
Subject: [PATCH 07/11] sysfs: Implement sysfs_delete_link and sysfs_rename_link
Posted by [Benjamin Thery](#) on Wed, 18 Jun 2008 17:08:39 GMT
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sysfs: Implement sysfs_delete_link and sysfs_rename_link

When removing a symlink sysfs_remove_link does not provide enough information to figure out which tagged directory the symlink falls in. So I need sysfs_delete_link which is passed the target of the symlink to delete.

Further half the time when we are removing a symlink the code is actually renaming the symlink but not doing so explicitly because we don't have a symlink rename method. So I have added sysfs_rename_link as well.

Both of these functions now have enough information to find a symlink in a tagged directory. The only restriction is that they must be called before the target kobject is renamed or deleted. If they are called later I loose track of which tag the target kobject was marked with and can no longer find the old symlink to remove it.

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

Signed-off-by: Benjamin Thery <benjamin.thery@bull.net>

```
fs/sysfs/symlink.c | 31 ++++++
include/linux/sysfs.h | 17 ++++++
2 files changed, 48 insertions(+)
```

Index: linux-mm/fs/sysfs/symlink.c

=====

--- linux-mm.orig/fs/sysfs/symlink.c

+++ linux-mm/fs/sysfs/symlink.c

```
@@ -80,6 +80,21 @@ int sysfs_create_link(struct kobject * k
}
```

```
/**
```

```
+ * sysfs_delete_link - remove symlink in object's directory.
```

```
+ * @kobj: object we're acting for.
```

```
+ * @targ: object we're pointing to.
```

```
+ * @name: name of the symlink to remove.
```

```
+ *
```

```
+ * Unlike sysfs_remove_link sysfs_delete_link has enough information
```

```
+ * to successfully delete symlinks in tagged directories.
```

```
+ */
```

```
+void sysfs_delete_link(struct kobject *kobj, struct kobject *targ,
```

```
+ const char *name)
```

```
+{
```

```

+ sysfs_hash_and_remove(targ, kobj->sd, name);
+}
+
+/**
+ * sysfs_remove_link - remove symlink in object's directory.
+ * @kobj: object we're acting for.
+ * @name: name of the symlink to remove.
@@ -97,6 +112,22 @@ void sysfs_remove_link(struct kobject *
+ sysfs_hash_and_remove(kobj, parent_sd, name);
+}

+/**
+ * sysfs_rename_link - rename symlink in object's directory.
+ * @kobj: object we're acting for.
+ * @targ: object we're pointing to.
+ * @old: previous name of the symlink.
+ * @new: new name of the symlink.
+ *
+ * A helper function for the common rename symlink idiom.
+ */
+int sysfs_rename_link(struct kobject *kobj, struct kobject *targ,
+ const char *old, const char *new)
+{
+ sysfs_delete_link(kobj, targ, old);
+ return sysfs_create_link(kobj, targ, new);
+}
+
+static int sysfs_get_target_path(struct sysfs_dirent *parent_sd,
+ struct sysfs_dirent *target_sd, char *path)
+{
Index: linux-mm/include/linux/sysfs.h
=====
--- linux-mm.orig/include/linux/sysfs.h
+++ linux-mm/include/linux/sysfs.h
@@ -113,6 +113,12 @@ int __must_check sysfs_create_link(struc
+ const char *name);
+ void sysfs_remove_link(struct kobject *kobj, const char *name);

+int sysfs_rename_link(struct kobject *kobj, struct kobject *target,
+ const char *old_name, const char *new_name);
+
+void sysfs_delete_link(struct kobject *dir, struct kobject *targ,
+ const char *name);
+
+int __must_check sysfs_create_group(struct kobject *kobj,
+ const struct attribute_group *grp);
+int sysfs_update_group(struct kobject *kobj,
@@ -194,6 +200,17 @@ static inline void sysfs_remove_link(str

```

```
{
}

+static inline int sysfs_rename_link(struct kobject *k, struct kobject *t,
+    const char *old_name, const char *new_name)
+{
+    return 0;
+}
+
+static inline void sysfs_delete_link(struct kobject *k, struct kobject *t,
+    const char *name)
+{
+}
+
+static inline int sysfs_create_group(struct kobject *kobj,
+    const struct attribute_group *grp)
+{
+}
+
+--
```