Операционные системы - 4

```
serhio@DESKTOP-QKU9C7M: ~

serhio@DESKTOP-QKU9C7M:~$ man -h
Usage: man [OPTION...] [SECTION] PAGE...

 -C, --config-file=FILE    use this user configuration file
 -d, --debug               emit debugging messages
 -D, --default             reset all options to their default values
     --warnings[=WARNINGS]  enable warnings from groff

 Main modes of operation:
 -f, --whatis              equivalent to whatis
 -k, --apropos             equivalent to apropos
 -K, --global-apropos      search for text in all pages
 -l, --local-file          interpret PAGE argument(s) as local filename(s)
 -w, --where, --path, --location
                           print physical location of man page(s)
 -W, --where-cat, --location-cat
                           print physical location of cat file(s)

 -c, --catman              used by catman to reformat out of date cat pages
 -R, --recode=ENCODING     output source page encoded in ENCODING

 Finding manual pages:
 -L, --locale=LOCALE       define the locale for this particular man search
```

Which

```
serhio@DESKTOP-QKU9C7M: ~/x

serhio@DESKTOP-QKU9C7M:~/x$ which -h
Illegal option -h
Usage: /usr/bin/which [-a] args
```

Fg

```
serhio@DESKTOP-QKU9C7M: ~/x

serhio@DESKTOP-QKU9C7M:~/x$ fg --help
fg: fg [job_spec]
    Move job to the foreground.

    Place the job identified by JOB_SPEC in the foreground, making it the
    current job.  If JOB_SPEC is not present, the shell's notion of the
    current job is used.

    Exit Status:
    Status of command placed in foreground, or failure if an error occurs.
serhio@DESKTOP-QKU9C7M:~/x$
```

Bg

```
serhio@DESKTOP-QKU9C7M:~/x$ bg --help
bg: bg [job_spec ...]
    Move jobs to the background.

    Place the jobs identified by each JOB_SPEC in the background, as if they
    had been started with `&'.  If JOB_SPEC is not present, the shell's notion
    of the current job is used.

    Exit Status:
    Returns success unless job control is not enabled or an error occurs.
serhio@DESKTOP-QKU9C7M:~/x$ _
```

Ps

```
serhio@DESKTOP-QKU9C7M: ~/x

serhio@DESKTOP-QKU9C7M:~/x$ ps --help

Usage:
 ps [options]

 Try 'ps --help <simple|list|output|threads|misc|all>'
  or 'ps --help <s|l|o|t|m|a>'
 for additional help text.

For more details see ps(1).
serhio@DESKTOP-QKU9C7M:~/x$ _
```

Ln

```
serhio@DESKTOP-QKU9C7M: ~/x

serhio@DESKTOP-QKU9C7M:~/x$ ln --help
Usage: ln [OPTION]... [-T] TARGET LINK_NAME
  or:  ln [OPTION]... TARGET
  or:  ln [OPTION]... TARGET... DIRECTORY
  or:  ln [OPTION]... -t DIRECTORY TARGET...
In the 1st form, create a link to TARGET with the name LINK_NAME.
In the 2nd form, create a link to TARGET in the current directory.
In the 3rd and 4th forms, create links to each TARGET in DIRECTORY.
Create hard links by default, symbolic links with --symbolic.
By default, each destination (name of new link) should not already exist.
When creating hard links, each TARGET must exist.  Symbolic links
can hold arbitrary text; if later resolved, a relative link is
interpreted in relation to its parent directory.

Mandatory arguments to long options are mandatory for short options too.
      --backup[=CONTROL]      make a backup of each existing destination file
  -b                          like --backup but does not accept an argument
  -d, -F, --directory         allow the superuser to attempt to hard link
                                directories (note: will probably fail due to
                                system restrictions, even for the superuser)
  -f, --force                 remove existing destination files
  -i, --interactive           prompt whether to remove destinations
  -L, --logical               dereference TARGETs that are symbolic links
  -n, --no-dereference        treat LINK_NAME as a normal file if
                                it is a symbolic link to a directory
  -P, --physical              make hard links directly to symbolic links
  -r, --relative              create symbolic links relative to link location
  -s, --symbolic              make symbolic links instead of hard links
  -S, --suffix=SUFFIX         override the usual backup suffix
  -t, --target-directory=DIRECTORY  specify the DIRECTORY in which to create
                                the links
  -T, --no-target-directory   treat LINK_NAME as a normal file always
  -v, --verbose               print name of each linked file
      --help     display this help and exit
      --version  output version information and exit
```

Stat

```
serhio@DESKTOP-QKU9C7M:~/x$ stat --help
Usage: stat [OPTION]... FILE...
Display file or file system status.

Mandatory arguments to long options are mandatory for short options too.
  -L, --dereference      follow links
  -f, --file-system      display file system status instead of file status
      --cached=MODE      specify how to use cached attributes;
                           useful on remote file systems. See MODE below
  -c  --format=FORMAT    use the specified FORMAT instead of the default;
                           output a newline after each use of FORMAT
      --printf=FORMAT    like --format, but interpret backslash escapes,
                           and do not output a mandatory trailing newline;
                           if you want a newline, include \n in FORMAT
  -t, --terse            print the information in terse form
      --help     display this help and exit
      --version  output version information and exit

The --cached MODE argument can be; always, never, or default.
`always` will use cached attributes if available, while
`never` will try to synchronize with the latest attributes, and
`default` will leave it up to the underlying file system.

The valid format sequences for files (without --file-system):

  %a   permission bits in octal (note '#' and '0' printf flags)
  %A   permission bits and file type in human readable form
```

Ping

```
Options:
  <destination>       dns name or ip address
  -a                  use audible ping
  -A                  use adaptive ping
  -B                  sticky source address
  -c <count>          stop after <count> replies
  -D                  print timestamps
  -d                  use SO_DEBUG socket option
  -f                  flood ping
  -h                  print help and exit
  -I <interface>      either interface name or address
  -i <interval>       seconds between sending each packet
  -L                  suppress loopback of multicast packets
  -l <preload>        send <preload> number of packages while waiting replies
  -m <mark>           tag the packets going out
  -M <pmtud opt>      define mtu discovery, can be one of <do|dont|want>
  -n                  no dns name resolution
  -O                  report outstanding replies
  -p <pattern>        contents of padding byte
  -q                  quiet output
  -Q <tclass>         use quality of service <tclass> bits
  -s <size>           use <size> as number of data bytes to be sent
  -S <size>           use <size> as SO_SNDBUF socket option value
  -t <ttl>            define time to live
  -U                  print user-to-user latency
  -v                  verbose output
  -V                  print version and exit
```

Chmod

```
serhio@DESKTOP-QKU9C7M:~/x$ chmod --help
Usage: chmod [OPTION]... MODE[,MODE]... FILE...
  or:  chmod [OPTION]... OCTAL-MODE FILE...
  or:  chmod [OPTION]... --reference=RFILE FILE...
Change the mode of each FILE to MODE.
With --reference, change the mode of each FILE to that of RFILE.

  -c, --changes          like verbose but report only when a change is made
  -f, --silent, --quiet  suppress most error messages
  -v, --verbose          output a diagnostic for every file processed
      --no-preserve-root  do not treat '/' specially (the default)
      --preserve-root    fail to operate recursively on '/'
      --reference=RFILE  use RFILE's mode instead of MODE values
  -R, --recursive        change files and directories recursively
      --help     display this help and exit
      --version  output version information and exit

Each MODE is of the form '[ugoa]*([-+=]([rwxXst]*|[ugo]))+|[-+=][0-7]+'.

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Report any translation bugs to <https://translationproject.org/team/>
Full documentation <https://www.gnu.org/software/coreutils/chmod>
or available locally via: info '(coreutils) chmod invocation'
serhio@DESKTOP-QKU9C7M:~/x$ _
```

Chown

```
serhio@DESKTOP-QKU9C7M:~/x$ chown --help
Usage: chown [OPTION]... [OWNER][:[GROUP]] FILE...
  or:  chown [OPTION]... --reference=RFILE FILE...
Change the owner and/or group of each FILE to OWNER and/or GROUP.
With --reference, change the owner and group of each FILE to those of RFILE.

  -c, --changes          like verbose but report only when a change is made
  -f, --silent, --quiet  suppress most error messages
  -v, --verbose          output a diagnostic for every file processed
      --dereference      affect the referent of each symbolic link (this is
                         the default), rather than the symbolic link itself
  -h, --no-dereference   affect symbolic links instead of any referenced file
                         (useful only on systems that can change the
                         ownership of a symlink)
      --from=CURRENT_OWNER:CURRENT_GROUP
                         change the owner and/or group of each file only if
                         its current owner and/or group match those specified
                         here.  Either may be omitted, in which case a match
                         is not required for the omitted attribute
      --no-preserve-root  do not treat '/' specially (the default)
      --preserve-root    fail to operate recursively on '/'
      --reference=RFILE  use RFILE's owner and group rather than
                         specifying OWNER:GROUP values
  -R, --recursive        operate on files and directories recursively

The following options modify how a hierarchy is traversed when the -R
option is also specified.  If more than one is specified, only the final
one takes effect.
```

dd

```
serhio@DESKTOP-QKU9C7M:~/x$ dd --help
Usage: dd [OPERAND]...
  or:  dd OPTION
Copy a file, converting and formatting according to the operands.

  bs=BYTES          read and write up to BYTES bytes at a time (default: 512);
                    overrides ibs and obs
  cbs=BYTES         convert BYTES bytes at a time
  conv=CONVS        convert the file as per the comma separated symbol list
  count=N           copy only N input blocks
  ibs=BYTES         read up to BYTES bytes at a time (default: 512)
  if=FILE           read from FILE instead of stdin
  iflag=FLAGS       read as per the comma separated symbol list
  obs=BYTES         write BYTES bytes at a time (default: 512)
  of=FILE           write to FILE instead of stdout
  oflag=FLAGS       write as per the comma separated symbol list
  seek=N            skip N obs-sized blocks at start of output
  skip=N            skip N ibs-sized blocks at start of input
  status=LEVEL      The LEVEL of information to print to stderr;
                    'none' suppresses everything but error messages,
                    'noxfer' suppresses the final transfer statistics,
                    'progress' shows periodic transfer statistics

N and BYTES may be followed by the following multiplicative suffixes:
c=1, w=2, b=512, kB=1000, K=1024, MB=1000*1000, M=1024*1024, xM=M,
GB=1000*1000*1000, G=1024*1024*1024, and so on for T, P, E, Z, Y.
Binary prefixes can be used, too: KiB=K, MiB=M, and so on.

Each CONV symbol may be:
```

Yes

```
serhio@DESKTOP-QKU9C7M:~/x$ yes --help
Usage: yes [STRING]...
  or:  yes OPTION
Repeatedly output a line with all specified STRING(s), or 'y'.

      --help     display this help and exit
      --version  output version information and exit

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Report any translation bugs to <https://translationproject.org/team/>
Full documentation <https://www.gnu.org/software/coreutils/yes>
or available locally via: info '(coreutils) yes invocation'
serhio@DESKTOP-QKU9C7M:~/x$
```

uname

grep

exit

```
Выбрать serhio@DESKTOP-QKU9C7M: ~/x
serhio@DESKTOP-QKU9C7M:~/x$ exit --help
exit: exit [n]
    Exit the shell.

    Exits the shell with a status of N.  If N is omitted, the exit status
    is that of the last command executed.
serhio@DESKTOP-QKU9C7M:~/x$ _
```

Создание директивы и переход в нее

```
serhio@DESKTOP-QKU9C7M:~$ mkdir dir
serhio@DESKTOP-QKU9C7M:~$ cd dir
```

Определяем версию


```
serhio@DESKTOP-QKU9C7M: ~/dir
serhio@DESKTOP-QKU9C7M:~/dir$ uname --version
uname (GNU coreutils) 8.32
Copyright (C) 2020 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <https://gnu.org/licenses/gpl.html>.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

Written by David MacKenzie.
serhio@DESKTOP-QKU9C7M:~/dir$
```

Запись в файл


```
serhio@DESKTOP-QKU9C7M: ~/dir
serhio@DESKTOP-QKU9C7M:~/dir$ touch file
serhio@DESKTOP-QKU9C7M:~/dir$ uname --version >> file
serhio@DESKTOP-QKU9C7M:~/dir$ cat file
uname (GNU coreutils) 8.32
Copyright (C) 2020 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <https://gnu.org/licenses/gpl.html>.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

Written by David MacKenzie.
serhio@DESKTOP-QKU9C7M:~/dir$
```

PATH
запись в файл


```
serhio@DESKTOP-QKU9C7M: ~/dir
serhio@DESKTOP-QKU9C7M:~/dir$ echo %PATH >> file
serhio@DESKTOP-QKU9C7M:~/dir$ cat file
uname (GNU coreutils) 8.32
Copyright (C) 2020 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <https://gnu.org/licenses/gpl.html>.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

Written by David MacKenzie.
%PATH
serhio@DESKTOP-QKU9C7M:~/dir$
```

определение архитектуры процессора

Изменение прав
полные сведения

кол-во процессоров

Сведения

Help

if-for-while

Присвоение значения

```
serhio@DESKTOP-QKU9C7M:~/dir$ echo hello
hello
serhio@DESKTOP-QKU9C7M:~/dir$ hello="hello world!"
serhio@DESKTOP-QKU9C7M:~/dir$ echo %hello
%hello
serhio@DESKTOP-QKU9C7M:~/dir$ _
```

Рандом


```
serhio@DESKTOP-QKU9C7M:~/dir$ echo $RANDOM
19069
serhio@DESKTOP-QKU9C7M:~/dir$ _
```

Удаление директории


```
serhio@DESKTOP-QKU9C7M:~/dir$ cd ..
serhio@DESKTOP-QKU9C7M:~$ rm -rf dir
serhio@DESKTOP-QKU9C7M:~$ ls
x
serhio@DESKTOP-QKU9C7M:~$ _
```