
Subject: [PATCH 02/14] sysfs: In sysfs_lookup protect s_parent with sysfs_mutex
Posted by [ebiederm](#) on Tue, 31 Jul 2007 10:20:05 GMT

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It turns out we have been being silly and have failed to protect ourselves against races between sysfs_lookup and operations that modify the sysfs directory like sysfs_readdir and create_dir.

So this patch modifies sysfs_lookup to grab sysfs_mutex before walking the parent->s_children list.

Signed-off-by: Eric W. Biederman <ebiederm@xmission.com>

fs/sysfs/dir.c | 15 ++++++++-----

1 files changed, 9 insertions(+), 6 deletions(-)

diff --git a/fs/sysfs/dir.c b/fs/sysfs/dir.c

index 40b9efe..b27a38c 100644

--- a/fs/sysfs/dir.c

+++ b/fs/sysfs/dir.c

@@ -756,11 +756,13 @@ static struct dentry * sysfs_lookup(struct inode *dir, struct dentry *dentry,

struct nameidata *nd)

{

struct sysfs_dirent * parent_sd = dentry->d_parent->d_fsdata;

+ struct dentry *result = NULL;

struct sysfs_dirent * sd;

struct bin_attribute *bin_attr;

struct inode *inode;

int found = 0;

+ mutex_lock(&sysfs_mutex);

for (sd = parent_sd->s_children; sd; sd = sd->s_sibling) {

if (sysfs_type(sd) &&

!strcmp(sd->s_name, dentry->d_name.name)) {

@@ -771,14 +773,14 @@ static struct dentry * sysfs_lookup(struct inode *dir, struct dentry *dentry,

/* no such entry */

if (!found)

- return NULL;

+ goto out;

/* attach dentry and inode */

inode = sysfs_get_inode(sd);

- if (!inode)

- return ERR_PTR(-ENOMEM);

```

-
- mutex_lock(&sysfs_mutex);
+ if (!inode) {
+ result = ERR_PTR(-ENOMEM);
+ goto out;
+ }

    if (inode->i_state & I_NEW) {
        /* initialize inode according to type */
@@ -808,9 +810,10 @@ static struct dentry * sysfs_lookup(struct inode *dir, struct dentry
*dentry,
    sysfs_instantiate(dentry, inode);
    sysfs_attach_dentry(sd, dentry);

+out:
    mutex_unlock(&sysfs_mutex);

- return NULL;
+ return result;
    }

    const struct inode_operations sysfs_dir_inode_operations = {
--
1.5.1.1.181.g2de0

```

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