

NAME

cgget, **cgput**, **cgread**, **cgread1**, **cgwrite**, **cgwrite1** - read/write cylinder groups of UFS disks

LIBRARY

UFS File System Access Library (libufs, -lufs)

SYNOPSIS

```
#include <sys/param.h>
#include <sys/mount.h>
#include <ufs/ufs/ufsmount.h>
#include <ufs/ufs/dinode.h>
#include <ufs/ffs/fs.h>
#include <libufs.h>
```

int

```
cgget(int devfd, struct fs *fs, int cg, struct cg *cgp);
```

int

```
cgput(int devfd, struct fs *fs, struct cg *cgp);
```

int

```
cgread(struct uufsd *disk);
```

int

```
cgread1(struct uufsd *disk, int cg);
```

int

```
cgwrite(struct uufsd *disk);
```

int

```
cgwrite1(struct uufsd *disk, int cg);
```

DESCRIPTION

The **cgget**(), **cgread**(), and **cgread1**() functions provide cylinder group reads for libufs(3) consumers. The **cgput**(), **cgwrite**(), and **cgwrite1**() functions provide cylinder group writes for libufs(3) consumers.

The **cgget**() function reads the cylinder group specified by *cg* into the buffer pointed to by *cgp* from the filesystem described by the *fs* superblock using the *devfd* file descriptor that references the filesystem disk. The **cgget**() function is the only cylinder group read function that is safe to use in threaded applications.

The **cgput()** function writes the cylinder group specified by *cgp* to the filesystem described by the *fs* superblock using the *devfd* file descriptor that references the filesystem disk. The **cgput()** function is the only cylinder group write function that is safe to use in threaded applications. Note that the **cgput()** function needs to be called only if the cylinder group has been modified and the on-disk copy needs to be updated.

The **cgread1()** function reads from the cylinder group specified by *cg* into the *d_cg* cylinder-group structure in a user-land UFS-disk structure. It sets the *d_lcg* field to the cylinder group number *cg*.

The **cgread()** function operates on sequential cylinder groups. Calling the **cgread()** function is equivalent to calling **cgread1()** with a cylinder group specifier equivalent to the value of the current *d_ccg* field, and then incrementing the *d_ccg* field.

The **cgwrite()** function stores on disk the cylinder group held in the *d_cg* cylinder-group structure in a user-land UFS-disk structure.

The **cgwrite1()** function provides no additional functionality over the **cgwrite()** function as there is only one place that a given cylinder group can correctly be written. If the caller gets the *cg* parameter wrong, the function fails with the error EDOOFUS. This function remains only to provide backward compatibility.

RETURN VALUES

The **cgread()** function returns 0 if there are no more cylinder groups to read, 1 if there are more cylinder groups, and -1 on error. The **cgread1()** function returns 1 on success and -1 on error. The other functions return 0 on success and -1 on error.

ERRORS

The **cgget()**, **cgread()**, and **cgread1()** functions may fail and set *errno* for any of the errors specified for the library function **bread(3)**.

The **cgput()**, **cgwrite()**, and **cgwrite1()** functions may fail and set *errno* for any of the errors specified for the library function **bwrite(3)**. Additionally the **cgwrite1()** will return the EDOOFUS error if the cylinder group specified does not match the cylinder group that it is requesting to write.

SEE ALSO

bread(3), **bwrite(3)**, **libufs(3)**

HISTORY

These functions first appeared as part of **libufs(3)** in FreeBSD 5.1.

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