Subject: [PATCH] ecryptfs lower_file largefile issue
Posted by Dmitriy Monakhov on Wed, 21 Feb 2007 10:07:22 GMT
View Forum Message <> Reply to Message

Where is largefile issue in ecryptfs.
Even if we want open file on ia32 with explicit O_LARGEFILE, lower_file will
be opened without O_LARGEFILE flag this result in various errors in dmesg
and data corruption.
Testcase:
```
#### write 'a' chars beyond 2Gb
# strace ./writer_test root/file
open("root/file", O_WRONLY|O_CREAT|O_LARGEFILE, 0666) = 3
lseek(3, 2147483640, SEEK_SET)          = 2147483640
write(3, "aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa"..., 10240) = 10240
##check content
# hexdump root/file4
0000000 0000 0000 0000 0000 0000 0000 0000 0000
*
7ffffff0 0000 0000 0000 0000 6161 6161 6161 6161
80000000 6161 6161 6161 6161 6161 6161 6161 6161
*
800027f0 6161 6161 6161 6161
800027f8

#umount root
# mount -tecryptfs pr/dir/ root/  -ocipher=aes
## check content after remount
# hexdump root/file4
0000000 0000 0000 0000 0000 0000 0000 0000 0000
*
7ffffff0 0000 0000 0000 0000 6161 6161 6161 6161
80000000 6161 6161 6161 6161 6161 6161 6161 6161
*
800027f0 6161 6161 6161 6161 0000 0000 0000 0000
80002800 0000 0000 0000 0000 0000 0000 0000 0000
*
80003000 ee3d e793 c410 3bd4 c642 5774 ad71 7932
80003010 17a6 443c 4621 9e4a cf15 babd 19d0 f5e7
*
80004000 ce32 49ed 217c f87d 5539 3e96 517c 961c
80004010 17a6 443c 4621 9e4a cf15 babd 19d0 f5e7
*
80005000
### Wow content was changed, kernel complain with folowing messages:
Error opening lower file for lower_dentry [0xf73a111c], lower_mnt [0xf7d8b1c0], and flags [0x0]
Error opening lower_file to read header region
Error attempting to read the [user.ecryptfs] xattr from the lower file; return value = [4294967201]
Valid metadata not found in header region or xattr region; treating file as unencrypted
```

Lets explicitly add O_LARGEFILE to opened lower file flags as it done in unionfs
and nfsd. Also remove unnecessery #define from ecryptfs_initialize_file().
Signed-off-by: Dmitriy Monakhov <dmonakhov@openvz.org>

```
diff --git a/fs/ecryptfs/file.c b/fs/ecryptfs/file.c
index bd969ad..7a7d25d 100644
--- a/fs/ecryptfs/file.c
+++ b/fs/ecryptfs/file.c
@@ -205,6 +205,7 @@ int ecryptfs_open_lower_file(struct file **lower_file,
 {
  int rc = 0;

+ flags |= O_LARGEFILE;
  dget(lower_dentry);
  mntget(lower_mnt);
  *lower_file = dentry_open(lower_dentry, lower_mnt, flags);
diff --git a/fs/ecryptfs/inode.c b/fs/ecryptfs/inode.c
index 27fd14a..a1fe8b4 100644
--- a/fs/ecryptfs/inode.c
+++ b/fs/ecryptfs/inode.c
@@ -200,9 +200,6 @@ static int ecryptfs_initialize_file(struct dentry *ecryptfs_dentry)
  inode = ecryptfs_dentry->d_inode;
  crypt_stat = &ecryptfs_inode_to_private(inode)->crypt_stat;
  lower_flags = ((O_CREAT | O_TRUNC) & O_ACCMODE) | O_RDWR;
-#if BITS_PER_LONG != 32
- lower_flags |= O_LARGEFILE;
-#endif
  lower_mnt = ecryptfs_dentry_to_lower_mnt(ecryptfs_dentry);
  /* Corresponding fput() at end of this function */
  if ((rc = ecryptfs_open_lower_file(&lower_file, lower_dentry, lower_mnt,
```