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Subject: Re: [PATCH 12/25] sysfs: Introduce sysfs\_rename\_mutex  
Posted by [ebiederm](#) on Wed, 08 Aug 2007 08:28:52 GMT  
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Tejun Heo <[htejun@gmail.com](mailto:htejun@gmail.com)> writes:

> Hello, Eric.  
>  
> Eric W. Biederman wrote:  
>> Looking carefully at the rename code we have a subtle dependency  
>> that the structure of sysfs not change while we are performing  
>> a rename. If the parent directory of the object we are renaming  
>> changes while the rename is being performed nasty things could  
>> happen when we go to release our locks.  
>>  
>> So introduce a sysfs\_rename\_mutex to prevent this highly  
>> unlikely theoretical issue.  
>  
> Yeah, it's a theoretical issue. Rename/move implementation has always  
> depended on the parent structure not changing beneath it, but it's nice  
> to tighten up loose ends.  
>  
>> +DEFINE\_MUTEX(sysfs\_rename\_mutex);  
>  
> Probably doesn't really matter but wouldn't a rwsem fit better?

Maybe. I didn't feel any loss in when I was writing the code.  
Very few code paths actually seem to care.

```
>> @@ -774,7 +775,7 @@ static struct dentry *__sysfs_get_dentry(struct  
> super_block *sb, struct sysfs_dirent *di  
>> * down from there looking up dentry for each step.  
>> *  
>> * LOCKING:  
>> - * Kernel thread context (may sleep)  
>> + * mutex_lock(sysfs_rename_mutex)
```

Well this is weird in that it should be on sysfs\_get\_dentry  
more than \_\_sysfs\_get\_dentry but otherwise it's ok.

> LOCKING describes what locks should be held when entering the function,  
> so proper description would be something like...  
>  
> Kernel thread context, grabs sysfs\_rename\_mutex

For rename\_dir and move\_dir yes. I was updating the rules  
for sysfs\_get\_dentry. Which really wants it's parents to  
hold that lock.

Eric

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