

NAME

dd_wnfree - wait for access to data distributor control file

SYNOPSIS

```
dd_wnfree(oid)
int oid;

dd_snatch()
```

DESCRIPTION

dd wnfree

This subroutine is intended to be used by programs which access the .ddcntl files. This subroutine, when called, will check a file (protect file) which contains an access slot for each office. Each access slot is either empty, in which case no process is currently accessing the .ddcntl file for that office, or the access slot contains the process ID of the process currently having access to the .ddcntl file for that office.

The argument oid is the office ID of the office to be accessed.

This subroutine will return only when it has gained access to the ddcntl file for the office of interest or when an interrupt or system error occurs. If necessary this subroutine causes the calling process to go to sleep until it gains access. If the subroutine does gain access to the desired .ddcntl file, this subroutine will place the process ID of the calling process in the access slot for the office of interest.

Any program which uses this subroutine would not use the SIGFPT signal (currently number 8). This signal is used by this subroutine to check the existence of processes which are currently accessing the .ddcntl files. Signal handling for SIGFPT is set up automatically by this subroutine. Also, since this subroutine sets up and catches alarm system calls, the programs which use the Locking Mechanism should not use an alarm call which might interfere with this subroutine's operation.

Subroutine dd wnfree returns one of the following values to the calling program:

- 5 Bad Protection file.
- 4 Protection file semaphore permanently locked.
- 3 System error occurred.
- 2 Illegal office ID passed to this subroutine.
- 1 An interrupt occurred.

0 Access to .ddcntl file gained.

The Protect file is a temporary file and is rebuilt, by the first call to subroutine dd wnftee or subroutine dd ifree, each time the system is rebooted.

If a process cannot afford to go to sleep and wait for gaining access to a particular .ddcntl file, it should use subroutine dd ifree.

dd snatch

This routine will catch the SIGFPT signal. It should be used in any program which uses the dd wnftee routine. Note that, except for setting an alarm clock, it performs no function. The SIGFPT signal will thus simply awake the process from being asleep on a semaphore. The alarm clock is used in the unlikely event that the process receives the SIGFPT signal between the time that the signal handling is set up and the time that the process goes to sleep on the semaphore.

LIBRARY

/lib/lib1.a

SEE ALSO

dd_ifree(3L), dd_freup(3L), dd_check(3L)