CONVENTIONS

The following conventions have been used in illustrating command formats:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
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<tbody>
<tr>
<td>UPPERCASE LETTERS</td>
<td>Represent necessary portions of the command line format.</td>
</tr>
<tr>
<td>lowercase letters</td>
<td>Represent variable portions of the command line format.</td>
</tr>
<tr>
<td>{ }</td>
<td>Represent alternative selections for the command line; one of the alternatives within the braces must be chosen by the user.</td>
</tr>
<tr>
<td>[ ]</td>
<td>Represent optional portions of the command line.</td>
</tr>
</tbody>
</table>

The following lists the variable portions of the command line descriptions. The left-column lists the variable names used on this reference card; the right-column explains what the user must supply in place of the variable name.

\^  A delimiter of an identifier; it can be any alphanumeric character.

addr  An octal address.

arg  A letter or word specifying the desired function of a command.

condition  One or more reasons for allowing (not allowing) a break condition to occur. It can be either READ, WRITE, EXECUTE ALL, or MUUO.

core  A decimal number of blocks (n or nK) or pages (nP) of core.

ctrl-file-spec  A file specification, plus switches and keyword parameters, for the control file being submitted to the Batch input queue.

device  Either dev, devnn, devnnu, or devu.

dev:  Any physical device name.

devnn:  Any physical device name, followed by a 2-digit node number.
<table>
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<th>Convention</th>
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<tr>
<td>devnmu:</td>
<td>Any physical device name, followed by a 2-digit node number and a 1-digit unit number.</td>
</tr>
<tr>
<td>devu:</td>
<td>Any physical device name followed by a 1-digit unit number.</td>
</tr>
<tr>
<td>drives</td>
<td>The physical drives on which a unit is to be mounted.</td>
</tr>
<tr>
<td>file[.ext]</td>
<td>Any legal filename from one to six characters, followed by an optional filename extension.</td>
</tr>
<tr>
<td>file-spec</td>
<td>A device name, a filename, a filename extension, and a directory name:</td>
</tr>
<tr>
<td></td>
<td><code>[[device:]] file [.ext ] [[directory]]</code></td>
</tr>
<tr>
<td>input-specifications</td>
<td>A list of input file specifications for the files to be processed.</td>
</tr>
<tr>
<td>jobn</td>
<td>A user's job number assigned by the system.</td>
</tr>
<tr>
<td>jobname</td>
<td>A name of up to six characters for the job being entered into one of the system queues.</td>
</tr>
<tr>
<td>lh</td>
<td>The left half of a 36-bit word.</td>
</tr>
<tr>
<td>log-dev</td>
<td>Any logical device name from one to six alphanumeric characters.</td>
</tr>
<tr>
<td>log-file-spec</td>
<td>A file specification for the file that is to be used to record action taken during the execution of the control file.</td>
</tr>
<tr>
<td>name</td>
<td>A one- to six-character SIXBIT name to be used as an identifier. In some command lines, name must be delimited by an alphanumeric character (refer to the description of <code>^</code>).</td>
</tr>
<tr>
<td>n</td>
<td>A number.</td>
</tr>
<tr>
<td>nnn</td>
<td>The density for the specified magnetic tape. The density can be 200, 556, or 800 bpi.</td>
</tr>
<tr>
<td>nnnn</td>
<td>A decimal number between 3 and 4094 designating the block size for the specified magnetic tape.</td>
</tr>
</tbody>
</table>
Convention | Meaning
---|---
<nnn> | A three-digit octal code indicating the protection of a file.
m | A TTY number.
prog | A program name of six or fewer characters.
queue name | A queue name which can be either INP:, LPT:, CDP:, PTP:, or PLT:.
rh | The right half of a 36-bit word.
/switches | One or more switches used to modify the command string. Each switch is preceded by a slash.
text | A message to be sent to the designated user or terminal.
[user number] | A numeric identification assigned to the user for the purpose of gaining access to the system. It is usually two numbers separated by a comma.

Note that the complete command format has been shown for the commands. Depending on the circumstances, only part of this format may be required. Refer to the DECsystem-10 Operating System Commands manual in order to determine the arguments required for a particular task. In addition, the commands can be abbreviated as long as the abbreviation does not conflict with any other command abbreviation.

Many command strings allow wild-card characters to be used in place of alphanumeric characters. These characters permit more than one file or directory to be referenced by a single specification. Two such wild-card characters are available:

1. * — The asterisk is a wild card for an entire field. When positioned in the appropriate context, it means:

   Examples
   
   a. any filename or extension     *.EXT     FILNAM.*
   b. any project number            [*1164]  [27,*]
      or programmer number
      (also any subfile directory)

   Note that *:* and [*,*] are also possible.
2. ? — The question mark is a wild card for a single character. It can be used in any field mentioned above, provided the * does not share the field. It means: any character.

\* .EX? FIL???.EX? ?!LNAM.*[27,116?] [*,11??]

In addition, the directory name can be specified with the project number, the programmer number, or both numbers missing.

COMMANDS

ASSIGN \{dev
devnn
devnu
devu\} \{ log-dev \}

Allocates an I/O device to the user's job without operator intervention. Assigns a logical name to a device.

ATTACH jobn [user number]

Detaches the current job and connects the terminal to the specified detached job.

BACKSPACE MTAn:m \{FILES \{RECORDS \}

Spaces a magtape backward the specified number of files or records.

CCONTINUE

Continues the program from the point at which it was interrupted, but leaves the terminal in monitor mode.

CLOSE device

Terminates I/O currently in progress on the specified device, performs the CLOSE monitor call, but does not release the device.

COMPILE list

Produces relocatable binary files for the specified source files.

CONTINUE

Continues the program from the point at which it was interrupted.

COPY file-spec <nnn> = file-spec [...]

Transfers files from one I/O device to another.
CORE

Types or modifies the amount of core assigned to the user's job.

CPUNCH jobname = list of input specifications

Places entries into the card punch output spooling queue.

CREATE file.ext

Opens a new file on disk for creation with LINED.

CREF

Lists on the line printer any cross-referenced listing files generated by a previous COMPILE, LOAD, EXECUTE, or DEBUG command.

CSTART addr

Begins execution of a program that was either loaded with a GET command or interrupted, but leaves the terminal in monitor mode.

D lh rh addr

Deposits information in the user's core area.

DAYTIME

Types the current date followed by the time of day.

DCORE file-specification

Writes a core image file of the user's core area.

DDT

Copies the saved program counter and starts the program at the beginning address of DDT, if DDT was loaded with the program (automatic in 6.01 and later monitors).

DEASSIGN device

Returns devices assigned to the user's job to the monitor's pool of available devices and clears logical name assignments.

DEBUG list

Produces relocatable binary files for the specified source files, loads the .REL file along with an appropriate system debugging program, and prepares for debugging.

DELETE list

Deletes files from DECTape or disk.
DETACH

Disconnects the terminal from the current job without affecting the status of the job.

DIRECT \{ output file specification = list of input file specifications \}

Lists the directory entries for the specified. No argument causes the user’s directory entries to be listed.

DISMOUNT device \{ /switches \}

Returns, via the operator, devices assigned to the user’s job to the monitor’s pool of available devices.

DSK \{ job \}

Types disk usage for the combined structures of the specified job.

DUMP \{ /command \{ /command... \} \{ @ file-specification \} \}

Writes a core image file, analyzes the file written, and provides printed output.

E \{ addr \}

Examines the specified core location in the user’s core area.

EDIT \{ file.ext \}

Opens the specified file for editing with LINED.

EOF \{ MTAn: \}

Writes an end-of-file mark on the specified magnetic tape.

EXECUTE \{ list \}

Produces relocatable binary files for the specified source files, loads the .REL files, and begins execution.

FILE \{ C \{ D, id, file.ext, file.ext \} \{ F, ^tape-id^, file-spec \{ ..., \} \} \{ L, id \} \{ R, ^tape-id^, file-spec \{ ..., \} \} \{ W \} \{ Z, ^tape-id^, file-spec \{ ..., \} \} \}

Provides remote control, via the operator, of DECtape to disk and disk to DECtape transfers.
FINISH  device

Terminates I/O in progress on the specified device and performs a
RELEASE monitor call and a DEASSIGN command.

FUDGE

Creates a library REL file by reading a temporary file generated
by a previous COMPILE, LOAD, EXECUTE, or DEBUG command
containing the /FUDGE switch.

GET  file-spec core

Loads a core image for the specified device, but does not begin
execution.

HALT (CTRL/C)

Stop the job and stores the program counter in the job data area.
CTRL/C can be used at user level as well as at monitor level.

HELP

{device*}
{device: name}

Outputs useful information on various system features.

INITIA  arg

Performs standard system initialization for the terminal issuing the
command.

JCONT  job

Continues the specified job if it was in a ^C state.

KJOB

file-spec =/letter list-of-file-structure-names,...

Gives up access to the system.

LABEL  device: ^name^  

Writes an identifier onto a DECTape.

LIST  list

Lists the specified files on the line printer.

LOAD  list

Produces relocatable binary files for the specified files, and loads
the .REL files generated.

LOCATE  node-id

Establishes logically, the user’s job at a specified node.
LOGIN \(\{\text{user number} \mid /\text{switches}\\}\) \(\{\text{user number} \mid /\text{switches}\\}\)

Provides access to the system.

MAKE file-spec

Opens a new file on disk for creation with TECO.

MOUNT device: log-dev: \(\{/\text{switches}\} \{\text{drives}\}\)

Allocates an I/O device to the user’s job via the operator.

NODE \(\{\text{node-id}\} \{\text{physical-device-name}\} \{\text{logical-device-name}\}\)

Types out node information, or assigns the designated I/O device to the specified node, and optionally assigns a logical device name.

NSAVE file-specification \(\{\text{core}\}\)

Writes a core image of the user’s core area on the specified device.

NSSAVE file-specification \(\{\text{core}\}\)

Writes a core image of the user’s core area on the specified device.

OSAVE file-specification \(\{\text{core}\}\)

Writes a core image of the user’s core area on the specified device.

OSSAVE file-specification \(\{\text{core}\}\)

Writes a core image of the user’s core area on the specified device.

PJOB

Outputs the job number to which the terminal is currently attached.

PLEASE device:program!text

Provides two-way communication between the user and the operator.

PLOT jobname = list-of-input-specifications

Places entries into the plotter output queue.

PRESCRIBE file.ext \(\{\ldots\}\)

 Renames the specified files with the standard protection code ORed with 100.
PRINT jobname = list-of-input-specifications

Places entries into the line printer output spooling queue.

PROTECT file <nnn> [...]

Sets the specified files to the requested protections.

QUEUE

\{ INP:jobname = ctrl-file-spec, log-file-spec \}
\{ queue name:jobname = list-of-file-specs \}
\{ listing-file-specs/LIST = list-of-queue-names \}

Enters items into the specified system queue.

R file.ext [core]

Loads a core image from the system device (SYS:) and starts it at the location specified within the file.

REASSIGN device: [jobn]

 Gives the specified device to the designated job.

REENTER

Starts the program at an alternate entry point specified by the program.

RENAMe new = old [,new = old,...]

Changes the name and protection of one or more files on DECtape or disk.

RESOURCES

Outputs the names of all available devices (except PTYs and TTYs), all file structures, and all physical units not in file structures.

REWIND device:

Rewinds a magnetic tape or DECtape.

RUN file-spec [core]

Loads a core image from the specified device and starts it at the location specified within the file.

SAVE file-spec [core]

Writes a core image of the user's core area on the specified device.
SCHED

Outputs the schedule bits set by the last SET SCHED command.

SEND

\[
\begin{align*}
\text{device:} & \text{ text} \\
\text{JOB n text} & \\
\text{n: text}
\end{align*}
\]

Provides a one-way interconsole line of communication.

SET BLOCKSIZE \( \text{device:nnnn} \)

Sets the default blocksize for the specified magnetic tape.

SET BREAK

\[
\begin{align*}
\text{AT addr} & \text{ ON condition} \\
\text{NO condition} & \\
\text{NONE} & \\
\text{USERS} & \\
\text{NO USERS}
\end{align*}
\]

Sets address break locations in programs according to specified conditions.

SET CDR filename

Sets the filename for the next card-reader spooling intercept.

SET CPU \( \text{CPxn}^{1,2} \)

\[
\begin{align*}
\text{NO CPxn} & \\
\text{ALL} & \\
\text{ONLY CPxn}
\end{align*}
\]

Sets the CPU specification for the job.

SET DENSITY \( \text{device:nnn} \)

Sets the default density for the specified magnetic tape.

SET DSKFUL

\[
\begin{align*}
\text{ERROR} & \\
\text{PAUSE}
\end{align*}
\]

Controls the job when the user has exhausted his disk space.

SET DSKPRI \( n^{1} \)

Sets the priority for the job’s disk operations (data transfers and head positionings).

SET HPQ \( n^{1} \)

Sets the high priority scheduler run queue for the job.
SET PHYSICAL \{ LIMIT core \)
\{ GUIDELINE core \}

Specifies when the job will go virtual and specifies a guideline for the page fault handler if GUIDELINE is designated.

SET SPOOL \{ device: ALL \}
\{ device: NONE \}
\{ device: NO \}

Adds devices to or deletes devices from the list of spooled devices for this job.

SET TIME \n\n
Sets the central processor time limit for this job.

SET TTY \{ NO arg \}
\{ arg \}

Sets properties to be associated with the terminal.

SET VIRTUAL LIMIT core

Specifies the limit on the virtual memory for a job.

SET WATCH \{ arg ALL \}
\{ arg NONE \}
\{ arg NO \}

Sets the output of incremental job statistics.

SKIP MTAn:\{ x FILES \}
\{ x RECORDS \}
\{ EOT \}

Moves the specified magnetic tape forward the designated number of files or records or to the logical end of tape.

SSAVE file-spec \[ core \]

Writes a core image of the user’s core area on the specified device.

START addr

Begins execution of a program either previously loaded with the GET command or interrupted while running.

SUBMIT jobname = ctrl-file-spec, log-file-spec \[ /switches \]

Places entries into the Batch input queue.
SYSTAT \[ \text{arg} \]

Prints information about the current status of the system.

TECO \text{file-spec}

Opens the specified file for editing with TECO.

TIME \text{jobn}

Outputs the running time for the specified job.

TPUNCH \text{jobname} = \text{list-of-inputspecs}

Places entries into the paper tape punch output spooling queue.

TTY \{\text{NO arg} \}
\{ \text{arg} \}

Sets properties to be associated with the terminal.

TYPE \text{list}

Types the specified file(s) on the user's terminal.

UNLOAD \text{device}

Rewinds and unloads the specified magnetic tape or DECTape.

\{ \text{USESTAT} \}
\{ \text{CTRL/T} \}

Prints information on the terminal concerning the user's job. \text{CTRL/T} can be used at the user level also.

VERSION

Outputs the version number of a program on the terminal.

WHERE \text{device}

Outputs the node number of the specified device.

ZERO \text{device} : \{ \text{directory} \}

Clears the directory of the specified device.
Syntax

* com arg1 arg2...  
  com - single letter as below
  arg1 m:m  
  m: first line
  m: last line
  (m may be omitted)

A first line
* last line
^n: * entire file
  o current line
  <prev>: previous line
  <ft>: next line

Commands

P. print
D. delete
I. insert
R. replace
F. string<ex> find string
S. old<ex>.new<ex>: m:m  
  substitute string

C. x, m:m  copy m:m to x
T. x, m:m  transpose = copy/delete
N i  sequence in m:n of i
E. close, save line no
ES " " strip " "
EY quit (not to close)
W. save current file, not close
1 Requires certain bits to be set in the privilege word.

2 Available only on a multiprocessor system.

3 Used with K110/KL10 virtual memory processors only.

4 Operator-privileged formats.

Order No: DEC-10-OTSMB-C-D
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