
Subject: [patch 03/10] account user mounts

Posted by [Miklos Szeredi](#) on Mon, 16 Apr 2007 11:03:11 GMT

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Add sysctl variables for accounting and limiting the number of user mounts.

The maximum number of user mounts is set to 1024 by default. This won't in itself enable user mounts, setting the "permit user submount" mount flag will also be needed.

Signed-off-by: Miklos Szeredi <mszeredi@suse.cz>

Index: linux/include/linux/sysctl.h

```
=====
--- linux.orig/include/linux/sysctl.h 2007-04-11 18:27:46.000000000 +0200
+++ linux/include/linux/sysctl.h 2007-04-11 20:08:16.000000000 +0200
@@ -818,6 +818,8 @@ enum
     FS_AIO_NR=18, /* current system-wide number of aio requests */
     FS_AIO_MAX_NR=19, /* system-wide maximum number of aio requests */
     FS_INOTIFY=20, /* inotify submenu */
+    FS_NR_USER_MOUNTS=21, /* int:current number of user mounts */
+    FS_MAX_USER_MOUNTS=22, /* int:maximum number of user mounts */
     FS_OCFS2=988, /* ocfs2 */
 };
```

Index: linux/kernel/sysctl.c

```
=====
--- linux.orig/kernel/sysctl.c 2007-04-11 18:27:46.000000000 +0200
+++ linux/kernel/sysctl.c 2007-04-11 20:08:16.000000000 +0200
@@ -1063,6 +1063,22 @@ static ctl_table fs_table[] = {
     #endif
     #endif
     {
+        .ctl_name = FS_NR_USER_MOUNTS,
+        .procname = "nr_user_mounts",
+        .data = &nr_user_mounts,
+        .maxlen = sizeof(int),
+        .mode = 0444,
+        .proc_handler = &proc_dointvec,
+    },
+    {
+        .ctl_name = FS_MAX_USER_MOUNTS,
+        .procname = "max_user_mounts",
+        .data = &max_user_mounts,
```

```
+ .maxlen = sizeof(int),
+ .mode = 0644,
+ .proc_handler = &proc_dointvec,
+ },
+ {
+   .ctl_name = KERN_SETUID_DUMPABLE,
+   .procname = "suid_dumpable",
+   .data = &suid_dumpable,
Index: linux/Documentation/filesystems/proc.txt
```

```
=====
--- linux.orig/Documentation/filesystems/proc.txt 2007-04-11 18:27:44.000000000 +0200
+++ linux/Documentation/filesystems/proc.txt 2007-04-12 13:32:14.000000000 +0200
@@ -923,6 +923,15 @@ reaches aio-max-nr then io_setup will fa
raising aio-max-nr does not result in the pre-allocation or re-sizing
of any kernel data structures.
```

```
+nr_user_mounts and max_user_mounts
```

```
+-----
```

```
+
+These represent the number of "user" mounts and the maximum number of
+"user" mounts respectively. User mounts may be created by
+unprivileged users. User mounts may also be created with sysadmin
+privileges on behalf of a user, in which case nr_user_mounts may
+exceed max_user_mounts.
```

```
+
```

```
2.2 /proc/sys/fs/binfmt_misc - Miscellaneous binary formats
```

```
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```

```
Index: linux/fs/namespace.c
```

```
=====
--- linux.orig/fs/namespace.c 2007-04-11 20:08:05.000000000 +0200
+++ linux/fs/namespace.c 2007-04-12 13:29:05.000000000 +0200
@@ -39,6 +39,9 @@ static int hash_mask __read_mostly, hash
static struct kmem_cache *mnt_cache __read_mostly;
static struct rw_semaphore namespace_sem;
```

```
+int nr_user_mounts;
+int max_user_mounts = 1024;
+
+/* /sys/fs */
+decl_subsys(fs, NULL, NULL);
+EXPORT_SYMBOL_GPL(fs_subsys);
@@ -227,11 +230,30 @@ static struct vfsmount *skip_mnt_tree(st
return p;
}
```

```
+static void dec_nr_user_mounts(void)
+{
```

```

+ spin_lock(&vfsmount_lock);
+ nr_user_mounts--;
+ spin_unlock(&vfsmount_lock);
+}
+
static void set_mnt_user(struct vfsmount *mnt)
{
    BUG_ON(mnt->mnt_flags & MNT_USER);
    mnt->mnt_uid = current->uid;
    mnt->mnt_flags |= MNT_USER;
+ spin_lock(&vfsmount_lock);
+ nr_user_mounts++;
+ spin_unlock(&vfsmount_lock);
+}
+
+static void clear_mnt_user(struct vfsmount *mnt)
+{
+ if (mnt->mnt_flags & MNT_USER) {
+  mnt->mnt_uid = 0;
+  mnt->mnt_flags &= ~MNT_USER;
+  dec_nr_user_mounts();
+ }
+ }
}

```

```

static struct vfsmount *clone_mnt(struct vfsmount *old, struct dentry *root,
@@ -283,6 +305,7 @@ static inline void __mntput(struct vfsmo

```

```

{
    struct super_block *sb = mnt->mnt_sb;
    dput(mnt->mnt_root);
+ clear_mnt_user(mnt);
    free_vfsmnt(mnt);
    deactivate_super(sb);
}
@@ -1023,6 +1046,7 @@ static int do_remount(struct nameidata *
    down_write(&sb->s_umount);
    err = do_remount_sb(sb, flags, data, 0);
    if (!err) {
+ clear_mnt_user(nd->mnt);
        nd->mnt->mnt_flags = mnt_flags;
        if (flags & MS_SETUSER)
            set_mnt_user(nd->mnt);

```

Index: linux/include/linux/fs.h

```

=====
--- linux.orig/include/linux/fs.h 2007-04-11 20:07:51.000000000 +0200
+++ linux/include/linux/fs.h 2007-04-12 13:26:42.000000000 +0200
@@ -50,6 +50,9 @@ extern struct inodes_stat_t inodes_stat;

```

```

extern int leases_enable, lease_break_time;

```

```
+extern int nr_user_mounts;
+extern int max_user_mounts;
+
#ifdef CONFIG_DNOTIFY
extern int dir_notify_enable;
#endif
```

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Containers mailing list
Containers@lists.linux-foundation.org
<https://lists.linux-foundation.org/mailman/listinfo/containers>
