NAME

fdisk – create or modify fixed disk partition table

SYNOPSIS

fdisk [**–o** *offset*] [**–s** *size*] [**–P** *fill_patt*] [**–S** *geom_file*]
[**–w** | **r** | **d** | **n** | **I** | **B** | **t** | **T** | **g** | **G** | **R**] [**–F** *fdisk_file*] [**–W** *creat_fdisk_file*] [**–h**]
[**–b** *masterboot*] [**–A** *id*:*act*:*bhead*:*bsect*:*bcyl*:*ehead*:*esect*:*ecyl*:*rsect*:*numsect*]
[**–D** *id*:*act*:*bhead*:*bsect*:*bcyl*:*ehead*:*esect*:*ecyl*:*rsect*:*numsect*] *rdevice*

AVAILABILITY

x86

SUNWcsr

DESCRIPTION

This command is used to create and modify the partition table and install the master boot record that is put in the first sector of the fixed disk. This table is used by the first-stage bootstrap to identify parts of the disk reserved for different operating systems, and to identify the partition containing the second-stage bootstrap (the *active* Solaris partition). The *rdevice* argument must be used to specify the raw device associated with the fixed disk, for example, **/dev/rdsk/c0t0d0p0**.

The program can operate in three different modes. The first is interactive mode. In interactive mode, the program displays the partition table as it exists on the disk, and then presents a menu allowing the user to modify the table. The menu, questions, warnings, and error messages are intended to be self-explanatory.

In interactive mode, if there is no partition table on the disk, the user is given the options of creating a default partitioning or specifying the initial table values. The default partitioning allocates the entire disk for the Solaris x86 system and makes the Solaris system partition active. In either case, when the initial table is created, **fdisk** also writes out the first-stage bootstrap code along with the partition table.

The second mode of operation is used for automated entry addition, entry deletion, or replacement of the entire fdisk table. This mode can add or delete an entry described on the command line. In this mode the entire **fdisk** table can be read in from a file replacing the original table. **fdisk** can also be used to create this file. There is a command line option that will cause **fdisk** to replace any **fdisk** table with the default of the whole disk for the Solaris x86 system.

The third mode of operation is used for disk diagnostics. In this mode, a section of the disk can be filled with a user specified pattern, and mode sections of the disk can also be read or written.

Menu Options

The menu options for interactive mode given by the **fdisk** program are:

Create a partition

This option allows the user to create a new partition. The maximum number of partitions is 4. The program will ask for the type of the partition (SOLARIS, MS-DOS, UNIX, or other). It will then ask for the size of the partition as a percentage of the disk.

The user may also enter the letter **c** at this point, in which case the program will ask for the starting cylinder number and size of the partition in cylinders. If a **c** is not entered, the program will determine the starting cylinder number where the partition will fit. In either case, if the partition would overlap an existing partition or will not fit, a message is displayed and the program returns to the original menu.

Change Active (Boot from) partition
This option allows the user to specify the partition where the first-stage bootstrap will look for the second-stage bootstrap, otherwise known as the *active* partition.

Delete a partition
This option allows the user to delete a previously created partition. Note that this will destroy all data in that partition.

Use the following options to include your modifications to the partition table at this time or to cancel the session without modifying the table:

Exit This option writes the new version of the table created during this session with *fdisk* out to the fixed disk, and exits the program.

Cancel This option exits without modifying the partition table.

OPTIONS

The following options apply to **fdisk**:

–S *geom_file* Set the label geometry to the content of the *geom_file*. The *geom_file* contains one specification line. Each line is delimited by a new-line character (**\n**). If the first character of a line is an asterisk (∗), the line is treated as a comment. Each line is composed of entries that are position-dependent, are separated by “white space,” and have the following format:

PCYL NCYL ACYL BCYL NHEADS NSECTORS SECTSIZ

where the entries have the following values:

PCYL This is the number of physical cylinders for the drive.

NCYL This is the number of usable cylinders for the drive.

ACYL This is the number of alt cylinders for the drive.

BCYL This is the number of offset cylinders for the drive (should be zero).

NHEADS The number of heads for this drive.

NSECTORS The number of sectors per track.

SECTSIZ The size in bytes of a sector.

–g Get the label geometry for disk and display on stdout (see the –**S** option for the format).

–G Get the physical geometry for disk and display on stdout (see the –**S** option for the format).

–n Don’t update **fdisk** table unless explicitly specified by another option. If no other options are used, –**n** will only write the master boot record to the disk. In addition, note that **fdisk** will not come up in interactive mode if the –**n** option is specified.

–I Forgo device checks. This is used to generate a file image of what would go on a disk without using the device. Note that you must use –**S** with this option (see above).

–B Default to one Solaris partition that uses the whole disk.

–t Adjust incorrect slice table entries so that they will not cross partition table boundaries.

–T Remove incorrect slice table entries that span partition table boundaries.

–b *master_boot* Specify the file *master_boot* as the master boot program. The default master boot program is **/usr/platform/***platform-name***/lib/fs/ufs/mboot**. The platform name can be found using the –**i** option of **uname**(1).

–R Treat disk as read-only. This is for testing purposes.

–W *fdisk_file* Create an **fdisk** file *fdisk_file* from disk table. This can be used with the –**F** option below.

–A *id:act:bhead:bsect:bcyl:ehead:esect:ecyl:rsect:numsect*
Add a partition as described by the argument (see the –**F** option below for the format).

–D *id:act:bhead:bsect:bcyl:ehead:esect:ecyl:rsect:numsect*
Delete a partition as described by the argument (see the –**F** option below for the format). Note that the argument must be an exact match or the entry will not be deleted!

–F *fdisk_file* Use fdisk file *fdisk_file* to initialize table. The *fdisk_file* contains up to four specification lines. Each line is delimited by a new-line character (**\n**). If the first character of a line is an asterisk (∗), the line is treated as a comment. Each line is composed of entries that are position-dependent, are separated by ‘‘white space’’ or colons, and have the following format:

id act bhead bsect bcyl ehead esect ecyl rsect numsect

where the entries have the following values:

id This is the type of partition and the correct numeric values may be found in **fdisk.h**.

act This is the active partition flag; **0** means not active and **128** means active.

bhead This is the head where the partition starts. If this is set to **0**, **fdisk** will correctly fill this in from other information.

bsect This is the sector where the partition starts. If this is set to **0**, **fdisk** will correctly fill this in from other information.

bcyl This is the cylinder where the partition starts. If this is set to **0**, **fdisk** will correctly fill this in from other information.

ehead This is the head where the partition ends. If this is set to **0**, **fdisk** will correctly fill this in from other information.

esect This is the sector where the partition ends. If this is set to **0**, **fdisk** will correctly fill this in from other information.

ecyl This is the cylinder where the partition ends. If this is set to **0**, **fdisk** will correctly fill this in from other information.

rsect The relative sector from the beginning of the disk where the partition starts. This must be specified and can be used by **fdisk** to fill in other fields.

numsect The size in sectors of this disk partition. This must be specified and can be used by **fdisk** to fill in other fields.

–r Read from disk and write to stdout. See –**o** and –**s**, which specify the starting point and size of the operation.

–w Write to disk and read from stdin. See –**o** and –**s**, which specify the starting point and size of the operation.

–P *fill_patt* Fill disk with pattern *fill_patt*. *fill_patt* can be decimal or hex and is used as number for constant long word pattern. If *fill_patt* is **#**, then pattern is block # for each block. Pattern is put in each block as long words and fills each block (see –**o** and –**s**).

–**o** *Offset* Block offset from start of disk. This option is used for –**P**, –**r**, and –**w**. Zero is assumed when this option is not used.

–**s** *size* Number of blocks to perform operation on (see –**o**).

–d Turn on verbose *debug* mode. This will cause **fdisk** to print its state on stderr as it is used. The output from this option should not be used with –**F**.

–h Issue verbose message; message will list all options and supply an explanation for each.

DIAGNOSTICS

Most messages will be self-explanatory. The following may appear immediately after starting the program:

Fdisk: **cannot open <device>**
This indicates that the device name argument is not valid.

Fdisk: **unable to get device parameters for device <device>**
This indicates a problem with the configuration of the fixed disk, or an error in the fixed disk driver.

Fdisk: **error reading partition table**
This indicates that some error occurred when trying initially to read the fixed disk. This could be a problem with the fixed disk controller or driver, or with the configuration of the fixed disk.

Fdisk: **error writing boot record**
This indicates that some error occurred when trying to write the new partition table out to the fixed disk. This could be a problem with the fixed disk controller, the disk itself, the driver, or the configuration of the fixed disk.

FILES

/usr/platform/*platform-name***/lib/fs/ufs/mboot /dev/rdsk/c0t0d0p0**

SEE ALSO

uname(1), **fmthard**(1M), **prtvtoc**(1M)