      print sizes in human readable format (e.g., 1K 243M 2G )
-m      print sizes in megabytes
-k      print sizes in kilobytes(default)
```

Example:

```
$ df
Filesystem           1k-blocks      Used Available Use% Mounted on
/dev/sda3              8690864   8553540    137324  98% /
/dev/sda1                64216     36364     27852  57% /boot
$ df /dev/sda3
Filesystem           1k-blocks      Used Available Use% Mounted on
/dev/sda3              8690864   8553540    137324  98% /
```

---

dirname

dirname FILENAME

Strips non-directory suffix from FILENAME

Example:

```
$ dirname /tmp/foo
/tmp
```

```
$ dirname /tmp/foo/
/tmp
```

---

dmesg

dmesg [**-c**] [**-n** LEVEL] [**-s** SIZE]

Prints or controls the kernel ring buffer

Options:

```
-c              Clears the ring buffer's contents after printing
-n LEVEL        Sets console logging level
-s SIZE         Use a buffer of size SIZE
```

---

dos2unix

dos2unix [option] [FILE]

Converts FILE from dos format to unix format. When no option is given, the input is converted to the opposite output format. When no file is given, uses stdin for input and stdout for output.

Options:

```
-u      output will be in UNIX format
-d      output will be in DOS format
```

---

dpkg

dpkg [**-ilCPru**] [**-F** option] package_name

dpkg is a utility to install, remove and manage Debian packages.

Options:

```
-i              Install the package
-l              List of installed packages
-C              Configure an unpackaged package
-F depends      Ignore depency problems
-P              Purge all files of a package
-r              Remove all but the configuration files for a package
-u              Unpack a package, but don't configure it
```

---

dpkg-deb

dpkg-deb [**-cefxX**] FILE [argument]

Perform actions on Debian packages (.debs)

Options:

```
-c      List contents of filesystem tree
-e      Extract control files to [argument] directory
-f      Display control field name starting with [argument]
-x      Extract packages filesystem tree to directory
-X      Verbose extract
```

Example:

```
$ dpkg-deb -X ./busybox_0.48-1_i386.deb /tmp
```

---

du

du [**-aHLdclsxhmk**] [FILE]...

Summarizes disk space used for each FILE and/or directory. Disk space is printed in units of 1024 bytes.

Options:

```
-a      show sizes of files in addition to directories
-H      follow symbolic links that are FILE command line args
-L      follow all symbolic links encountered
-d N    limit output to directories (and files with -a) of depth < N
-c      output a grand total
-l      count sizes many times if hard linked
-s      display only a total for each argument
-x      skip directories on different filesystems
-h      print sizes in human readable format (e.g., 1K 243M 2G )
-m      print sizes in megabytes
-k      print sizes in kilobytes(default)
```

Example:

```
$ du
16      ./CVS
12      ./kernel-patches/CVS
```

```
80      ./kernel-patches
12      ./tests/CVS
36      ./tests
12      ./scripts/CVS
16      ./scripts
12      ./docs/CVS
104     ./docs
2417    .
```

---

dumpkmap

dumpkmap > keymap

Prints out a binary keyboard translation table to standard output.

Example:

```
$ dumpkmap > keymap
```

---

dumpleases

dumpleases [**-r**|**-a**] [**-f** LEASEFILE]

Displays the DHCP leases granted by udhcpd.

Options:

```
-f,     --file=FILENAME Leases file to load
-r,     --remaining     Interpret lease times as time remaing
-a,     --absolute      Interpret lease times as expire time
```

---

echo

echo [**-neE**] [ARG ...]

Prints the specified ARGs to stdout

Options:

```
-n      suppress trailing newline
-e      interpret backslash-escaped characters (i.e., \t=tab)
-E      disable interpretation of backslash-escaped characters
```

Example:

```
$ echo "Erik is cool"
Erik is cool
$  echo -e "Erik\nis\ncool"
Erik
is
cool
$ echo "Erik\nis\ncool"
Erik\nis\ncool
```

---

env

env [**-iu**] [-] [name=value]... [command]

Prints the current environment or runs a program after setting up the specified environment.

Options:

```
-, -i   start with an empty environment
-u      remove variable from the environment
```

---

expr

expr EXPRESSION

Prints the value of EXPRESSION to standard output.

EXPRESSION may be:

```
ARG1 |  ARG2    ARG1 if it is neither null nor 0, otherwise ARG2
ARG1 &  ARG2    ARG1 if neither argument is null or 0, otherwise 0
ARG1 <  ARG2    ARG1 is less than ARG2
ARG1 <= ARG2    ARG1 is less than or equal to ARG2
ARG1 =  ARG2    ARG1 is equal to ARG2
ARG1 != ARG2    ARG1 is unequal to ARG2
ARG1 >= ARG2    ARG1 is greater than or equal to ARG2
ARG1 >  ARG2    ARG1 is greater than ARG2
ARG1 +  ARG2    arithmetic sum of ARG1 and ARG2
ARG1 -  ARG2    arithmetic difference of ARG1 and ARG2
ARG1 *  ARG2    arithmetic product of ARG1 and ARG2
```

```
        ARG1 /  ARG2     arithmetic quotient of ARG1 divided by ARG2
        ARG1 %  ARG2     arithmetic remainder of ARG1 divided by ARG2
        STRING : REGEXP             anchored pattern match of REGEXP in
STRING
        match STRING REGEXP         same as STRING : REGEXP
        substr STRING POS LENGTH    substring of STRING, POS counted from 1
        index STRING CHARS          index in STRING where any CHARS is
found,
                                    or 0
        length STRING               length of STRING
        quote TOKEN                 interpret TOKEN as a string, even if
                                    it is a keyword like `match' or an
                                    operator like `/'
        ( EXPRESSION )              value of EXPRESSION
```

Beware that many operators need to be escaped or quoted for shells. Comparisons are arithmetic if both ARGs are numbers, else lexicographical. Pattern matches return the string matched between \(and \) or null; if \(and \) are not used, they return the number of characters matched or 0.

---

false

false

Return an exit code of FALSE (1).

Example:

```
$ false
$ echo $?
1
```

---

fbset

fbset [options] [mode]

Show and modify frame buffer settings

Example:

```
$ fbset
mode "1024x768-76"
```

```
                # D: 78.653 MHz, H: 59.949 kHz, V: 75.694 Hz
                geometry 1024 768 1024 768 16
                timings 12714 128 32 16 4 128 4
                accel false
                rgba 5/11,6/5,5/0,0/0
        endmode
```

---

fdflush

fdflush DEVICE

Forces floppy disk drive to detect disk change

---

fdformat

fdformat [**-n**] DEVICE

Low-level formats a floppy disk

Options:

```
        -n      Don't verify after format
```

---

fdisk

fdisk [**-luv**] [**-C** CYLINDERS] [**-H** HEADS] [**-S** SECTORS] [**-b** SSZ] DISK

Change partition table Options:

```
        -l  List partition table(s)
        -u  Give Start and End in sector (instead of cylinder) units
        -s PARTITION  Give partition size(s) in blocks
        -b 2048: (for certain MO disks) use 2048-byte sectors
        -C CYLINDERS  Set the number of cylinders
        -H HEADS  Set the number of heads
        -S SECTORS  Set the number of sectors
        -v  Give fdisk version
```

---

find

find [PATH...] [EXPRESSION]

Search for files in a directory hierarchy. The default PATH is the current directory; default EXPRESSION is '**-print**'

EXPRESSION may consist of:

```
        -follow         Dereference symbolic links.

        -name PATTERN   File name (leading directories removed) matches
PATTERN.

        -print          Print (default and assumed).

        -type X         Filetype matches X (where X is one of:
f,d,l,b,c,...)

        -perm PERMS     Permissions match any of (+NNN); all of (-NNN);

                        or exactly (NNN)

        -mtime TIME     Modified time is greater than (+N); less than (-N);

                        or exactly (N) days

        -newer FILE     Modified time is more recent than FILE's

        -inum N         File has inode number N
```

Example:

```
        $ find / -name passwd

        /etc/passwd
```

---

fold

fold [**-bsw**] [FILE]

Wrap input lines in each FILE (standard input by default), writing to standard output.

Options:

```
        -b      count bytes rather than columns

        -s      break at spaces

        -w      use WIDTH columns instead of 80
```

---

free

free

Displays the amount of free and used system memory

Example:

```
        $ free
```

```
                        total         used         free       shared
buffers
          Mem:        257628       248724         8904        59644
93124
         Swap:        128516         8404       120112
        Total:        386144       257128       129016
```

---

freeramdisk

freeramdisk DEVICE

Frees all memory used by the specified ramdisk.

Example:

```
$ freeramdisk /dev/ram2
```

---

fsck.minix

fsck.minix [**-larvsmf**] /dev/name

Performs a consistency check for MINIX filesystems.

Options:

```
-l      Lists all filenames
-r      Perform interactive repairs
-a      Perform automatic repairs
-v      verbose
-s      Outputs super-block information
-m      Activates MINIX-like "mode not cleared" warnings
-f      Force file system check.
```

---

ftpget

ftpget [options] remote-host local-file remote-file

Retrieve a remote file via FTP.

Options:

```
-c, --continue          Continue a previous transfer
-v, --verbose           Verbose
-u, --username          Username to be used
```

```
        -p, --password          Password to be used
        -P, --port              Port number to be used
```

---

ftpput

ftpput [options] remote-host remote-file local-file

Store a local file on a remote machine via FTP.

Options:

```
        -v, --verbose           Verbose
        -u, --username          Username to be used
        -p, --password          Password to be used
        -P, --port              Port number to be used
```

---

getopt

getopt [OPTIONS]...

Parse command options

```
        -a, --alternative               Allow long options starting with
single -
        -l, --longoptions=longopts      Long options to be recognized
        -n, --name=progname             The name under which errors are
reported
        -o, --options=optstring Short options to be recognized
        -q, --quiet                     Disable error reporting by getopt(3)
        -Q, --quiet-output              No normal output
        -s, --shell=shell               Set shell quoting conventions
        -T, --test                      Test for getopt(1) version
        -u, --unquoted          Do not quote the output
```

Example:

```
        $ cat getopt.test
        #!/bin/sh
        GETOPT=`getopt -o ab:c:: --long a-long,b-long:,c-long:: \
               -n 'example.busybox' -- "$@"`
        if [ $? != 0 ] ; then  exit 1 ; fi
```

```
eval set -- "$GETOPT"
while true ; do
 case $1 in
   -a|--a-long) echo "Option a" ; shift ;;
   -b|--b-long) echo "Option b, argument `$2'" ; shift 2 ;;
   -c|--c-long)
     case "$2" in
       "") echo "Option c, no argument"; shift 2 ;;
       *)  echo "Option c, argument `$2'" ; shift 2 ;;
     esac ;;
   --) shift ; break ;;
   *) echo "Internal error!" ; exit 1 ;;
 esac
done
```

---

getty

getty [OPTIONS]... baud_rate,... line [termtype]

Opens a tty, prompts for a login name, then invokes /bin/login

Options:

```
-h              Enable hardware (RTS/CTS) flow control.
-i              Do not display /etc/issue before running login.
-L              Local line, so do not do carrier detect.
-m              Get baud rate from modem's CONNECT status message.
-w              Wait for a CR or LF before sending /etc/issue.
-n              Do not prompt the user for a login name.
-f issue_file   Display issue_file instead of /etc/issue.
-l login_app    Invoke login_app instead of /bin/login.
-t timeout      Terminate after timeout if no username is read.
-I initstring   Sets the init string to send before anything else.
-H login_host   Log login_host into the utmp file as the hostname.
```

---

grep

grep [**-ihHnqvs**] PATTERN [FILEs...]

Search for PATTERN in each FILE or standard input.

Options:

```
-H      prefix output lines with filename where match was found
-h      suppress the prefixing filename on output
-i      ignore case distinctions
-l      list names of files that match
-n      print line number with output lines
-q      be quiet. Returns 0 if result was found, 1 otherwise
-v      select non-matching lines
-s      suppress file open/read error messages
```

Example:

```
$ grep root /etc/passwd
root:x:0:0:root:/root:/bin/bash
$ grep ^[rR]oo. /etc/passwd
root:x:0:0:root:/root:/bin/bash
```

---

gunzip

gunzip [OPTION]... FILE

Uncompress FILE (or standard input if FILE is '-').

Options:

```
-c      Write output to standard output
-f      Force read when source is a terminal
-t      Test compressed file integrity
```

Example:

```
$ ls -la /tmp/BusyBox*
-rw-rw-r--    1 andersen andersen   557009 Apr 11 10:55
/tmp/BusyBox-0.43.tar.gz
$ gunzip /tmp/BusyBox-0.43.tar.gz
$ ls -la /tmp/BusyBox*
-rw-rw-r--    1 andersen andersen  1761280 Apr 14 17:47
/tmp/BusyBox-0.43.tar
```

---

gzip

gzip [OPTION]... [FILE]...

Compress `FILE(s)` with maximum compression. When FILE is '-' or unspecified, reads standard input. Implies **-c**.

Options:

```
-c      Write output to standard output instead of FILE.gz

-d      Decompress

-f      Force write when destination is a terminal
```

Example:

```
$ ls -la /tmp/busybox*

-rw-rw-r--    1 andersen andersen  1761280 Apr 14 17:47
/tmp/busybox.tar

$ gzip /tmp/busybox.tar

$ ls -la /tmp/busybox*

-rw-rw-r--    1 andersen andersen   554058 Apr 14 17:49
/tmp/busybox.tar.gz
```

---

halt

halt [**-d**<delay>]

Halt the system. Options:

```
-d              delay interval for halting.
```

---

hdparm

hdparm [options] [device] ..

Options: **-a** get/set fs readahead

```
-A   set drive read-lookahead flag (0/1)

-b   get/set bus state (0 == off, 1 == on, 2 == tristate)

-B   set Advanced Power Management setting (1-255)

-c   get/set IDE 32-bit IO setting

-C   check IDE power mode status

-d   get/set using_dma flag
```

```
-D   enable/disable drive defect-mgmt
-f   flush buffer cache for device on exit
-g   display drive geometry
-h   display terse usage information
-i   display drive identification
-I   detailed/current information directly from drive
-Istdin  similar to -I, but wants /proc/ide/*/hd?/identify as input
-k   get/set keep_settings_over_reset flag (0/1)
-K   set drive keep_features_over_reset flag (0/1)
-L   set drive doorlock (0/1) (removable harddisks only)
-m   get/set multiple sector count
-n   get/set ignore-write-errors flag (0/1)
-p   set PIO mode on IDE interface chipset (0,1,2,3,4,...)
-P   set drive prefetch count
-q   change next setting quietly
-Q   get/set DMA tagged-queuing depth (if supported)
-r   get/set readonly flag (DANGEROUS to set)
-R   register an IDE interface (DANGEROUS)
-S   set standby (spindown) timeout
-t   perform device read timings
-T   perform cache read timings
-u   get/set unmaskirq flag (0/1)
-U   un-register an IDE interface (DANGEROUS)
-v   defaults; same as -mcudkrag for IDE drives
-V   display program version and exit immediately
-w   perform device reset (DANGEROUS)
-W   set drive write-caching flag (0/1) (DANGEROUS)
-x   tristate device for hotswap (0/1) (DANGEROUS)
-X   set IDE xfer mode (DANGEROUS)
-y   put IDE drive in standby mode
-Y   put IDE drive to sleep
-Z   disable Seagate auto-powersaving mode
-z   re-read partition table
```

---

head

head [OPTION]... [FILE]...

Print first 10 lines of each FILE to standard output. With more than one FILE, precede each with a header giving the file name. With no FILE, or when FILE is -, read standard input.

Options:

```
-n NUM          Print first NUM lines instead of first 10
-c NUM          output the first NUM bytes
-q              never output headers giving file names
-v              always output headers giving file names
```

Example:

```
$ head -n 2 /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/bin/sh
```

---

hexdump

hexdump [-[bcdefnosvx]] [OPTION] FILE

The hexdump utility is a filter which displays the specified files, or the standard input, if no files are specified, in a user specified format

```
-b              One-byte octal display
-c              One-byte character display
-d              Two-byte decimal display
-e FORMAT STRING
-f FORMAT FILE
-n LENGTH       Interpret only length bytes of input
-o              Two-byte octal display
-s OFFSET       Skip offset byte
-v              display all input data
-x              Two-byte hexadecimal display
```

---

hostid

hostid

Print out a unique 32-bit identifier for the machine.

---

hostname

hostname [OPTION] {hostname | **-F** FILE}

Get or set the hostname or DNS domain name. If a hostname is given (or FILE with the **-F** parameter), the host name will be set.

Options:

```
-s      Short
-i      Addresses for the hostname
-d      DNS domain name
-f      Fully qualified domain name
-F FILE Use the contents of FILE to specify the hostname
```

Example:

```
$ hostname
sage
```

---

httpd

httpd [**-c** <conf file>] [**-p** <port>] [**-u** user] [**-r** <realm>] [**-m** pass] [**-h** home] [**-d**/**-e** <string>]

Listens for incoming http server requests.

Options:

```
-c FILE         Specifies configuration file. (default httpd.conf)
-p PORT Server port (default 80)
-u USER Set uid to USER after listening privileges port
-r REALM        Authentication Realm for Basic Authentication
-m PASS         Crypt PASS with md5 algorithm
-h HOME         Specifies http HOME directory (default ./)
-e STRING       Html encode STRING
-d STRING       URL decode STRING
```

---

hwclock

hwclock [**-r**|**--show**] [**-s**|**--hctosys**] [**-w**|**--systohc**] [**-l**|**--localtime**] [**-u**|**--utc**]

Query and set the hardware clock (RTC)

Options:

```
-r      read hardware clock and print result
-s      set the system time from the hardware clock
-w      set the hardware clock to the current system time
-u      the hardware clock is kept in coordinated universal time
-l      the hardware clock is kept in local time
```

---

id

id [OPTIONS]... [USERNAME]

Print information for USERNAME or the current user

Options:

```
-c      prints only the security context
-g      prints only the group ID
-u      prints only the user ID
-n      print a name instead of a number
-r      prints the real user ID instead of the effective ID
```

Example:

```
$ id
uid=1000(andersen) gid=1000(andersen)
```

---

ifconfig

ifconfig [**-a**] <interface> [<address>]

configure a network interface

Options: [add <address>[/<prefixlen>]] [del <address>[/<prefixlen>]]

```
[[-]broadcast [<address>]]  [[-]pointopoint [<address>]]
[netmask <address>]  [dstaddr <address>]
[outfill <NN>] [keepalive <NN>]
[hw ether <address>]  [metric <NN>]  [mtu <NN>]
[[-]trailers]  [[-]arp]  [[-]allmulti]
[multicast]  [[-]promisc]  [txqueuelen <NN>]  [[-]dynamic]
```

```
        [mem_start <NN>]  [io_addr <NN>]  [irq <NN>]
        [up|down] ...
```

---

ifdown

ifdown <**-ahinv**> <ifaces...>

ifdown <options> <ifaces...>

Options:

```
        -h      this help
        -a      de/configure all interfaces automatically
        -i FILE use FILE for interface definitions
        -n      print out what would happen, but don't do it
                (note that this option doesn't disable mappings)
        -v      print out what would happen before doing it
        -m      don't run any mappings
        -f      force de/configuration
```

---

ifup

ifup <**-ahinv**> <ifaces...>

ifup <options> <ifaces...>

Options:

```
        -h      this help
        -a      de/configure all interfaces automatically
        -i FILE use FILE for interface definitions
        -n      print out what would happen, but don't do it
                        (note that this option doesn't disable mappings)
        -v      print out what would happen before doing it
        -m      don't run any mappings
        -f      force de/configuration
```

---

inetd

inetd [**-q** len] [conf]

Listens for network connections and launches programs

Option:

```
        -q      Sets the size of the socket listen queue to
                the specified value. Default is 128.
```

---

init

init

Init is the parent of all processes.

This version of init is designed to be run only by the kernel.

BusyBox init doesn't support multiple runlevels. The runlevels field of the /etc/inittab file is completely ignored by BusyBox init. If you want runlevels, use sysvinit.

BusyBox init works just fine without an inittab. If no inittab is found, it has the following default behavior:

```
        ::sysinit:/etc/init.d/rcS
        ::askfirst:/bin/sh
        ::ctrlaltdel:/sbin/reboot
        ::shutdown:/sbin/swapoff -a
        ::shutdown:/bin/umount -a -r
        ::restart:/sbin/init
```

if it detects that /dev/console is _not_ a serial console, it will also run:

```
        tty2::askfirst:/bin/sh
        tty3::askfirst:/bin/sh
        tty4::askfirst:/bin/sh
```

If you choose to use an /etc/inittab file, the inittab entry format is as follows:

```
        <id>:<runlevels>:<action>:<process>
        <id>:
                WARNING: This field has a non-traditional meaning for
BusyBox init!
                The id field is used by BusyBox init to specify the
controlling tty for
                the specified process to run on.  The contents of this field
are
                appended to "/dev/" and used as-is.  There is no need for
this field to
```

```
                be unique, although if it isn't you may have strange
results.  If this
                field is left blank, the controlling tty is set to the
console.  Also
                note that if BusyBox detects that a serial console is in
use, then only
                entries whose controlling tty is either the serial console
or /dev/null
                will be run.  BusyBox init does nothing with utmp.  We don't
need no
                stinkin' utmp.
        <runlevels>:
                The runlevels field is completely ignored.
        <action>:
                Valid actions include: sysinit, respawn, askfirst, wait,
                once, restart, ctrlaltdel, and shutdown.
                The available actions can be classified into two groups:
actions
                that are run only once, and actions that are re-run when the
specified
                process exits.
                Run only-once actions:
                        'sysinit' is the first item run on boot.  init waits
until all
                        sysinit actions are completed before continuing.
Following the
                        completion of all sysinit actions, all 'wait'
actions are run.
                        'wait' actions, like  'sysinit' actions, cause init
to wait until
                        the specified task completes.  'once' actions are
asynchronous,
                        therefore, init does not wait for them to complete.
'restart' is
                        the action taken to restart the init process.  By
default this should
                        simply run /sbin/init, but can be a script which
runs pivot_root or it
                        can do all sorts of other interesting things.  The
'ctrlaltdel' init
```

```
                        actions are run when the system detects that someone
on the system
                        console has pressed the CTRL-ALT-DEL key combination.
Typically one
                        wants to run 'reboot' at this point to cause the
system to reboot.
                        Finally the 'shutdown' action specifies the actions
to taken when
                        init is told to reboot.  Unmounting filesystems and
disabling swap
                        is a very good here
                Run repeatedly actions:
                        'respawn' actions are run after the 'once' actions.
When a process
                        started with a 'respawn' action exits, init
automatically restarts
                        it.  Unlike sysvinit, BusyBox init does not stop
processes from
                        respawning out of control.  The 'askfirst' actions
acts just like
                        respawn, except that before running the specified
process it
                        displays the line "Please press Enter to activate
this console."
                        and then waits for the user to press enter before
starting the
                        specified process.
                Unrecognized actions (like initdefault) will cause init to
emit an
                error message, and then go along with its business.  All
actions are
                run in the order they appear in /etc/inittab.
        <process>:
                Specifies the process to be executed and its command line.
```

Example /etc/inittab file:

```
        # This is run first except when booting in single-user mode.
        #
        ::sysinit:/etc/init.d/rcS
```

```
# /bin/sh invocations on selected ttys
#
# Start an "askfirst" shell on the console (whatever that may be)
::askfirst:-/bin/sh
# Start an "askfirst" shell on /dev/tty2-4
tty2::askfirst:-/bin/sh
tty3::askfirst:-/bin/sh
tty4::askfirst:-/bin/sh

# /sbin/getty invocations for selected ttys
#
tty4::respawn:/sbin/getty 38400 tty4
tty5::respawn:/sbin/getty 38400 tty5



# Example of how to put a getty on a serial line (for a terminal)
#
#::respawn:/sbin/getty -L ttyS0 9600 vt100
#::respawn:/sbin/getty -L ttyS1 9600 vt100
#
# Example how to put a getty on a modem line.
#::respawn:/sbin/getty 57600 ttyS2

# Stuff to do when restarting the init process
::restart:/sbin/init

# Stuff to do before rebooting
::ctrlaltdel:/sbin/reboot
::shutdown:/bin/umount -a -r
::shutdown:/sbin/swapoff -a
```

---

insmod

insmod [OPTION]... MODULE [symbol=value]...

Loads the specified kernel modules into the kernel.

Options:

```
-f      Force module to load into the wrong kernel version.
-k      Make module autoclean-able.
-v      verbose output
-q      quiet output
-L      Lock to prevent simultaneous loads of a module
-m      Output load map to stdout
-o NAME Set internal module name to NAME
-x      do not export externs
```

---

install

install [**-cgmops**] [sources] <dest|directory>

Copies files and set attributes

Options:

```
-c      copy the file, default
-d      create directories
-g      set group ownership
-m      set permission modes
-o      set ownership
-p      preserve date
-s      strip symbol tables
```

---

ip

ip [OPTIONS] { address | link | route | tunnel } { COMMAND | help }

ip [OPTIONS] OBJECT { COMMAND | help } where OBJECT := { link | addr | route | tunnel } OPTIONS := { **-f**[amily] { inet | inet6 | link } | **-o**[neline] }

---

ipaddr

ipaddr { {add|del} IFADDR dev STRING | {show|flush}

[dev STRING] [to PREFIX] }

ipaddr {add|del} IFADDR dev STRING ipaddr {show|flush} [dev STRING] [scope SCOPE-ID]

```
                        [ to PREFIX ] [ label PATTERN ]

                        IFADDR := PREFIX | ADDR peer PREFIX

                        [ broadcast ADDR ] [ anycast ADDR ]

                        [ label STRING ] [ scope SCOPE-ID ]

                        SCOPE-ID := [ host | link | global | NUMBER ]
```

---

ipcalc

ipcalc [OPTION]... <ADDRESS>[[/]<NETMASK>] [NETMASK]

Calculate IP network settings from a IP address

Options:

```
        -b      --broadcast     Display calculated broadcast address.

        -n      --network       Display calculated network address.

        -m      --netmask       Display default netmask for IP. X

        -p      --prefix        Display the prefix for IP/NETMASK.      -h
--hostname      Display first resolved host name.

        -s      --silent        Don't ever display error messages.
```

---

iplink

iplink

iplink set DEVICE { up | down | arp { on | off } |

```
                        dynamic { on | off } |

                        mtu MTU }

        iplink show [ DEVICE ]
```

---

iproute

iproute { list | flush | { add | del | change | append |

replace | monitor } ROUTE }

iproute { list | flush } SELECTOR iproute get ADDRESS [from ADDRESS iif STRING]

```
                        [ oif STRING ]  [ tos TOS ]
        iproute { add | del | change | append | replace | monitor } ROUTE
                        SELECTOR := [ root PREFIX ] [ match PREFIX ] [ proto
RTPROTO ]
                        ROUTE := [ TYPE ] PREFIX [ tos TOS ] [ proto RTPROTO
]
```

---

iptunnel

iptunnel { add | change | del | show } [NAME]

[mode { ipip | gre | sit }]

[remote ADDR] [local ADDR] [ttl TTL]

```
iptunnel { add | change | del | show } [ NAME ]
                        [ mode { ipip | gre | sit } ] [ remote ADDR ] [
local ADDR ]
                        [ [i|o]seq ] [ [i|o]key KEY ] [ [i|o]csum ]
                        [ ttl TTL ] [ tos TOS ] [ [no]pmtudisc ] [ dev
PHYS_DEV ]
```

---

kill

kill [**-signal**] process-id [process-id ...]

Send a signal (default is SIGTERM) to the specified process(es).

Options:

```
        -l      List all signal names and numbers.
```

Example:

```
        $ ps | grep apache
        252 root     root     S [apache]
        263 www-data www-data S [apache]
        264 www-data www-data S [apache]
        265 www-data www-data S [apache]
        266 www-data www-data S [apache]
        267 www-data www-data S [apache]
        $ kill 252
```

---

killall

killall [**-q**] [**-signal**] process-name [process-name ...]

Send a signal (default is SIGTERM) to the specified process(es).

Options:

```
-l      List all signal names and numbers.
-q      Do not complain if no processes were killed.
```

Example:

```
$ killall apache
```

---

klogd

klogd [**-c** n] [**-n**]

Kernel logger. Options:

```
-c n    Sets the default log level of console messages to n.
-n      Run as a foreground process.
```

---

lash

lash [FILE]... or: sh **-c** command [args]...

The BusyBox LAme SHell (command interpreter)

This command does not yet have proper documentation.

Use lash just as you would use any other shell. It properly handles pipes, redirects, job control, can be used as the shell for scripts, and has a sufficient set of builtins to do what is needed. It does not (yet) support Bourne Shell syntax. If you need things like ``if-then-else'', ``while'', and such use ash or bash. If you just need a very simple and extremely small shell, this will do the job.

---

last

last

Shows listing of the last users that logged into the system

---

length

length STRING

Prints out the length of the specified STRING.

Example:

```
$ length Hello
5
```

---

ln

ln [OPTION] TARGET... LINK_NAME|DIRECTORY

Create a link named LINK_NAME or DIRECTORY to the specified TARGET

You may use '--' to indicate that all following arguments are non-options.

Options:

```
-s      make symbolic links instead of hard links
-f      remove existing destination files
-n      no dereference symlinks - treat like normal file
```

Example:

```
$ ln -s BusyBox /tmp/ls
$ ls -l /tmp/ls
lrwxrwxrwx    1 root     root            7 Apr 12 18:39 ls ->
BusyBox*
```

---

loadfont

loadfont < font

Loads a console font from standard input.

Example:

```
$ loadfont < /etc/i18n/fontname
```

---

loadkmap

loadkmap < keymap

Loads a binary keyboard translation table from standard input.

Example:

```
$ loadkmap < /etc/i18n/lang-keymap
```

---

logger

logger [OPTION]... [MESSAGE]

Write MESSAGE to the system log. If MESSAGE is omitted, log stdin.

Options:

```
-s      Log to stderr as well as the system log.
-t TAG  Log using the specified tag (defaults to user name).
-p PRIORITY     Enter the message with the specified priority.
        This may be numerical or a ``facility.level'' pair.
```

Example:

```
$ logger "hello"
```

---

login

login [OPTION]... [username] [ENV=VAR ...]

Begin a new session on the system

Options:

```
-f      Do not authenticate (user already authenticated)
-h      Name of the remote host for this login.
-p      Preserve environment.
```

---

logname

logname

Print the name of the current user.

Example:

```
$ logname
root
```

---

logread

logread [OPTION]...

Shows the messages from syslogd (using circular buffer).

Options:

```
        -f              output data as the log grows
```

---

losetup

losetup [OPTION]... LOOPDEVICE FILE or: losetup [OPTION]... **-d** LOOPDEVICE

Associate LOOPDEVICE with FILE.

Options:

```
        -d              Disassociate LOOPDEVICE.
        -o OFFSET       Start OFFSET bytes into FILE.
```

---

ls

ls [**-1AacCdeFilnpLRrSsTtuvwxXhkK**] [filenames...]

List directory contents

Options:

```
        -1      list files in a single column
        -A      do not list implied . and ..
        -a      do not hide entries starting with .
        -C      list entries by columns
        -c      with -l: show ctime
        -d      list directory entries instead of contents
        -e      list both full date and full time
        -F      append indicator (one of */=@|) to entries
        -i      list the i-node for each file
        -l      use a long listing format
        -n      list numeric UIDs and GIDs instead of names
        -p      append indicator (one of /=@|) to entries
        -L      list entries pointed to by symbolic links
        -R      list subdirectories recursively
        -r      sort the listing in reverse order
        -S      sort the listing by file size
        -s      list the size of each file, in blocks
        -T NUM  assume Tabstop every NUM columns
```

```
        -t      with -l: show modification time
        -u      with -l: show access time
        -v      sort the listing by version
        -w NUM  assume the terminal is NUM columns wide
        -x      list entries by lines instead of by columns
        -X      sort the listing by extension
        -h      print sizes in human readable format (e.g., 1K 243M 2G )
        -k      print security context
        -K      print security context in long format
```

---

lsmod

lsmod

List the currently loaded kernel modules.

---

makedevs

makedevs NAME TYPE MAJOR MINOR FIRST LAST [s]

Creates a range of block or character special files

TYPEs include:

```
        b:      Make a block (buffered) device.
        c or u: Make a character (un-buffered) device.
        p:      Make a named pipe. MAJOR and MINOR are ignored for named
pipes.
```

FIRST specifies the number appended to NAME to create the first device. LAST specifies the number of the last item that should be created. If 's' is the last argument, the base device is created as well.

For example:

```
        makedevs /dev/ttyS c 4 66 2 63   ->  ttyS2-ttyS63
        makedevs /dev/hda b 3 0 0 8 s    ->  hda,hda1-hda8
```

Example:

```
        # makedevs /dev/ttyS c 4 66 2 63
        [creates ttyS2-ttyS63]
        # makedevs /dev/hda b 3 0 0 8 s
```

```
        [creates hda,hda1-hda8]
```

---

md5sum

md5sum [OPTION] [FILEs...] or: md5sum [OPTION] **-c** [FILE]

Print or check MD5 checksums.

Options: With no FILE, or when FILE is -, read standard input.

```
        -c      check MD5 sums against given list
```

The following two options are useful only when verifying checksums:

```
        -s      don't output anything, status code shows success
        -w      warn about improperly formated MD5 checksum lines
```

Example:

```
        $ md5sum < busybox
        6fd11e98b98a58f64ff3398d7b324003
        $ md5sum busybox
        6fd11e98b98a58f64ff3398d7b324003  busybox
        $ md5sum -c -
        6fd11e98b98a58f64ff3398d7b324003  busybox
        busybox: OK
        ^D
```

---

mesg

mesg [y|n]

mesg controls write access to your terminal

```
        y       Allow write access to your terminal.
        n       Disallow write access to your terminal.
```

---

mkdir

mkdir [OPTION] DIRECTORY...

Create the `DIRECTORY(ies)` if they do not already exist

Options:

```
        -m      set permission mode (as in chmod), not rwxrwxrwx - umask
```

```
        -p      no error if existing, make parent directories as needed
```

Example:

```
        $ mkdir /tmp/foo
        $ mkdir /tmp/foo
        /tmp/foo: File exists
        $ mkdir /tmp/foo/bar/baz
        /tmp/foo/bar/baz: No such file or directory
        $ mkdir -p /tmp/foo/bar/baz
```

---

mkfifo

mkfifo [OPTIONS] name

Creates a named pipe (identical to 'mknod name p')

Options:

```
        -m      create the pipe using the specified mode (default a=rw)
```

---

mkfs.minix

mkfs.minix [**-c** | **-l** filename] [**-nXX**] [**-iXX**] /dev/name [blocks]

Make a MINIX filesystem.

Options:

```
        -c              Check the device for bad blocks
        -n [14|30]      Specify the maximum length of filenames
        -i INODES       Specify the number of inodes for the filesystem
        -l FILENAME     Read the bad blocks list from FILENAME
        -v              Make a Minix version 2 filesystem
```

---

mknod

mknod [OPTIONS] NAME TYPE MAJOR MINOR

Create a special file (block, character, or pipe).

Options:

```
        -m      create the special file using the specified mode (default
a=rw)
```

TYPEs include:

```
        b:      Make a block (buffered) device.

        c or u: Make a character (un-buffered) device.

        p:      Make a named pipe. MAJOR and MINOR are ignored for named
pipes.
```

Example:

```
        $ mknod /dev/fd0 b 2 0

        $ mknod -m 644 /tmp/pipe p
```

---

mkswap

mkswap [**-c**] [**-v0**|**-v1**] device [block-count]

Prepare a disk partition to be used as a swap partition.

Options:

```
        -c              Check for read-ability.

        -v0             Make version 0 swap [max 128 Megs].

        -v1             Make version 1 swap [big!] (default for kernels >

                        2.1.117).

        block-count     Number of block to use (default is entire
partition).
```

---

mktemp

mktemp [**-dq**] TEMPLATE

Creates a temporary file with its name based on TEMPLATE. TEMPLATE is any name with six `Xs' (i.e., /tmp/temp.XXXXXX).

Options:

```
        -d              Make a directory instead of a file

        -q              Fail silently if an error occurs
```

Example:

```
        $ mktemp /tmp/temp.XXXXXX

        /tmp/temp.mWiLjM

        $ ls -la /tmp/temp.mWiLjM

        -rw-------    1 andersen andersen        0 Apr 25 17:10
/tmp/temp.mWiLjM
```

---

modprobe

modprobe [**-knqrsv**] [MODULE ...]

Used for high level module loading and unloading.

Options:

```
-k      Make module autoclean-able.
-n      Just show what would be done.
-q      Quiet output.
-r      Remove module (stacks) or do autoclean.
-s      Report via syslog instead of stderr.
-v      Verbose output.
```

Example:

```
$ modprobe cdrom
```

---

more

more [FILE ...]

More is a filter for viewing FILE one screenful at a time.

Example:

```
$ dmesg | more
```

---

mount

mount [flags] DEVICE NODE [**-o** options,more-options]

Mount a filesystem. Autodetection of filesystem type requires the /proc filesystem be already mounted.

Flags:

```
-a:             Mount all filesystems in fstab.
-f:             "Fake" Add entry to mount table but don't mount it.
-n:             Don't write a mount table entry.
-o option:      One of many filesystem options, listed below.
-r:             Mount the filesystem read-only.
-t fs-type:     Specify the filesystem type.
```

```
-w:             Mount for reading and writing (default).
```

Options for use with the ``**-o**'' flag:

```
async/sync:     Writes are asynchronous / synchronous.
atime/noatime:  Enable / disable updates to inode access times.
dev/nodev:      Allow use of special device files / disallow them.
exec/noexec:    Allow use of executable files / disallow them.
loop:           Mounts a file via loop device.
suid/nosuid:    Allow set-user-id-root programs / disallow them.
remount:        Re-mount a mounted filesystem, changing its flags.
ro/rw:          Mount for read-only / read-write.
bind:           Use the linux 2.4.x "bind" feature.
```

There are EVEN MORE flags that are specific to each filesystem. You'll have to see the written documentation for those filesystems.

Example:

```
$ mount
/dev/hda3 on / type minix (rw)
proc on /proc type proc (rw)
devpts on /dev/pts type devpts (rw)
$ mount /dev/fd0 /mnt -t msdos -o ro
$ mount /tmp/diskimage /opt -t ext2 -o loop
```

---

mt

mt [**-f** device] opcode value

Control magnetic tape drive operation

Available Opcodes:

bsf bsfm bsr bss datacompression drvbuffer eof eom erase fsf fsfm fsr fss load lock mkpart nop offline ras1 ras2 ras3 reset retension rewind rewoffline seek setblk setdensity setpart tell unload unlock weof wset

---

mv

mv [OPTION]... SOURCE DEST or: mv [OPTION]... SOURCE... DIRECTORY

Rename SOURCE to DEST, or move `SOURCE(s)` to DIRECTORY.

Options:

```
-f      don't prompt before overwriting
-i      interactive, prompt before overwrite
```

Example:

```
$ mv /tmp/foo /bin/bar
```

---

nameif

nameif [**-s**] [**-c** FILE] [{IFNAME MACADDR}]

Nameif renaming network interface while it in the down state.

Options:

```
-c FILE         Use configuration file (default is /etc/mactab)
-s              Use syslog (LOCAL0 facility).
IFNAME MACADDR  new_interface_name interface_mac_address
```

Example:

```
$ nameif -s dmz0 00:A0:C9:8C:F6:3F
 or
$ nameif -c /etc/my_mactab_file
```

---

nc

nc [OPTIONS] [IP] [port]

Netcat opens a pipe to IP:port

Options:

```
-l              listen mode, for inbound connects
-p PORT         local port number
-i SECS         delay interval for lines sent
-e PROG         program to exec after connect (dangerous!)
```

Example:

```
$ nc foobar.somedomain.com 25
220 foobar ESMTP Exim 3.12 #1 Sat, 15 Apr 2000 00:03:02 -0600
help
214-Commands supported:
```

```
214-    HELO EHLO MAIL RCPT DATA AUTH
214     NOOP QUIT RSET HELP
quit
221 foobar closing connection
```

---

netstat

netstat [**-laenrtuwx**]

Netstat displays Linux networking information.

Options:

```
-l display listening server sockets
-a display all sockets (default: connected)
-e display other/more information
-n don't resolve names
-r display routing table
-t tcp sockets
-u udp sockets
-w raw sockets
-x unix sockets
```

---

nslookup

nslookup [HOST] [SERVER]

Queries the nameserver for the IP address of the given HOST optionally using a specified DNS server

Example:

```
$ nslookup localhost
Server:     default
Address:    default

Name:       debian
Address:    127.0.0.1
```

---

od

od [**-aBbcDdeFfHhIiLlOovXx**] [FILE]

Write an unambiguous representation, octal bytes by default, of FILE to standard output. With no FILE, or when FILE is -, read standard input.

---

openvt

openvt <vtnum> <COMMAND> [ARGS...]

Start a command on a new virtual terminal

Example:

```
openvt 2 /bin/ash
```

---

passwd

passwd [OPTION] [name]

Change a user password. If no name is specified, changes the password for the current user. Options:

```
-a      Define which algorithm shall be used for the password.

                (Choices: des, md5      PASSWORD_ALG_TYPES(", sha1")
)

-d      Delete the password for the specified user account.

-l      Locks (disables) the specified user account.

-u      Unlocks (re-enables) the specified user account.
```

---

patch

patch [**-p**<num>]

[**-p**<num>]

Example:

```
$ patch -p1 <example.diff
```

---

pidof

pidof process-name [OPTION] [process-name ...]

Lists the PIDs of all processes with names that match the names on the command line. Options:

```
-s              display only a single PID.
```

Example:

```
$ pidof init
1
```

---

ping

ping [OPTION]... host

Send ICMP ECHO_REQUEST packets to network hosts.

Options:

```
-c COUNT        Send only COUNT pings.
-s SIZE         Send SIZE data bytes in packets (default=56).
-q              Quiet mode, only displays output at start
                and when finished.
```

Example:

```
$ ping localhost
PING slag (127.0.0.1): 56 data bytes
64 bytes from 127.0.0.1: icmp_seq=0 ttl=255 time=20.1 ms

--- debian ping statistics ---
1 packets transmitted, 1 packets received, 0% packet loss
round-trip min/avg/max = 20.1/20.1/20.1 ms
```

---

ping6

ping6 [OPTION]... host

Send ICMP ECHO_REQUEST packets to network hosts.

Options:

```
-c COUNT        Send only COUNT pings.
-s SIZE         Send SIZE data bytes in packets (default=56).
-q              Quiet mode, only displays output at start
                and when finished.
```

Example:

```
$ ping6 ip6-localhost
```

```
PING ip6-localhost (::1): 56 data bytes
64 bytes from ::1: icmp6_seq=0 ttl=64 time=20.1 ms

--- ip6-localhost ping statistics ---
1 packets transmitted, 1 packets received, 0% packet loss
round-trip min/avg/max = 20.1/20.1/20.1 ms
```

---

pivot_root

pivot_root NEW_ROOT PUT_OLD

Move the current root file system to PUT_OLD and make NEW_ROOT the new root file system.

---

poweroff

poweroff [**-d**<delay>]

Halt the system and request that the kernel shut off the power. Options:

```
-d              delay interval for shutting off.
```

---

printf

printf FORMAT [ARGUMENT...]

Formats and prints `ARGUMENT(s)` according to FORMAT, Where FORMAT controls the output exactly as in C printf.

Example:

```
$ printf "Val=%d\n" 5
Val=5
```

---

ps

ps

Report process status

```
This version of ps accepts no options.
```

`Options:`

```
-c      show SE Linux context
```

Example:

```
$ ps
  PID  Uid      Gid State Command
    1 root     root     S init
    2 root     root     S [kflushd]
    3 root     root     S [kupdate]
    4 root     root     S [kpiod]
    5 root     root     S [kswapd]
  742 andersen andersen S [bash]
  743 andersen andersen S -bash
  745 root     root     S [getty]
 2990 andersen andersen R ps
```

---

pwd

pwd

Print the full filename of the current working directory.

Example:

```
$ pwd
/root
```

---

rdate

rdate [**-sp**] HOST

Get and possibly set the system date and time from a remote HOST.

Options:

```
-s      Set the system date and time (default).
-p      Print the date and time.
```

---

readlink

readlink

Displays the value of a symbolic link.

---

realpath

realpath pathname ...

Returns the absolute pathnames of given argument.

---

reboot

reboot [**-d**<delay>]

Reboot the system. Options:

```
-d              delay interval for rebooting.
```

---

renice

renice priority pid [pid ...]

Changes priority of running processes. Allowed priorities range from 20 (the process runs only when nothing else is running) to 0 (default priority) to **-20** (almost nothing else ever gets to run).

---

reset

reset

Resets the screen.

---

rm

rm [OPTION]... FILE...

Remove (unlink) the FILE(s). You may use '--' to indicate that all following arguments are non-options.

Options:

```
-i              always prompt before removing each destination
-f              remove existing destinations, never prompt
-r or -R        remove the contents of directories recursively
```

Example:

```
$ rm -rf /tmp/foo
```

---

rmdir

rmdir [OPTION]... DIRECTORY...

Remove the DIRECTORY(ies), if they are empty.

Example:

```
# rmdir /tmp/foo
```

---

rmmod

rmmod [OPTION]... [MODULE]...

Unloads the specified kernel modules from the kernel.

Options:

```
-a      Remove all unused modules (recursively)
```

Example:

```
$ rmmod tulip
```

---

route

route [{add|del|delete}]

Edit the kernel's routing tables.

Options:

```
-n              Dont resolve names.
-e              Display other/more information.
-A inet{6}      Select address family.
```

---

rpm

rpm **-i -q**[ildc]p package.rpm

Manipulates RPM packages

Options:

```
-i Install package
-q Query package
-p Query uninstalled package
-i Show information
-l List contents
```

```
        -d List documents
        -c List config files
```

---

rpm2cpio

rpm2cpio package.rpm

Outputs a cpio archive of the rpm file.

---

run-parts

run-parts [**-t**] [**-a** ARG] [**-u** MASK] DIRECTORY

Run a bunch of scripts in a directory.

Options:

```
        -t      Prints what would be run, but does not actually run
anything.
        -a ARG  Pass ARG as an argument for every program invoked.
        -u MASK Set the umask to MASK before executing every program.
```

---

rx

rx FILE

Receive a file using the xmodem protocol.

Example:

```
        $ rx /tmp/foo
```

---

sed

sed [**-efinr**] pattern [files...]

Options:

```
        -e script       add the script to the commands to be executed
        -f scriptfile   add script-file contents to the
                        commands to be executed
        -i              edit files in-place
        -n              suppress automatic printing of pattern space
        -r              use extended regular expression syntax
```

If no **-e** or **-f** is given, the first non-option argument is taken as the sed script to interpret. All remaining arguments are names of input files; if no input files are specified, then the standard input is read. Source files will not be modified unless **-i** option is given.

Example:

```
$ echo "foo" | sed -e 's/f[a-zA-Z]o/bar/g'

bar
```

---

seq

seq [first [increment]] last

Print numbers from FIRST to LAST, in steps of INCREMENT. FIRST, INCREMENT default to 1 Arguments:

```
LAST

FIRST   LAST

FIRST   INCREMENT       LAST
```

---

setkeycodes

setkeycodes SCANCODE KEYCODE ...

Set entries into the kernel's scancode-to-keycode map, allowing unusual keyboards to generate usable keycodes.

SCANCODE may be either xx or e0xx (hexadecimal), and KEYCODE is given in decimal

Example:

```
$ setkeycodes e030 127
```

---

sha1sum

sha1sum [OPTION] [FILEs...] or: sha1sum [OPTION] **-c** [FILE]

Print or check SHA1 checksums.

Options: With no FILE, or when FILE is -, read standard input.

```
-c      check SHA1 sums against given list
```

The following two options are useful only when verifying checksums:

```
-s      don't output anything, status code shows success

-w      warn about improperly formated SHA1 checksum lines
```

---

sleep

sleep [N]...

```
                 Pause for a time equal to the total of the args given,
where each arg can
                have an optional suffix of (s)econds, (m)inutes, (h)ours, or
(d)ays.
```

Example:

```
$ sleep 2
[2 second delay results]
$ sleep 1d 3h 22m 8s
[98528 second delay results]
```

---

sort

sort [**-nru**] [FILE]...

Sorts lines of text in the specified files

Options:

```
-u      suppress duplicate lines
-r      sort in reverse order
-n      sort numerics
```

Example:

```
$ echo -e "e\nf\nb\nd\nc\na" | sort
a
b
c
d
e
f
```

---

start-stop-daemon

start-stop-daemon [OPTIONS] [**--start**|**--stop**] ... [-- arguments...]

Program to start and stop services.

Options:

```
        -S|--start                      start
        -K|--stop                       stop
        -a|--startas <pathname>         starts process specified by pathname
        -b|--background                 force process into background
        -u|--user <username>|<uid>      stop this user's processes
        -x|--exec <executable>          program to either start or check
        -m|--make-pidfile <filename>    create the -p file and enter pid in
it
        -n|--name <process-name>        stop processes with this name
        -p|--pidfile <pid-file>         save or load pid using a pid-file
        -q|--quiet                      be quiet
        -s|--signal <signal>            signal to send (default TERM)
```

---

strings

strings [**-afo**] [**-n** length] [file ...]

Display printable strings in a binary file.

Options:

```
        -a      Scan the whole files (this is the default).
        -f      Precede each string with the name of the file where it was
found.
        -n N    Specifies that at least N characters forms a sequence
(default 4)
        -o      Each string is preceded by its decimal offset in the file.
```

---

stty

stty [**-a**|g] [**-F** DEVICE] [SETTING]...

Without arguments, prints baud rate, line discipline, and deviations from stty sane.

Options:

```
        -F DEVICE       open device instead of stdin
        -a              print all current settings in human-readable form
        -g              print in stty-readable form
        [SETTING]       see manpage
```

---

su

su [OPTION]... [-] [username]

Change user id or become root. Options:

```
-p      Preserve environment
```

---

sulogin

sulogin [OPTION]... [tty-device]

Single user login Options:

```
-f      Do not authenticate (user already authenticated)
-h      Name of the remote host for this login.
-p      Preserve environment.
```

---

swapoff

swapoff [OPTION] [DEVICE]

Stop swapping virtual memory pages on DEVICE.

Options:

```
-a      Stop swapping on all swap devices
```

---

swapon

swapon [OPTION] [DEVICE]

Start swapping virtual memory pages on DEVICE.

Options:

```
-a      Start swapping on all swap devices
```

---

sync

sync

Write all buffered filesystem blocks to disk.

---

sysctl

sysctl [OPTIONS]... [VALUE]...

sysctl - configure kernel parameters at runtime

Options:

```
        -n      Use this option to disable printing of the key name when
printing values.

        -w      Use this option when you want to change a sysctl setting.

        -p      Load in sysctl settings from the file specified or
/etc/sysctl.conf if none given.

        -a      Display all values currently available.

        -A      Display all values currently available in table form.
```

Example:

```
        sysctl [-n] variable ...

        sysctl [-n] -w variable=value ...

        sysctl [-n] -a

        sysctl [-n] -p <file>   (default /etc/sysctl.conf)

        sysctl [-n] -A
```

---

syslogd

syslogd [OPTION]...

Linux system and kernel logging utility. Note that this version of syslogd ignores /etc/syslog.conf.

Options:

```
        -m MIN          Minutes between MARK lines (default=20, 0=off)

        -n              Run as a foreground process

        -O FILE         Use an alternate log file
(default=/var/log/messages)

        -S              Make logging output smaller.

        -s SIZE         Max size (KB) before rotate (default=200KB, 0=off)

        -b NUM          Number of rotated logs to keep (default=1, max=99,
0=purge)

        -R HOST[:PORT]  Log to IP or hostname on PORT (default PORT=514/UDP)

        -L              Log locally and via network logging (default is
network only)

        -C [size(KiB)]  Log to a circular buffer (read the buffer using
logread)
```

Example:

```
$ syslogd -R masterlog:514

$ syslogd -R 192.168.1.1:601
```

---

tail

tail [OPTION]... [FILE]...

Print last 10 lines of each FILE to standard output. With more than one FILE, precede each with a header giving the file name. With no FILE, or when FILE is -, read standard input.

Options:

```
-c N[kbm]       output the last N bytes

-n N[kbm]       print last N lines instead of last 10

-f              output data as the file grows

-q              never output headers giving file names

-s SEC          wait SEC seconds between reads with -f

-v              always output headers giving file names
```

If the first character of N (bytes or lines) is a '+', output begins with the Nth item from the start of each file, otherwise, print the last N items in the file. N bytes may be suffixed by k (x1024), b (x512), or m (1024^2).

Example:

```
$ tail -n 1 /etc/resolv.conf

nameserver 10.0.0.1
```

---

tar

tar -[czjZxtvO] [**-X** FILE][**-f** TARFILE] [**-C** DIR] [FILE(s)] ...

Create, extract, or list files from a tar file.

Options:

```
c               create

x               extract

t               list
```

Archive format selection:

```
z               Filter the archive through gzip

j               Filter the archive through bzip2

Z               Filter the archive through compress
```

File selection:

```
f               name of TARFILE or "-" for stdin
O               extract to stdout
exclude         file to exclude
X               file with names to exclude
C               change to directory DIR before operation
v               verbosely list files processed
```

Example:

```
$ zcat /tmp/tarball.tar.gz | tar -xf -
$ tar -cf /tmp/tarball.tar /usr/local
```

---

tee

tee [OPTION]... [FILE]...

Copy standard input to each FILE, and also to standard output.

Options:

```
-a      append to the given FILEs, do not overwrite
-i      ignore interrupt signals (SIGINT)
```

Example:

```
$ echo "Hello" | tee /tmp/foo
$ cat /tmp/foo
Hello
```

---

telnet

telnet HOST [PORT]

Telnet is used to establish interactive communication with another computer over a network using the TELNET protocol.

---

telnetd

telnetd [OPTION]

Telnetd listens for incoming TELNET connections on PORT. Options:

```
-p PORT listen for connections on PORT (default 23)
```

```
-l LOGIN        exec LOGIN on connect (default /bin/sh)
-f issue_file   Display issue_file instead of /etc/issue.
```

---

test

test EXPRESSION or [EXPRESSION]

Checks file types and compares values returning an exit code determined by the value of EXPRESSION.

Example:

```
$ test 1 -eq 2
$ echo $?
1
$ test 1 -eq 1
$ echo $?
0
$ [ -d /etc ]
$ echo $?
0
$ [ -d /junk ]
$ echo $?
1
```

---

tftp

tftp [OPTION]... HOST [PORT]

Transfers a file from/to a tftp server using ``octet'' mode.

Options:

```
-l FILE Local FILE.
-r FILE Remote FILE.
-g      Get file.
-p      Put file.
-b SIZE Transfer blocks of SIZE octets.
```

---

time

time [OPTION]... COMMAND [ARGS...]

Runs the program COMMAND with arguments ARGS. When COMMAND finishes, COMMAND's resource usage information is displayed

Options:

```
-v      Displays verbose resource usage information.
```

---

top

top [**-d** <seconds>]

top provides an view of processor activity in real time. This utility reads the status for all processes in /proc each <seconds> and shows the status for however many processes will fit on the screen. This utility will not show processes that are started after program startup, but it will show the EXIT status for and PIDs that exit while it is running.

---

touch

touch [**-c**] FILE [FILE ...]

Update the last-modified date on the given FILE[s].

Options:

```
-c      Do not create any files
```

Example:

```
$ ls -l /tmp/foo
/bin/ls: /tmp/foo: No such file or directory
$ touch /tmp/foo
$ ls -l /tmp/foo
-rw-rw-r--    1 andersen andersen        0 Apr 15 01:11 /tmp/foo
```

---

tr

tr [**-cds**] STRING1 [STRING2]

Translate, squeeze, and/or delete characters from standard input, writing to standard output.

Options:

```
-c      take complement of STRING1
-d      delete input characters coded STRING1
-s      squeeze multiple output characters of STRING2 into one
```

```
character
```

Example:

```
        $ echo "gdkkn vnqkc" | tr [a-y] [b-z]
        hello world
```

---

traceroute

traceroute [**-dnrv**] [**-m** max_ttl] [**-p** port#] [**-q** nqueries]
[**-s** src_addr] [**-t** tos] [**-w** wait] host [data size]

trace the route ip packets follow going to ``host'' Options:

```
        -d      set SO_DEBUG options to socket
        -n      Print hop addresses numerically rather than symbolically
        -r      Bypass the normal routing tables and send directly to a host
        -v      Verbose output
        -m max_ttl      Set the max time-to-live (max number of hops)
        -p port#        Set the base UDP port number used in probes
                (default is 33434)
        -q nqueries     Set the number of probes per ``ttl'' to nqueries
                (default is 3)
        -s src_addr     Use the following IP address as the source address
        -t tos  Set the type-of-service in probe packets to the following
value
                (default 0)
        -w wait Set the time (in seconds) to wait for a response to a probe
                (default 3 sec.).
```

---

true

true

Return an exit code of TRUE (0).

Example:

```
        $ true
```

```
$ echo $?
0
```

---

tty

tty

Print the file name of the terminal connected to standard input.

Options:

```
-s      print nothing, only return an exit status
```

Example:

```
$ tty
/dev/tty2
```

---

udhcpc

udhcpc [**-fbnqv**] [**-c** CLIENTID] [**-H** HOSTNAME] [**-i** INTERFACE] [**-p** pidfile] [**-r** IP] [**-s** script]

```
-c,     --clientid=CLIENTID     Client identifier
-H,     --hostname=HOSTNAME     Client hostname
-h,                             Alias for -H
-f,     --foreground    Do not fork after getting lease
-b,     --background    Fork to background if lease cannot be
immediately negotiated.
-i,     --interface=INTERFACE   Interface to use (default: eth0)
-n,     --now   Exit with failure if lease cannot be immediately
negotiated.
-p,     --pidfile=file  Store process ID of daemon in file
-q,     --quit  Quit after obtaining lease
-r,     --request=IP    IP address to request (default: none)
-s,     --script=file   Run file at dhcp events (default:
/usr/share/udhcpc/default.script)
-v,     --version       Display version
```

---

udhcpd

udhcpd [configfile]

---

umount

umount [flags] FILESYSTEM|DIRECTORY

Unmount file systems

Flags:

```
-a      Unmount all file systems in /etc/mtab
-n      Don't erase /etc/mtab entries
-r      Try to remount devices as read-only if mount is busy
-f      Force umount (i.e., unreachable NFS server)
-l      Do not free loop device (if a loop device has been used)
```

Example:

```
$ umount /dev/hdc1
```

---

uname

uname [OPTION]...

Print certain system information. With no OPTION, same as **-s**.

Options:

```
-a      print all information
-m      the machine (hardware) type
-n      print the machine's network node hostname
-r      print the operating system release
-s      print the operating system name
-p      print the host processor type
-v      print the operating system version
```

Example:

```
$ uname -a
Linux debian 2.4.23 #2 Tue Dec 23 17:09:10 MST 2003 i686 GNU/Linux
```

---

uncompress

uncompress [**-c**] [**-f**] [name ...]

Uncompress .Z file[s] Options:

```
        -c      extract to stdout
        -f      force overwrite an existing file
```

---

uniq

uniq [OPTION]... [INPUT [OUTPUT]]

Discard all but one of successive identical lines from INPUT (or standard input), writing to OUTPUT (or standard output).

Options:

```
        -c      prefix lines by the number of occurrences
        -d      only print duplicate lines
        -u      only print unique lines
        -f N    skip the first N fields
        -s N    skip the first N chars (after any skipped fields)
```

Example:

```
        $ echo -e "a\na\nb\nc\nc\na" | sort | uniq
        a
        b
        c
```

---

unix2dos

unix2dos [option] [FILE]

Converts FILE from unix format to dos format. When no option is given, the input is converted to the opposite output format. When no file is given, uses stdin for input and stdout for output.
Options:

```
        -u      output will be in UNIX format
        -d      output will be in DOS format
```

---

unzip

unzip [**-opts**[modifiers]] file[.zip] [list] [**-x** xlist] [**-d** exdir]

Extracts files from ZIP archives.

Options:

```
        -l      list archive contents (short form)
```

```
        -n      never overwrite existing files (default)
        -o      overwrite files without prompting
        -p      send output to stdout
        -q      be quiet
        -x      exclude these files
        -d      extract files into this directory
```

---

uptime

uptime

Display the time since the last boot.

Example:

```
$ uptime
  1:55pm  up  2:30, load average: 0.09, 0.04, 0.00
```

---

usleep

usleep N

Pause for N microseconds.

Example:

```
$ usleep 1000000
[pauses for 1 second]
```

---

uudecode

uudecode [FILE]...

Uudecode a file that is uuencoded.

Options:

```
-o FILE direct output to FILE
```

Example:

```
$ uudecode -o busybox busybox.uu
$ ls -l busybox
-rwxr-xr-x   1 ams      ams        245264 Jun  7 21:35 busybox
```

---

uuencode

uuencode [OPTION] [INFILE] REMOTEFILE

Uuencode a file.

Options:

```
-m      use base64 encoding per RFC1521
```

Example:

```
$ uuencode busybox busybox
begin 755 busybox
<encoded file snipped>
$ uudecode busybox busybox > busybox.uu
$
```

---

vconfig

vconfig COMMAND [OPTIONS] ...

vconfig lets you create and remove virtual ethernet devices.

Options:

```
add             [interface-name] [vlan_id]
rem             [vlan-name]
set_flag        [interface-name] [flag-num]       [0 | 1]
set_egress_map  [vlan-name]      [skb_priority]   [vlan_qos]
set_ingress_map [vlan-name]      [skb_priority]   [vlan_qos]
set_name_type   [name-type]
```

---

vi

vi [OPTION] [FILE]...

edit FILE.

Options:

```
-R      Read-only- do not write to the file.
```

---

vlock

vlock [OPTIONS]

Lock a virtual terminal. A password is required to unlock Options:

```
-a      Lock all VTs
```

---

watch

watch [**-n** <seconds>] COMMAND...

Executes a program periodically. Options:

```
-n      Loop period in seconds - default is 2.
```

Example:

```
$ watch date

Mon Dec 17 10:31:40 GMT 2000

Mon Dec 17 10:31:42 GMT 2000

Mon Dec 17 10:31:44 GMT 2000
```

---

watchdog

watchdog [**-t** <seconds>] DEV

Periodically write to watchdog device DEV. Options:

```
-t      Timer period in seconds - default is 30.
```

---

wc

wc [OPTION]... [FILE]...

Print line, word, and byte counts for each FILE, and a total line if more than one FILE is specified. With no FILE, read standard input.

Options:

```
-c      print the byte counts

-l      print the newline counts

-L      print the length of the longest line

-w      print the word counts
```

Example:

```
$ wc /etc/passwd

     31      46    1365 /etc/passwd
```

---

wget

wget [**-c**|**--continue**] [**-q**|**--quiet**] [**-O**|**--output-**
document file]

[**--header** 'header: value'] [**-Y**|**--proxy** on/off]
[**-P** DIR] url

wget retrieves files via HTTP or FTP

Options:

```
-c      continue retrieval of aborted transfers
-q      quiet mode - do not print
-P      Set directory prefix to DIR
-O      save to filename ('-' for stdout)
-Y      use proxy ('on' or 'off')
```

---

which

which [COMMAND ...]

Locates a COMMAND.

Example:

```
$ which login
/bin/login
```

---

who

who

Prints the current user names and related information

---

whoami

whoami

Prints the user name associated with the current effective user id.

---

xargs

xargs [COMMAND] [OPTIONS] [ARGS...]

Executes COMMAND on every item given by standard input.

Options:

```
-p      Prompt the user about whether to run each command
-r      Do not run command for empty readed lines
-x      Exit if the size is exceeded
-0      Input filenames are terminated by a null character
-t      Print the command line on stderr before executing it.
```

Example:

```
$ ls | xargs gzip
$ find . -name '*.c' -print | xargs rm
```

---

yes

yes [OPTION]... [STRING]...

Repeatedly outputs a line with all specified STRING(s), or 'y'.

---

zcat

zcat FILE

Uncompress to stdout.

Please note: The Linux of a DIL/NetPC offers only a subset of all BusyBox commands. Please check the details with the *busybox* command. For more information's about BusyBox and to the current version please visit the website at http://www.busybox.net/.