
Subject: [PATCH] ecryptfs lower_file largefile issue
Posted by [Dmitriy Monakhov](#) on Wed, 21 Feb 2007 10:07:22 GMT
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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

```
00000000 0000 0000 0000 0000 0000 0000 0000 0000 0000
```

*

```
7fffffff 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

```
00000000 0000 0000 0000 0000 0000 0000 0000 0000 0000
```

*

```
7fffffff 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 unnecessary #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,
```
