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Rocky Enterprise Linux 9.2 Manual Pages on command 'setfont.8'

$ man setfont.8

SETFONT(8) System Manager's Manual SETFONT(8)

NAME

setfont - load EGA/VGA console screen font

SYNOPSIS

setfont [-O font+umap.orig] [-o font.orig] [-om cmap.orig] [-ou umap.orig] [-N] [font.new ...] [-m cmap] [-u umap] [-C console] [-hH] [-v] [-V]

DESCRIPTION

The setfont command reads a font from the file font.new and loads it into the EGA/VGA character generator, and optionally outputs the previ? ous font. It can also load various mapping tables and output the pre? vious versions.

If no args are given (or only the option -N for some number N), then a default (8xN) font is loaded (see below). One may give several small fonts, all containing a Unicode table, and setfont will combine them and load the union. Typical use:

setfont

Load a default font.

setfont drdos8x16

Load a given font (here the 448-glyph drdos font).

setfont cybercafe -u cybercafe

Load a given font that does not have a Unicode map and provide one explicitly.

setfont LatArCyrHeb-19 -m 8859-2

Load a given font (here a 512-glyph font combining several char? acter sets) and indicate that one's local character set is ISO 8859-2.

Note: if a font has more than 256 glyphs, only 8 out of 16 colors can be used simultaneously. It can make console perception worse (loss of intensity and even some colors).

FONT FORMATS

The standard Linux font format is the PSF font. It has a header de? scribing font properties like character size, followed by the glyph bitmaps, optionally followed by a Unicode mapping table giving the Uni? code value for each glyph. Several other (obsolete) font formats are recognized. If the input file has code page format (probably with suf? fix .cp), containing three fonts with sizes e.g. 8x8, 8x14 and 8x16, then one of the options -8 or -14 or -16 must be used to select one. Raw font files are binary files of size 256*N bytes, containing bit im? ages for each of 256 characters, one byte per scan line, and N bytes per character (0 < N <= 32). Most fonts have a width of 8 bits, but with the framebuffer device (fb) other widths can be used.

FONT HEIGHT

The program setfont has no built-in knowledge of VGA video modes, but just asks the kernel to load the character ROM of the video card with certain bitmaps. However, since Linux 1.3.1 the kernel knows enough about EGA/VGA video modes to select a different line distance. The de? fault character height will be the number N inferred from the font or specified by option. However, the user can specify a different charac? ter height H using the -h option.

CONSOLE MAPS

Several mappings are involved in the path from user program output to console display. If the console is in utf8 mode (see unicode_start(1)) then the kernel expects that user program output is coded as UTF-8 (see utf-8(7)), and converts that to Unicode (ucs2). Otherwise, a translation table is used from the 8-bit program output to 16-bit Unicode values. Such a translation table is called a Unicode console map. There are four of them: three built into the kernel, the fourth settable using the -m option of setfont. An escape sequence chooses between these four tables; after loading a cmap, setfont will output the escape sequence Esc (K that makes it the active translation.

Suitable arguments for the -m option are for example 8859-1, 8859-2, ..., 8859-15, cp437, ..., cp1250.

Given the Unicode value of the symbol to be displayed, the kernel finds the right glyph in the font using the Unicode mapping info of the font and displays it.

Old fonts do not have Unicode mapping info, and in order to handle them there are direct-to-font maps (also loaded using -m) that give a correspondence between user bytes and font positions. The most common correspondence is the one given in the file trivial (where user byte values are used directly as font positions). Other correspondences are sometimes preferable since the PC video hardware expects line drawing characters in certain font positions.

Giving a -m none argument inhibits the loading and activation of a mapping table. The previous console map can be saved to a file using the -om file option. These options of setfont render mapscrn(8) obsolete. (However, it may be useful to read that man page.)

UNICODE FONT MAPS

The correspondence between the glyphs in the font and Unicode values is described by a Unicode mapping table. Many fonts have a Unicode mapping table included in the font file, and an explicit table can be indicated using the -u option. The program setfont will load such a Unicode mapping table, unless a -u none argument is given. The previous Unicode mapping table will be saved as part of the saved font file when

the -O option is used. It can be saved to a separate file using the -ou
file option. These options of setfont render loadunimap(8) obsolete.

The Unicode mapping table should assign some glyph to the `missing
character' value U+fffd, otherwise missing characters are not trans?
lated, giving a usually very confusing result.

Usually no mapping table is needed, and a Unicode mapping table is al?
ready contained in the font (sometimes this is indicated by the .psfu
extension), so that most users need not worry about the precise meaning
and functioning of these mapping tables.

One may add a Unicode mapping table to a psf font using psfaddtable(1).

OPTIONS

-h H   Override font height.

-d   Doubles the size of the font, by replicating all of its pixels
vertically and horizontally. This is suitable for high pixel
density (e.g. "4k") displays on which the standard fonts are too
small to be easily legible. Due to kernel limitations, this is
suitable only for 16x16 or smaller fonts.

-m file

Load console map or Unicode console map from file.

-o file

Save previous font in file.

-O file

Save previous font and Unicode map in file.

-om file

Store console map in file.

-ou file

Save previous Unicode map in file.

-u file

Load Unicode table describing the font from file.

-C console

Set the font for the indicated console. (May require root per?
missions.)

-v   Be verbose.

-V Print version and exit.

NOTE

PC video hardware allows one to use the "intensity" bit either to indi?
cate brightness, or to address 512 (instead of 256) glyphs in the font.
So, if the font has more than 256 glyphs, the console will be reduced
to 8 (instead of 16) colors.

FILES

/usr/lib/kbd/consolefonts

The default font directory.

/usr/lib/kbd/unimaps

The default directory for Unicode maps.

/usr/lib/kbd/consoletrans

The default directory for screen mappings.

The default font is a file default (or default8xN if the -N option was given for some number N) perhaps with suitable extension (like .psf).

SEE ALSO

psfaddtable(1), unicode_start(1), loadunimap(8), utf-8(7), mapscrn(8)

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