NAME

keymap − keyboard maps

SYNOPSIS

/etc/keymap

DESCRIPTION

/etc/keymap is the compressed mapping from keyboard scan codes to ASCII. It is made from a keymap source file consisting of MAP_COLS columns (MINIX assigns the value 6 to MAX_COLS, corresponding to key pressed, key+SHIFT, key+LEFT_ALT, key+RIGHT_ALT, key+ALT+SHIFT and key+CTRL) and NR_SCAN_CODES rows (MINIX assigns the value 0x80 to NR_SCAN_CODES, corresponding to the number of scan codes to be provided by the keyboard), and each element is 2 bytes in length (see u16_t in type definitions). The low order byte corresponds to the character represented by the scan code, and the high order byte corresponds to the special meaning (when CAPS LOCK has effect, if it is a function key, etc.), which is converted to binary keymap format using the **genmap** utility.

Types (general): <sys/types.h>

<sys/types.h> defines the **u8_t** and **u16_t** types, corresponding to 8 and 16 bit values.

Macros: <minix/keymap.h>

C(*c*) - Control
Maps to control code

A(*c*) - Alt
Sets the eight bit

CA(*c*) - Control-Alt
Short for **A(C(*c*))**

L(*c*) - Caps Lock
Adds Caps Lock effect

These macros are used in a keymap source file to help define keys. So instead of writing **032** to put a CTRL-Z in the map you write **C('Z')**. The **L(*c*)** macro is used in column 0 to tell that the Caps Lock key is active for this key. (Caps Lock should only have effect on letters.)

Definitions: <minix/keymap.h>

<minix/keymap.h> contains a large number of definitions for special keys, like function keys, and keys on the numeric keypad. They are:

Escape key and modifiers: **EXT**, **CTRL**, **SHIFT**, **ALT**.

Numeric keypad keys: **HOME**, **END**, **UP**, **DOWN**, **LEFT**, **RIGHT**, **PGUP**, **PGDN**, **MID** (numeric '5'), **PLUS**, **INSRT**.

ALT + numpad key: **AHOME**, **AEND**, ..., **AINSRT**.

CTRL + numpad: **CHOME**, **CEND**, ..., **CINSRT**.

Lock keys: **CALOCK** (Caps Lock), **NLOCK** (Num Lock), **SLOCK** (Scroll Lock).

Function keys: **F1**, ..., **F12**.

ALT - function key: **AF1**, ..., **AF12**.

CTRL - function key: **CF1**, ..., **CF12**.

SHIFT - function key: **SF1**, ..., **SF12**.

ALT - SHIFT - function key: **ASF1**, ..., **ASF12**.

There is one key definition that isn't a key at all: **EXTKEY**. This keycode is sent by the keyboard as an indicator that the next keycode is special. For instance both ALT keys have the same keycode, but the right ALT key is sent by the keyboard preceded by the EXTKEY keycode. The same is true for the '/' key on the numeric pad versus the other '/' key on the US keyboard. (On other keyboards this key may have a different symbol.) The keyboard driver knows that a different key is presses if it is preceded by EXTKEY.

Creating/changing keyboard mapping

You can create your own keyboard mapping by copying one of the existing keymap source files (Standard Minix: **kernel/keymaps/*.src**, Minix-vmd: **kernel/ibm/keymaps/*.src**) and modifying the desired keys. Once this has been done, you need to recompile the genmap.c file, either by adding a new entry to the Makefile, or by running the following commands:

cc -DKEYSRC=\"*keymap***.src\" genmap.c**

After this, the **keymap** file can be generated by running:

a.out > *keymap***.map**

The keymap can be loaded in the keyboard driver by:

loadkeys *keymap***.map**

It is wise to first run **loadkeys** on one of the maps in **/usr/lib/keymaps** so that you can easily revert back to a known keymap with a few taps on the up-arrow key and pressing return. You will otherwise have to fix the keymap with a faulty keymap loaded into the keyboard driver, which is no fun.

When the keymap is to your satisfaction you can copy it to **/etc/keymap** to have it loaded automatically at reboot.

FILES

/etc/keymap Default keymap file

SEE ALSO

loadkeys (1).

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