

Generic: Why do I find the disk is suddenly read-only or get the message "mounting root filesystem as read-only" or similar?

First off, check the disk *isn't* read-only. If it's a floppy, make sure that one of the holes in the disk should be closed by the little black tab. Otherwise, this usually indicates a (possibly minor) problem with the underlying filesystem.

Freesco uses a filesystem called UMSDOS to let itself be used on DOS FAT-formatted disks. This allows you to use the complex and powerful Linux filing system (e.g. symbolic and hard links, long, case-sensitive filenames, many different permissions, and the file owners / groups concept) without having to reformat your hard drive. It works by letting UMSDOS "pretend" to be a Linux filesystem, and then instead of writing directly to the disk, UMSDOS writes everything down in "normal" files on a FAT disk (which is why, when you look at the Freesco directory in DOS, you see strange filenames and ---LINUX--.--- files everywhere).

If, when Freesco boots, it detects any problems with the underlying FAT filesystem or these files, it will automatically revert to read-only mode. This is a very sensible safety precaution. You can still retrieve all your important data but can do no further damage to the system.

In Freesco, where critical data shouldn't really be stored on the same disk, you can just boot into DOS or Windows and run SCANDISK to fix the FAT filesystem as you would normally. On the next boot into Freesco, the UMSDOS system will try it's best to repair itself and continue. Ninety-nine percent of the time, a SCANDISK will report only lost clusters and, once fixed, Freesco will continue without losing any data. There might also be a more serious problem with the disk, though.

This problem has been frequently reported by people who use packages on Freesco which are in danger of being in the middle of writing to the disk at the time the power is turned off, e.g. FTPD, Samba, Squid etc.

Prevention is almost certainly better than the cure, here. To stop these sorts of disk errors occurring, it is always advisable to properly shutdown the router **before** you switch off the power. Typing halt on a telnet connection or on the Freesco console (after logging in) will properly close all files, leaving it safe to shut off (the Linux equivalent of Windows' shutdown screen).

If you intend on leaving your Freesco router switched on when nobody is present to run SCANDISK in the

SCANDISK /AUTOFIX

This would mean that on every reboot, the filesystem will be checked and, if damaged, automatically repaired.

The DOS command CHKDSK /F is slightly better as it will only fix certain minor problems on the specific drive.

*Unique solution ID: #1181
Author: Mathieu CATTIN*

Generic: Why do I find the disk is suddenly read-only or get the message "mounting root filesystem as read-only" or similar?

Last update: 2005-03-26 00:10