

NAME

quotactl - manipulate file system quotas

LIBRARY

Standard C Library (libc, -lc)

SYNOPSIS

```
#include <sys/types.h>
```

```
#include <ufs/ufs/quota.h>
```

```
int
```

```
quotactl(const char *path, int cmd, int id, void *addr);
```

DESCRIPTION

The **quotactl()** system call enables, disables and manipulates file system quotas. A quota control command given by *cmd* operates on the given filename *path* for the given user or group *id*. (NOTE: One should use the QCMD macro defined in *<ufs/ufs/quota.h>* to formulate the value for *cmd*.) The address of an optional command specific data structure, *addr*, may be given; its interpretation is discussed below with each command.

For commands that use the *id* identifier, it must be either -1 or any positive value. The value of -1 indicates that the current UID or GID should be used. Any other negative value will return an error.

Currently quotas are supported only for the "ufs" file system. For "ufs", a command is composed of a primary command (see below) and a command type used to interpret the *id*. Types are supported for interpretation of user identifiers (USRQUOTA) and group identifiers (GRPQUOTA). The "ufs" specific commands are:

- | | |
|----------------|---|
| Q_QUOTAON | Enable disk quotas for the file system specified by <i>path</i> . The command type specifies the type of the quotas being enabled. The <i>addr</i> argument specifies a file from which to take the quotas. The quota file must exist; it is normally created with the quotacheck(8) program. The <i>id</i> argument is unused. Only the super-user may turn quotas on. |
| Q_QUOTAOFF | Disable disk quotas for the file system specified by <i>path</i> . The command type specifies the type of the quotas being disabled. The <i>addr</i> and <i>id</i> arguments are unused. Only the super-user may turn quotas off. |
| Q_GETQUOTASIZE | Get the wordsize used to represent the quotas for the user or group (as determined by the command type). Possible values are 32 for the old-style |

quota file and 64 for the new-style quota file. The *addr* argument is a pointer to an integer into which the size is stored. The identifier *id* is not used.

- Q_GETQUOTA** Get disk quota limits and current usage for the user or group (as determined by the command type) with identifier *id*. The *addr* argument is a pointer to a *struct dqblk* structure (defined in `<ufs/ufs/quota.h>`).
- Q_SETQUOTA** Set disk quota limits for the user or group (as determined by the command type) with identifier *id*. The *addr* argument is a pointer to a *struct dqblk* structure (defined in `<ufs/ufs/quota.h>`). The usage fields of the *dqblk* structure are ignored. This system call is restricted to the super-user.
- Q_SETUSE** Set disk usage limits for the user or group (as determined by the command type) with identifier *id*. The *addr* argument is a pointer to a *struct dqblk* structure (defined in `<ufs/ufs/quota.h>`). Only the usage fields are used. This system call is restricted to the super-user.
- Q_SYNC** Update the on-disk copy of quota usages. The command type specifies which type of quotas are to be updated. The *id* and *addr* arguments are ignored.

RETURN VALUES

The **quotactl()** function returns the value 0 if successful; otherwise the value -1 is returned and the global variable *errno* is set to indicate the error.

ERRORS

The **quotactl()** system call will fail if:

- [EOPNOTSUPP] The kernel has not been compiled with the QUOTA option.
- [EUSERS] The quota table cannot be expanded.
- [EINVAL] The *cmd* argument or the command type is invalid. In **Q_GETQUOTASIZE**, **Q_GETQUOTA**, **Q_SETQUOTA**, and **Q_SETUSE**, quotas are not currently enabled for this file system.
- The *id* argument to **Q_GETQUOTA**, **Q_SETQUOTA** or **Q_SETUSE** is a negative value.
- [EACCES] In **Q_QUOTAON**, the quota file is not a plain file.

- [EACCES] Search permission is denied for a component of a path prefix.
- [ENOTDIR] A component of a path prefix was not a directory.
- [ENAMETOOLONG] A component of either pathname exceeded 255 characters, or the entire length of either path name exceeded 1023 characters.
- [ENOENT] A filename does not exist.
- [ELOOP] Too many symbolic links were encountered in translating a pathname.
- [EROFS] In Q_QUOTAON, either the file system on which quotas are to be enabled is mounted read-only or the quota file resides on a read-only file system.
- [EIO] An I/O error occurred while reading from or writing to a file containing quotas.
- [EINTEGRITY] Corrupted data was detected while reading from the file system.
- [EFAULT] An invalid *addr* was supplied; the associated structure could not be copied in or out of the kernel.
- [EFAULT] The *path* argument points outside the process's allocated address space.
- [EPERM] The call was privileged and the caller was not the super-user.

SEE ALSO

quota(1), fstab(5), edquota(8), quotacheck(8), quotaon(8), repquota(8)

HISTORY

The **quotactl()** system call appeared in 4.3BSD-Reno.

BUGS

There should be some way to integrate this call with the resource limit interface provided by **setrlimit(2)** and **getrlimit(2)**.