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LSF103 - Aide et Documentation

L'Aide des Commandes Externes au Shell

Les commandes externes au shell sont des binaires exécutables ou des scripts, généralement situés dans /bin, /sbin, /usr/bin ou /usr/sbin :

```
SLES12SP1:~ # type ifconfig
ifconfig is /sbin/ifconfig
```

L'aide d'une commande externe au shell peut être visualisé dans la plupart des cas en passant le paramètre **- -help** en argument à la commande en question :

```
SLES12SP1:~ # du --help | more
Usage: du [OPTION]... [FILE]...
  or:  du [OPTION]... --files0-from=F
Summarize disk usage of each FILE, recursively for directories.

Mandatory arguments to long options are mandatory for short options too.
  -0, --null            end each output line with 0 byte rather than newline
  -a, --all             write counts for all files, not just directories
      --apparent-size   print apparent sizes, rather than disk usage; although
                          the apparent size is usually smaller, it may be
                          larger due to holes in ('sparse') files, internal
                          fragmentation, indirect blocks, and the like
  -B, --block-size=SIZE  scale sizes by SIZE before printing them; e.g.,
                          '-BM' prints sizes in units of 1,048,576 bytes;
                          see SIZE format below
  -b, --bytes           equivalent to '--apparent-size --block-size=1'
  -c, --total           produce a grand total
```

```
  -D, --dereference-args  dereference only symlinks that are listed on the
                            command line
  -d, --max-depth=N     print the total for a directory (or file, with --all)
                            only if it is N or fewer levels below the command
                            line argument;  --max-depth=0 is the same as
                            --summarize
      --files0-from=F   summarize disk usage of the
--More--
```

Cependant dans certains cas, cette option n'est pas admise :

```
SLES12SP1:~ # type --help
-bash: type: --: invalid option
type: usage: type [-afptP] name [name ...]
```

L'Aide des Commandes Internes du Shell

Les commandes internes au shell sont des commandes telles **type**, **cd** ou **umask**. Pour vérifier le type de commande, il faut utiliser la commande **type** :

```
SLES12SP1:~ # type type
type is a shell builtin
```

Le shell possède la commande **help**. Utilisée seule, cette commande fournit la liste des commandes internes :

```
SLES12SP1:~ # help | more
GNU bash, version 4.2.47(1)-release (x86_64-suse-linux-gnu)
These shell commands are defined internally.  Type `help' to see this list.
Type `help name' to find out more about the function `name'.
Use `info bash' to find out more about the shell in general.
Use `man -k' or `info' to find out more about commands not in this list.
```

```
A star (*) next to a name means that the command is disabled.

 job_spec [&]                                    history [-c] [-d offset] [n] or history -anrw>
 (( expression ))                                if COMMANDS; then COMMANDS; [ elif COMMANDS; >
 . filename [arguments]                          jobs [-lnprs] [jobspec ...] or jobs -x comman>
 :                                               kill [-s sigspec | -n signum | -sigspec] pid >
 [ arg... ]                                      let arg [arg ...]
 [[ expression ]]                                local [option] name[=value] ...
 alias [-p] [name[=value] ... ]                  logout [n]
 bg [job_spec ...]                               mapfile [-n count] [-O origin] [-s count] [-t>
 bind [-lpvsPVS] [-m keymap] [-f filename] [-q > popd [-n] [+N | -N]
 break [n]                                       printf [-v var] format [arguments]
 builtin [shell-builtin [arg ...]]               pushd [-n] [+N | -N | dir]
 caller [expr]                                   pwd [-LP]
 case WORD in [PATTERN [| PATTERN]...) COMMANDS> read [-ers] [-a array] [-d delim] [-i text] [>
 cd [-L|[-P [-e]]] [dir]                         readarray [-n count] [-O origin] [-s count] [>
 command [-pVv] command [arg ...]                readonly [-aAf] [name[=value] ...] or readonl>
--More--
```

L'aide concernant une commande spécifique peut être obtenu en passant la commande concernée en argument à la commande **help** :

```
SLES12SP1:~ # help type
type: type [-afptP] name [name ...]
    Display information about command type.
    For each NAME, indicate how it would be interpreted if used as a
    command name.
    Options:
      -a    display all locations containing an executable named NAME;
        includes aliases, builtins, and functions, if and only if
        the `-p' option is not also used
      -f    suppress shell function lookup
      -P    force a PATH search for each NAME, even if it is an alias,
        builtin, or function, and returns the name of the disk file
        that would be executed
```

```
      -p     returns either the name of the disk file that would be executed,
        or nothing if `type -t NAME' would not return `file'.
      -t     output a single word which is one of `alias', `keyword',
        `function', `builtin', `file' or `', if NAME is an alias, shell
        reserved word, shell function, shell builtin, disk file, or not
        found, respectively
    Arguments:
      NAME  Command name to be interpreted.
    Exit Status:
    Returns success if all of the NAMEs are found; fails if any are not found.
typeset: typeset [-aAfFgilrtux] [-p] name[=value] ...
    Set variable values and attributes.
    Obsolete.  See `help declare'.
```

La Commande man

La commande man donne accès au manuel de la commande passée en argument. Par exemple **man help** :

```
BASH_BUILTINS(1)                  General Commands Manual                  BASH_BUILTINS(1)


NAME
       bash,  :,  .,  [,  alias, bg, bind, break, builtin, caller, cd, command, compgen, com-
       plete, compopt, continue, declare, dirs,  disown, echo,  enable,  eval,  exec,  exit,
       export,  false,  fc, fg, getopts, hash, help, history, jobs, kill, let, local, logout,
       mapfile, popd, printf, pushd, pwd, read, readonly, return, set, shift, shopt,  source,
       suspend, test, times, trap, true, type, typeset, ulimit, umask, unalias, unset, wait -
       bash built-in commands, see bash(1)


BASH BUILTIN COMMANDS
       Unless otherwise noted, each builtin command documented in this section  as  accepting
       options  preceded  by  -  accepts  -- to signify the end of the options.  The :, true,
       false, and test builtins do not accept options and do not  treat  --  specially.   The
```

```
        exit,  logout,  break,  continue, let, and shift builtins accept and process arguments
        beginning with - without requiring --.  Other builtins that accept arguments  but  are
        not  specified  as  accepting  options interpret arguments beginning with - as invalid
        options and require -- to prevent this interpretation.
        : [arguments]
                No effect; the command does nothing beyond expanding arguments  and  performing
                any specified redirections.  A zero exit code is returned.


        .  filename [arguments]
 Manual page help(1) line 1 (press h for help or q to quit)
```

Une page de manuel peut contenir plusieurs sections :

Section	Contenu
NOM	Nom et rôle de la commande
SYNOPSIS	Syntaxe de la commande, paramètres et arguments
DESCRIPTION	Mode d'emploi et les arguments principaux
OPTIONS	Descriptions détaillées de chaque paramètre
EXEMPLES / EXAMPLES	Exemples d'utilisation de la commande
ENVIRONNEMENT / ENVIRONMENT VARIABLES	Fonctionnement selon l'environnement du shell
CONFORMITÉ / STANDARDS / CONFORMING TO	Éventuelles normes auxquelles la commande se conforme
BOGUES / BUGS/TO DO	Éventuelles bogues connues
DIAGNOSTICS/RETOUR / EXIT STATUS/RETURN VALUE	Codes d'erreur et leur signification
VOIR AUSSI / SEE ALSO	Commandes liées à celle du manuel actuel

La navigation dans la page de manuel se fait grâce à l'utilisation de certaines touches :

Touche	Fonction
Espace	Faire défiler une page complète
Entrée	Faire défiler la page ligne par ligne
↑	Faire défiler la page une ligne vers le haut
↓	Faire défiler la page une ligne vers le bas
PageHaut	Faire défiler une demi-page vers le haut

Touche	Fonction
PageBas	Faire défiler une demi-page vers le bas
Début	Se positionner au début du manuel
Fin	Se positionner à la fin du manuel
/	Rechercher la chaîne qui suit la touche /. La touche n recherche l'occurrence suivante. La touche N recherche l'occurrence précédente
Q	Quitter le manuel

Un manuel complet est fait de plusieurs sections :

Section	Contenu
1	Instructions exécutables ou commandes shell
2	Appels système
3	Appels des bibliothèques
4	Fichiers spéciaux
5	Format des fichiers
6	Jeux, économiseurs d'écrans, gadgets
7	Divers et commandes non standard
8	Commandes d'administration du système Linux
9	Sous-programmes du noyau

Les différentes sections disponibles sont visibles grâce à l'utilisation de la commande **whereis** :

```
SLES12SP1:~ # whereis passwd
passwd: /usr/bin/passwd /etc/passwd /etc/passwd.YaST2save /usr/share/man/man1/passwd.1ssl.gz
/usr/share/man/man1/passwd.1.gz /usr/share/man/man5/passwd.5.gz
```

Pour visualiser une section spécifique, il convient de préciser son numéro :

```
$ man 5 passwd [Entrée]
```

L'option **-k** de la commande man permet de rechercher la chaîne passée en argument dans la liste des manuels disponibles :

```
SLES12SP1:~ # man -k passwd
chpasswd (8)          - update passwords in batch mode
Crypt::SmbHash (3pm) - Perl-only implementation of lanman and nt md4 hash functions, for use in...
fgetpwent_r (3)       - get passwd file entry reentrantly
getpwent_r (3)        - get passwd file entry reentrantly
gpasswd (1)           - administer /etc/group
grub2-mkpasswd-pbkdf2 (1) - generate hashed password for GRUB
ldappasswd (1)        - change the password of an LDAP entry
lppasswd (1)          - add, change, or delete digest passwords.
opiepasswd (1)        - Change or set a user's password for the OPIE authentication system.
pam_localuser (8)     - require users to be listed in /etc/passwd
passwd (1)            - change user password
passwd (1ssl)         - compute password hashes
passwd (5)            - password file
passwd2des (3)        - RFS password encryption
saslpasswd2 (8)       - set a user's sasl password
smbpasswd (5)         - The Samba encrypted password file
smbpasswd (8)         - change a user's SMB password
vncpasswd (1)         - change the VNC password
yppasswd (1)          - change your password in the NIS database
```

Le résultat est une liste de commandes suivies par une description brève de celles-ci.

⚠️ **Important** - Notez que les numéros entre parenthèses indiquent les sections disponibles.

Options de la commande

Les options de cette commande sont :

```
SLES12SP1:~ # man --help
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
  -m, --systems=SYSTEM      use manual pages from other systems
  -M, --manpath=PATH        set search path for manual pages to PATH

  -S, -s, --sections=LIST   use colon separated section list

  -e, --extension=EXTENSION  limit search to extension type EXTENSION

  -i, --ignore-case         look for pages case-insensitively (default)
  -I, --match-case          look for pages case-sensitively

      --regex               show all pages matching regex
```

```
      --wildcard              show all pages matching wildcard

      --names-only            make --regex and --wildcard match page names only,
                              not descriptions

  -a, --all                   find all matching manual pages
  -u, --update                force a cache consistency check

      --no-subpages           don't try subpages, e.g. 'man foo bar' => 'man
                              foo-bar'

 Controlling formatted output:
  -P, --pager=PAGER           use program PAGER to display output
  -r, --prompt=STRING         provide the `less' pager with a prompt

  -7, --ascii                 display ASCII translation of certain latin1 chars
  -E, --encoding=ENCODING     use selected output encoding
      --no-hyphenation, --nh turn off hyphenation
      --no-justification,                             --nj   turn off justification
  -p, --preprocessor=STRING  STRING indicates which preprocessors to run:
                              e - [n]eqn, p - pic, t - tbl,
g - grap, r - refer, v - vgrind

  -t, --troff                 use groff to format pages
  -T, --troff-device[=DEVICE]   use groff with selected device

  -H, --html[=BROWSER]        use  or BROWSER to display HTML output
  -X, --gxditview[=RESOLUTION]   use groff and display through gxditview
                              (X11):
                              -X = -TX75, -X100 = -TX100, -X100-12 = -TX100-12
  -Z, --ditroff               use groff and force it to produce ditroff

  -?, --help                  give this help list
      --usage                 give a short usage message
```

```
  -V, --version              print program version


Mandatory or optional arguments to long options are also mandatory or optional
 for any corresponding short options.


Report bugs to cjwatson@debian.org.
```

La Commande apropos

La commande **apropos** cherche dans la base de données **whatis** la chaine de caractères passée en argument à la commande. Sans option, la sortie obtenue est identique à la commande **man -k** :

```
SLES12SP1:~ # apropos passwd
chpasswd (8)         - update passwords in batch mode
Crypt::SmbHash (3pm) - Perl-only implementation of lanman and nt md4 hash functions, for use in...
fgetpwent_r (3)      - get passwd file entry reentrantly
getpwent_r (3)       - get passwd file entry reentrantly
gpasswd (1)          - administer /etc/group
grub2-mkpasswd-pbkdf2 (1) - generate hashed password for GRUB
ldappasswd (1)       - change the password of an LDAP entry
lppasswd (1)         - add, change, or delete digest passwords.
opiepasswd (1)       - Change or set a user's password for the OPIE authentication system.
pam_localuser (8)    - require users to be listed in /etc/passwd
passwd (1)           - change user password
passwd (1ssl)        - compute password hashes
passwd (5)           - password file
passwd2des (3)       - RFS password encryption
saslpasswd2 (8)      - set a user's sasl password
smbpasswd (5)        - The Samba encrypted password file
smbpasswd (8)        - change a user's SMB password
vncpasswd (1)        - change the VNC password
yppasswd (1)         - change your password in the NIS database
```

Options de la commande

Les options de cette commande sont :

```
SLES12SP1:~ # apropos --help
Usage: apropos [OPTION...] KEYWORD...

  -d, --debug                emit debugging messages
  -v, --verbose              print verbose warning messages
  -e, --exact                search each keyword for exact match
  -r, --regex                interpret each keyword as a regex
  -w, --wildcard             the keyword(s) contain wildcards
  -a, --and                  require all keywords to match
  -l, --long                 do not trim output to terminal width
  -C, --config-file=FILE     use this user configuration file
  -L, --locale=LOCALE        define the locale for this search
  -m, --systems=SYSTEM       use manual pages from other systems
  -M, --manpath=PATH         set search path for manual pages to PATH
  -s, --sections=LIST, --section=LIST
                             search only these sections (colon-separated)
  -?, --help                 give this help list
      --usage                give a short usage message
  -V, --version              print program version


Mandatory or optional arguments to long options are also mandatory or optional
for any corresponding short options.


The --regex option is enabled by default.


Report bugs to cjwatson@debian.org.
```

Les Commandes mandb et whatis

Sous SLES 11 et 12 la base de données peut être maintenue manuellement par root en invoquant l'exécutable **/bin/mandb** ou **/usr/bin/mandb**.

L'utilisation de **mandb** est très simple :

```
SLES12SP1:~ # mandb
mandb: warning: $MANPATH set, ignoring /etc/manpath.config
Purging old database entries in /usr/share/man/ca...
Processing manual pages under /usr/share/man/ca...
Purging old database entries in /usr/share/man/cs...
Processing manual pages under /usr/share/man/cs...
Purging old database entries in /usr/share/man/da...
Processing manual pages under /usr/share/man/da...
Purging old database entries in /usr/share/man/de...
Processing manual pages under /usr/share/man/de...
Purging old database entries in /usr/share/man/es...
Processing manual pages under /usr/share/man/es...
...
10 man subdirectories contained newer manual pages.
0 manual pages were added.
0 stray cats were added.
0 old database entries were purged.
```

La commande **whatis** peut maintenant être utilisée pour identifier les sections des manuels disponibles pour une commande donnée :

```
SLES12SP1:~ # whatis passwd
passwd (1ssl)        - compute password hashes
passwd (1)           - change user password
passwd (5)           - password file
```

Options des commandes

Les options de la commande **mandb** sont :

```
SLES12SP1:~ # mandb --help
Usage: mandb [OPTION...] [MANPATH]

  -c, --create              create dbs from scratch, rather than updating
  -C, --config-file=FILE    use this user configuration file
  -d, --debug               emit debugging messages
  -f, --filename=FILENAME   update just the entry for this filename
  -p, --no-purge            don't purge obsolete entries from the dbs
  -q, --quiet               work quietly, except for 'bogus' warning
  -s, --no-straycats        don't look for or add stray cats to the dbs
  -t, --test                check manual pages for correctness
  -u, --user-db             produce user databases only
  -?, --help                give this help list
      --usage               give a short usage message
  -V, --version             print program version

Mandatory or optional arguments to long options are also mandatory or optional
for any corresponding short options.

Report bugs to cjwatson@debian.org.
```

Les options de la commande **whatis** sont :

```
SLES12SP1:~ # whatis --help
Usage: whatis [OPTION...] KEYWORD...

  -d, --debug               emit debugging messages
  -v, --verbose             print verbose warning messages
  -r, --regex               interpret each keyword as a regex
```

```
 -w, --wildcard              the keyword(s) contain wildcards
 -l, --long                  do not trim output to terminal width
 -C, --config-file=FILE      use this user configuration file
 -L, --locale=LOCALE         define the locale for this search
 -m, --systems=SYSTEM        use manual pages from other systems
 -M, --manpath=PATH          set search path for manual pages to PATH
 -s, --sections=LIST, --section=LIST
                             search only these sections (colon-separated)
 -?, --help                  give this help list
     --usage                 give a short usage message
 -V, --version               print program version


Mandatory or optional arguments to long options are also mandatory or optional
 for any corresponding short options.


Report bugs to cjwatson@debian.org.
```

La Commande info

En plus du système des manuels, des informations concernant des exécutables peuvent être trouvées dans le système **info**. De l'information détaillée, des exemples et des tutoriels peuvent être absents du système des manuels. Pour cette raison le système **info** a été créé.

Dans le système **info**, de multiples pages d'informations concernant un exécutable, appelées nœuds, sont regroupées. La navigation entre nœuds est simple et utilise un système de liens hypertexte.

Afin de faciliter la navigation chaque page contient une entête qui inclut de l'information sur le nœud courant, le nœud parent, le nœud précédent et le nœud suivant. Pour naviguer entre les nœuds il convient d'utiliser les touches suivantes :

Touch	Fonction
n	Nœud suivant.
p	Nœud précédent.
u	Nœud parent.

Touch	Fonction
Espace	Défiler une page vers le bas.
Suppr	Défiler une page vers le haut.
b	Retour au début du nœud courant.
Tab ⇆	Sélectionner le lien hypertexte suivant.
m <lien>	Aller au sous-nœud spécifié. En appuyant sur [Tab], on obtient la liste de tous les sous-nœuds.
↵ Entrée	Suivre le lien hypertexte courant. Un lien hypertexte commence avec un astérisque et se termine avec le caractère **:**.
q	Quitter le système **info**.

Pour accéder au premier nœud, utilisez la commande suivante :

```
SLES12SP1:~ # info
...
File: dir,        Node: Top        This is the top of the INFO tree

  This (the Directory node) gives a menu of major topics.
  Typing "q" exits, "?" lists all Info commands, "d" returns here,
  "h" gives a primer for first-timers,
  "mEmacs<Return>" visits the Emacs manual, etc.

  In Emacs, you can click mouse button 2 on a menu item or cross reference
  to select it.

* Menu:

Archiving
* Cpio: (cpio).                 Copy-in-copy-out archiver to tape or disk.
* Shar utilities: (sharutils).  Shell archiver, uuencode/uudecode.
* Tar: (tar).                   Making tape (or disk) archives.

Basics
* Bash: (bash).                 The GNU Bourne-Again SHell.
* Common options: (coreutils)Common options.
```

```
* Coreutils: (coreutils).        Core GNU (file, text, shell) utilities.
* Date input formats: (coreutils)Date input formats.
-----Info: (dir)Top, 321 lines --Top-------------------------------------------------------------
Welcome to Info version 4.13. Type h for help, m for menu item.
```

Options de la commande

Les options de cette commande sont :

```
SLES12SP1:~ # info --help
Usage: info [OPTION]... [MENU-ITEM...]

Read documentation in Info format.

Options:
  -k, --apropos=STRING        look up STRING in all indices of all manuals.
  -d, --directory=DIR         add DIR to INFOPATH.
      --dribble=FILENAME      remember user keystrokes in FILENAME.
  -f, --file=FILENAME         specify Info file to visit.
  -h, --help                  display this help and exit.
      --index-search=STRING   go to node pointed by index entry STRING.
  -n, --node=NODENAME         specify nodes in first visited Info file.
  -o, --output=FILENAME       output selected nodes to FILENAME.
  -R, --raw-escapes           output "raw" ANSI escapes (default).
      --no-raw-escapes        output escapes as literal text.
      --restore=FILENAME      read initial keystrokes from FILENAME.
  -O, --show-options, --usage  go to command-line options node.
      --subnodes              recursively output menu items.
      --vi-keys               use vi-like and less-like key bindings.
      --version               display version information and exit.
  -w, --where, --location     print physical location of Info file.

The first non-option argument, if present, is the menu entry to start from;
```

```
it is searched for in all `dir' files along INFOPATH.
If it is not present, info merges all `dir' files and shows the result.
Any remaining arguments are treated as the names of menu
items relative to the initial node visited.


For a summary of key bindings, type h within Info.


Examples:
  info                       show top-level dir menu
  info info                  show the general manual for Info readers
  info info-stnd             show the manual specific to this Info program
  info emacs                 start at emacs node from top-level dir
  info emacs buffers         start at buffers node within emacs manual
  info --show-options emacs  start at node with emacs' command line options
  info --subnodes -o out.txt emacs  dump entire manual to out.txt
  info -f ./foo.info         show file ./foo.info, not searching dir


Email bug reports to bug-texinfo@gnu.org,
general questions and discussion to help-texinfo@gnu.org.
Texinfo home page: http://www.gnu.org/software/texinfo/
```

<html>

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</html>