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Subject: ext2/ext3 errors behaviour fixes

Posted by [vaverin](#) on Wed, 04 Oct 2006 07:50:00 GMT

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Hello all,

Current error behaviour for ext2 and ext3 filesystems does not fully correspond to the documentation and should be fixed.

According to man 8 mount, ext2 and ext3 file systems allow to set one of 3 different on-errors behaviours:

---- start of quote man 8 mount ----

errors=continue / errors=remount-ro / errors=panic

Define the behaviour when an error is encountered. (Either ignore errors and just mark the file system erroneous and continue, or remount the file system read-only, or panic and halt the system.) The default is set in the filesystem superblock, and can be changed using tune2fs(8).

---- end of quote ----

However EXT3\_ERRORS\_CONTINUE is not read from the superblock, and thus ERRORS\_CONT is not saved on the sbi->s\_mount\_opt. It leads to the incorrect handle of errors on ext3.

Then we've checked corresponding code in ext2 and discovered that it is buggy as well:

- EXT2\_ERRORS\_CONTINUE is not read from the superblock (the same);
- parse\_option() does not clean the alternative values and thus something like (ERRORS\_CONT|ERRORS\_RO) can be set;
- if options are omitted, parse\_option() does not set any of these options.

Therefore it is possible to set any combination of these options on the ext2:

- none of them may be set:  
EXT2\_ERRORS\_CONTINUE on superblock / empty mount options;
- any of them may be set using mount options;
- 2 any options may be set: by using EXT2\_ERRORS\_RO/EXT2\_ERRORS\_PANIC on the superblock and other value in mount options;
- and finally all three options may be set by adding third option in remount.

Currently ext2 uses these values only in ext2\_error() and it is not leading to any noticeable troubles. However somebody may be discouraged when he will try to workaround EXT2\_ERRORS\_PANIC on the superblock by using errors=continue in mount options.

The following patches fix this.

Thank you,  
Vasily Averin

