NAME

df - display free disk space

SYNOPSIS

df [**--libxo**] [**-b** | **-g** | **-H** | **-h** | **-k** | **-m** | **-P**] [**-acilnT**] [**-,**] [**-t** *type*] [*file* | *filesystem* ...]

DESCRIPTION

The **df** utility displays statistics about the amount of free disk space on the specified mounted *file system* or on the file system of which *file* is a part. By default block counts are displayed with an assumed block size of 512 bytes. If neither a file or a file system operand is specified, statistics for all mounted file systems are displayed (subject to the **-t** option below).

The following options are available:

--libxo
Generate output via libxo(3) in a selection of different human and machine readable formats. See xo_parse_args(3) for details on command line arguments.

-a Show all mount points, including those that were mounted with the MNT_IGNORE flag. This is implied for file systems specified on the command line.

-b Explicitly use 512 byte blocks, overriding any BLOCKSIZE specification from the environment. This is the same as the **-P** option. The **-k** option overrides this option.

-c Display a grand total.

-g Use 1073741824 byte (1 Gibibyte) blocks rather than the default. This overrides any BLOCKSIZE specification from the environment.

-h "Human-readable" output. Use unit suffixes: Byte, Kibibyte, Mebibyte, Gibibyte, Tebibyte and Pebibyte (based on powers of 1024) in order to reduce the number of digits to four or fewer.

-H, **--si**
Same as **-h** but based on powers of 1000.

-i Include statistics on the number of free and used inodes. In conjunction with the **-h** or **-H** options, the number of inodes is scaled by powers of 1000. In case the filesystem has no inodes then ‘-’ is displayed instead of the usage percentage.

-k Use 1024 byte (1 Kibibyte) blocks rather than the default. This overrides the **-P** option and any

BLOCKSIZE specification from the environment.

-l Select locally-mounted file system for display. If used in combination with the **-t** *type* option, file system types will be added or excluded acccording to the parameters of that option.

-m Use 1048576 byte (1 Mebibyte) blocks rather than the default. This overrides any BLOCKSIZE specification from the environment.

-n Print out the previously obtained statistics from the file systems. This option should be used if it is possible that one or more file systems are in a state such that they will not be able to provide statistics without a long delay. When this option is specified, **df** will not request new statistics from the file systems, but will respond with the possibly stale statistics that were previously obtained.

-P Explicitly use 512 byte blocks, overriding any BLOCKSIZE specification from the environment. This is the same as the **-b** option. The **-k** option overrides this option.

-t *type*

Select file systems to display. More than one type may be specified in a comma separated list. The list of file system types can be prefixed with "no" to specify the file system types for which action should *not* be taken. If used in combination with the **-l** option, the parameters of this option will modify the list of locally-mounted file systems selected by the **-l** option. For example, the **df** command:

```
df -t nonfs,nullfs
```

lists all file systems except those of type NFS and NULLFS. The lsvfs(1) command can be used to find out the types of file systems that are available on the system.

-T Include file system type.

-, (Comma) Print sizes grouped and separated by thousands using the non-monetary separator returned by localeconv(3), typically a comma or period. If no locale is set, or the locale does not have a non-monetary separator, this option has no effect.

ENVIRONMENT

BLOCKSIZE Specifies the units in which to report block counts. This uses getbsize(3), which allows units of bytes or numbers scaled with the letters *k* (for multiples of 1024 bytes), *m* (for multiples of 1048576 bytes) or *g* (for gibibytes). The allowed range is 512 bytes to 1 GB. If the value is outside, it will be set to the appropriate limit.

EXAMPLES

Show human readable free disk space for all mount points including file system type:

```
$ df -ahT
Filesystem   Type       Size    Used   Avail Capacity  Mounted on
/dev/ada1p2  ufs        213G    152G     44G    78%    /
devfs        devfs      1.0K    1.0K      0B   100%    /dev
/dev/ada0p1  ufs        1.8T    168G    1.5T    10%    /data
linsysfs     linsysfs   4.0K    4.0K      0B   100%    /compat/linux/sys
/dev/da0     msdosfs    7.6G    424M    7.2G     5%    /mnt/usb
```

Show previously collected data including inode statistics except for devfs or linsysfs file systems. Note that the "no" prefix affects all the file systems in the list and the **-t** option can be specified only once:

```
$ df -i -n -t nodevfs,linsysfs
Filesystem   1K-blocks      Used      Avail Capacity iused     ifree %iused
Mounted on
/dev/ada1p2  223235736 159618992   45757888    78% 1657590  27234568    6%   /
/dev/ada0p1 1892163184 176319420 1564470712    10% 1319710 243300576    1%
/data
/dev/da0       7989888    433664    7556224     5%       0         0  100%
/mnt/usb
```

Show human readable information for the file system containing the file */etc/rc.conf*:

```
$ df -h /etc/rc.conf
Filesystem     Size    Used   Avail Capacity  Mounted on
/dev/ada1p2    213G    152G     44G    78%    /
```

Same as above but specifying some file system:

```
$ df -h /dev/ada1p2
Filesystem     Size    Used   Avail Capacity  Mounted on
/dev/ada1p2    213G    152G     44G    78%    /
```

NOTES

For non-Unix file systems, the reported values of used and free inodes may have a different meaning than that of used and available files and directories. An example is msdosfs, which in the case of FAT12 or FAT16 file systems reports the number of available and free root directory entries instead of inodes (where 1 to 21 such directory entries are required to store each file or directory name or disk label).

SEE ALSO

lsvfs(1), quota(1), fstatfs(2), getfsstat(2), statfs(2), getbsize(3), getmntinfo(3), libxo(3), localeconv(3), xo_parse_args(3), fstab(5), mount(8), pstat(8), quot(8), swapinfo(8)

STANDARDS

With the exception of most options, the **df** utility conforms to IEEE Std 1003.1-2004 ("POSIX.1"), which defines only the **-k**, **-P** and **-t** options.

HISTORY

A **df** command appeared in Version 1 AT&T UNIX.

BUGS

The **-n** flag is ignored if a file or file system is specified. Also, if a mount point is not accessible by the user, it is possible that the file system information could be stale.

The **-b** and **-P** options are identical. The former comes from the BSD tradition, and the latter is required for IEEE Std 1003.1-2004 ("POSIX.1") conformity.