

NAME

termcap - terminal capability database

DESCRIPTION

The termcap database is an obsolete facility for describing the capabilities of character-cell terminals and printers. It is retained only for capability with old programs; new programs should use the [terminfo\(5\)](#) database and associated libraries.

/etc/termcap is an ASCII file (the database master) that lists the capabilities of many different types of terminals. Programs can read termcap to find the particular escape codes needed to control the visual attributes of the terminal actually in use. (Other aspects of the terminal are handled by [stty\(1\)](#).) The termcap database is indexed on the **TERM** environment variable.

Termcap entries must be defined on a single logical line, with '\ ' used to suppress the newline. Fields are separated by ':'. The first field of each entry starts at the left-hand margin, and contains a list of names for the terminal, separated by '| '.

The first subfield may (in BSD termcap entries from versions 4.3 and earlier) contain a short name consisting of two characters. This short name may consist of capital or small letters. In 4.4BSD, termcap entries this field is omitted.

The second subfield (first, in the newer 4.4BSD format) contains the name used by the environment variable **TERM**. It should be spelled in lowercase letters. Selectable hardware capabilities should be marked by appending a hyphen and a suffix to this name. See below for an example. Usual suffixes are w (more than 80 characters wide), am (automatic margins), nam (no automatic margins), and rv (reverse video display). The third subfield contains a long and descriptive name for this termcap entry.

Subsequent fields contain the terminal capabilities; any continued capability lines must be indented one tab from the left margin.

Although there is no defined order, it is suggested to write first boolean, then numeric, and then string capabilities, each sorted alphabetically without looking at lower or upper spelling. Capabilities of similar functions can be written in one line.

Example for:

```
Head line: vt|vt101|DEC VT 101 terminal in 80 character mode:\
Head line: Vt|vt101-w|DEC VT 101 terminal in (wide) 132 character mode:\
Boolean: :bs:\
Numeric: :co#80:\
String: :sr=\E[H:\
```

Boolean capabilities

5i Printer will not echo on screen
am Automatic margins which means automatic line wrap
bs Control-H (8 dec.) performs a backspace
bw Backspace on left margin wraps to previous line and right margin
da Display retained above screen
db Display retained below screen
eo A space erases all characters at cursor position
es Escape sequences and special characters work in status line
gn Generic device
hc This is a hardcopy terminal
HC The cursor is hard to see when not on bottom line
hs Has a status line
hz Hazeltine bug, the terminal can not print tilde characters
in Terminal inserts null bytes, not spaces, to fill whitespace
km Terminal has a meta key
mi Cursor movement works in insert mode
ms Cursor movement works in standout/underline mode

NP No pad character
 NR ti does not reverse te
 nx No padding, must use XON/XOFF
 os Terminal can overstrike
 ul Terminal underlines although it can not overstrike
 xb Beehive glitch, f1 sends ESCAPE, f2 sends ^C
 xn Newline/wraparound glitch
 xo Terminal uses xon/xoff protocol
 xs Text typed over standout text will be displayed in standout
 xt Teleray glitch, destructive tabs and odd standout mode

Numeric capabilities

co Number of columns
 dB Delay in milliseconds for backspace on hardcopy terminals
 dC Delay in milliseconds for carriage return on hardcopy terminals
 dF Delay in milliseconds for form feed on hardcopy terminals
 dN Delay in milliseconds for new line on hardcopy terminals
 dT Delay in milliseconds for tabulator stop on hardcopy terminals
 dV Delay in milliseconds for vertical tabulator stop on
 hardcopy terminals
 it Difference between tab positions
 lh Height of soft labels
 lm Lines of memory
 lw Width of soft labels
 li Number of lines
 Nl Number of soft labels
 pb Lowest baud rate which needs padding
 sg Standout glitch
 ug Underline glitch
 vt virtual terminal number
 ws Width of status line if different from screen width

String capabilities

!1 shifted save key
 !2 shifted suspend key
 !3 shifted undo key
 #1 shifted help key
 #2 shifted home key
 #3 shifted input key
 #4 shifted cursor left key
 %0 redo key
 %1 help key
 %2 mark key
 %3 message key
 %4 move key
 %5 next-object key
 %6 open key
 %7 options key
 %8 previous-object key
 %9 print key
 %a shifted message key
 %b shifted move key
 %c shifted next key
 %d shifted options key
 %e shifted previous key
 %f shifted print key

%g shifted redo key
 %h shifted replace key
 %i shifted cursor right key
 %j shifted resume key
 &0 shifted cancel key
 &1 reference key
 &2 refresh key
 &3 replace key
 &4 restart key
 &5 resume key
 &6 save key
 &7 suspend key
 &8 undo key
 &9 shifted begin key
 *0 shifted find key
 *1 shifted command key
 *2 shifted copy key
 *3 shifted create key
 *4 shifted delete character
 *5 shifted delete line
 *6 select key
 *7 shifted end key
 *8 shifted clear line key
 *9 shifted exit key
 @0 find key
 @1 begin key
 @2 cancel key
 @3 close key
 @4 command key
 @5 copy key
 @6 create key
 @7 end key
 @8 enter/send key
 @9 exit key
 al Insert one line
 AL Insert %1 lines
 ac Pairs of block graphic characters to map alternate character set
 ae End alternative character set
 as Start alternative character set for block graphic characters
 bc Backspace, if not **^H**
 bl Audio bell
 bt Move to previous tab stop
 cb Clear from beginning of line to cursor
 cc Dummy command character
 cd Clear to end of screen
 ce Clear to end of line
 ch Move cursor horizontally only to column %1
 cl Clear screen and cursor home
 cm Cursor move to row %1 and column %2 (on screen)
 CM Move cursor to row %1 and column %2 (in memory)
 cr Carriage return
 cs Scroll region from line %1 to %2
 ct Clear tabs
 cv Move cursor vertically only to line %1

dc Delete one character
DC Delete %1 characters
dl Delete one line
DL Delete %1 lines
dm Begin delete mode
do Cursor down one line
DO Cursor down #1 lines
ds Disable status line
eA Enable alternate character set
ec Erase %1 characters starting at cursor
ed End delete mode
ei End insert mode
ff Formfeed character on hardcopy terminals
fs Return character to its position before going to status line
F1 The string sent by function key f11
F2 The string sent by function key f12
F3 The string sent by function key f13
... ..
F9 The string sent by function key f19
FA The string sent by function key f20
FB The string sent by function key f21
... ..
FZ The string sent by function key f45
Fa The string sent by function key f46
Fb The string sent by function key f47
... ..
Fr The string sent by function key f63
hd Move cursor a half line down
ho Cursor home
hu Move cursor a half line up
i1 Initialization string 1 at login
i3 Initialization string 3 at login
is Initialization string 2 at login
ic Insert one character
IC Insert %1 characters
if Initialization file
im Begin insert mode
ip Insert pad time and needed special characters after insert
iP Initialization program
K1 upper left key on keypad
K2 center key on keypad
K3 upper right key on keypad
K4 bottom left key on keypad
K5 bottom right key on keypad
k0 Function key 0
k1 Function key 1
k2 Function key 2
k3 Function key 3
k4 Function key 4
k5 Function key 5
k6 Function key 6
k7 Function key 7
k8 Function key 8
k9 Function key 9

k; Function key 10
ka Clear all tabs key
kA Insert line key
kb Backspace key
kB Back tab stop
kC Clear screen key
kd Cursor down key
kD Key for delete character under cursor
ke turn keypad off
kE Key for clear to end of line
kF Key for scrolling forward/down
kh Cursor home key
kH Cursor hown down key
kI Insert character/Insert mode key
kI Cursor left key
kL Key for delete line
kM Key for exit insert mode
kN Key for next page
kP Key for previous page
kr Cursor right key
kR Key for scrolling backward/up
ks Turn keypad on
kS Clear to end of screen key
kt Clear this tab key
kT Set tab here key
ku Cursor up key
l0 Label of zeroth function key, if not f0
l1 Label of first function key, if not f1
l2 Label of first function key, if not f2
... ..
la Label of tenth function key, if not f10
le Cursor left one character
ll Move cursor to lower left corner
LE Cursor left %1 characters
LF Turn soft labels off
LO Turn soft labels on
mb Start blinking
MC Clear soft margins
md Start bold mode
me End all mode like so, us, mb, md, and mr
mh Start half bright mode
mk Dark mode (Characters invisible)
ML Set left soft margin
mm Put terminal in meta mode
mo Put terminal out of meta mode
mp Turn on protected attribute
mr Start reverse mode
MR Set right soft margin
nd Cursor right one character
nw Carriage return command
pc Padding character
pf Turn printer off
pk Program key %1 to send string %2 as if typed by user
pl Program key %1 to execute string %2 in local mode

pn Program soft label %1 to show string %2
 po Turn the printer on
 pO Turn the printer on for %1 (<256) bytes
 ps Print screen contents on printer
 px Program key %1 to send string %2 to computer
 r1 Reset string 1 to set terminal to sane modes
 r2 Reset string 2 to set terminal to sane modes
 r3 Reset string 3 to set terminal to sane modes
 RA disable automatic margins
 rc Restore saved cursor position
 rf Reset string filename
 RF Request for input from terminal
 RI Cursor right %1 characters
 rp Repeat character %1 for %2 times
 rP Padding after character sent in replace mode
 rs Reset string
 RX Turn off XON/XOFF flow control
 sa Set %1 %2 %3 %4 %5 %6 %7 %8 %9 attributes
 SA enable automatic margins
 sc Save cursor position
 se End standout mode
 sf Normal scroll one line
 SF Normal scroll %1 lines
 so Start standout mode
 sr Reverse scroll
 SR scroll back %1 lines
 st Set tabulator stop in all rows at current column
 SX Turn on XON/XOFF flow control
 ta move to next hardware tab
 tc Read in terminal description from another entry
 te End program that uses cursor motion
 ti Begin program that uses cursor motion
 ts Move cursor to column %1 of status line
 uc Underline character under cursor and move cursor right
 ue End underlining
 up Cursor up one line
 UP Cursor up %1 lines
 us Start underlining
 vb Visible bell
 ve Normal cursor visible
 vi Cursor invisible
 vs Standout cursor
 wi Set window from line %1 to %2 and column %3 to %4
 XF XOFF character if not **^S**

There are several ways of defining the control codes for string capabilities:

Every normal character represents itself, except '^', '\', and '%'.
 A **^x** means Control-x. Control-A equals 1 decimal.

\x means a special code. x can be one of the following characters:

- E Escape (27)
- n Linefeed (10)
- r Carriage return (13)
- t Tabulation (9)
- b Backspace (8)

f	Form feed (12)
0	Null character. A \xxx specifies the octal character xxx.
i	Increments parameters by one.
r	Single parameter capability
+	Add value of next character to this parameter and do binary output
2	Do ASCII output of this parameter with a field width of 2
d	Do ASCII output of this parameter with a field width of 3
%	Print a '%'

If you use binary output, then you should avoid the null character ('\0') because it terminates the string. You should reset tabulator expansion if a tabulator can be the binary output of a parameter.

Warning:

The above metacharacters for parameters may be wrong: they document Minix termcap which may not be compatible with Linux termcap.

The block graphic characters can be specified by three string capabilities:

as	start the alternative charset
ae	end the alternative charset
ac	pairs of characters. The first character is the name of the block graphic symbol and the second character is its definition.

The following names are available:

+	right arrow (>)
,	left arrow (<)
.	down arrow (v)
0	full square (#)
I	lantern (#)
-	upper arrow (^)
'	rhombus (+)
a	chess board (:)
f	degree (')
g	plus-minus (#)
h	square (#)
j	right bottom corner (+)
k	right upper corner (+)
l	left upper corner (+)
m	left bottom corner (+)
n	cross (+)
o	upper horizontal line (-)
q	middle horizontal line (-)
s	bottom horizontal line (⏟)
t	left tee (+)
u	right tee (+)
v	bottom tee (+)
w	normal tee (+)
x	vertical line ()
~	paragraph (???)

The values in parentheses are suggested defaults which are used by the *curses* library, if the capabilities are missing.

SEE ALSO

ncurses(3), **termcap(3)**, [terminfo\(5\)](#)

COLOPHON

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