
Subject: Re: [patch 8/9] unprivileged mounts: propagation: inherit owner from parent
Posted by [serue](#) on Mon, 14 Jan 2008 23:13:40 GMT

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Quoting Miklos Szeredi (miklos@szeredi.hu):

> From: Miklos Szeredi <mszeredi@suse.cz>

>

> On mount propagation, let the owner of the clone be inherited from the
> parent into which it has been propagated. Also if the parent has the
> "nosuid" flag, set this flag for the child as well.

What about nodev?

thanks,

-serge

>

> This makes sense for example, when propagation is set up from the
> initial namespace into a per-user namespace, where some or all of the
> mounts may be owned by the user.

>

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

> ---

>

> Index: linux/fs/namespace.c

> =====

> --- linux.orig/fs/namespace.c 2008-01-04 13:48:14.000000000 +0100

> +++ linux/fs/namespace.c 2008-01-04 13:49:52.000000000 +0100

> @@ -500,10 +500,10 @@ static int reserve_user_mount(void)

> return err;

> }

>

> -static void __set_mnt_user(struct vfsmount *mnt)

> +static void __set_mnt_user(struct vfsmount *mnt, uid_t owner)

> {

> BUG_ON(mnt->mnt_flags & MNT_USER);

> - mnt->mnt_uid = current->fsuid;

> + mnt->mnt_uid = owner;

> mnt->mnt_flags |= MNT_USER;

>

> if (!capable(CAP_SETUID))

> @@ -514,7 +514,7 @@ static void __set_mnt_user(struct vfsmou

>

> static void set_mnt_user(struct vfsmount *mnt)

> {

> - __set_mnt_user(mnt);

> + __set_mnt_user(mnt, current->fsuid);

> spin_lock(&vfsmount_lock);

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> nr_user_mounts++;
> spin_unlock(&vfsmount_lock);
> @@ -530,7 +530,7 @@ static void clear_mnt_user(struct vfsmou
> }
>
> static struct vfsmount *clone_mnt(struct vfsmount *old, struct dentry *root,
> - int flag)
> + int flag, uid_t owner)
> {
> struct super_block *sb = old->mnt_sb;
> struct vfsmount *mnt;
> @@ -554,7 +554,10 @@ static struct vfsmount *clone_mnt(struct
> /* don't copy the MNT_USER flag */
> mnt->mnt_flags &= ~MNT_USER;
> if (flag & CL_SETUSER)
> - __set_mnt_user(mnt);
> + __set_mnt_user(mnt, owner);
> +
> + if (flag & CL_NOSUID)
> + mnt->mnt_flags |= MNT_NOSUID;
>
> if (flag & CL_SLAVE) {
> list_add(&mnt->mnt_slave, &old->mnt_slave_list);
> @@ -1060,7 +1063,7 @@ static int lives_below_in_same_fs(struct
> }
>
> struct vfsmount *copy_tree(struct vfsmount *mnt, struct dentry *dentry,
> - int flag)
> + int flag, uid_t owner)
> {
> struct vfsmount *res, *p, *q, *r, *s;
> struct nameidata nd;
> @@ -1068,7 +1071,7 @@ struct vfsmount *copy_tree(struct vfsmou
> if (!(flag & CL_COPY_ALL) && IS_MNT_UNBINDABLE(mnt))
> return ERR_PTR(-EPERM);
>
> - res = q = clone_mnt(mnt, dentry, flag);
> + res = q = clone_mnt(mnt, dentry, flag, owner);
> if (IS_ERR(q))
> goto error;
> q->mnt_mountpoint = mnt->mnt_mountpoint;
> @@ -1090,7 +1093,7 @@ struct vfsmount *copy_tree(struct vfsmou
> p = s;
> nd.path.mnt = q;
> nd.path.dentry = p->mnt_mountpoint;
> - q = clone_mnt(p, p->mnt_root, flag);
> + q = clone_mnt(p, p->mnt_root, flag, owner);
> if (IS_ERR(q))

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> goto error;
> spin_lock(&vfsmount_lock);
> @@ -1115,7 +1118,7 @@ struct vfsmount *collect_mounts(struct v
> {
> struct vfsmount *tree;
> down_read(&namespace_sem);
> - tree = copy_tree(mnt, dentry, CL_COPY_ALL | CL_PRIVATE);
> + tree = copy_tree(mnt, dentry, CL_COPY_ALL | CL_PRIVATE, 0);
> up_read(&namespace_sem);
> return tree;
> }
> @@ -1286,7 +1289,8 @@ static int do_change_type(struct nameida
> */
> static int do_loopback(struct nameidata *nd, char *old_name, int flags)
> {
> - int clone_fl;
> + int clone_fl = 0;
> + uid_t owner = 0;
> struct nameidata old_nd;
> struct vfsmount *mnt = NULL;
> int err;
> @@ -1307,11 +1311,17 @@ static int do_loopback(struct nameidata
> if (!check_mnt(nd->path.mnt) || !check_mnt(old_nd.path.mnt))
> goto out;
>
> - clone_fl = (flags & MS_SETUSER) ? CL_SETUSER : 0;
> + if (flags & MS_SETUSER) {
> + clone_fl |= CL_SETUSER;
> + owner = current->fsuid;
> + }
> +
> if (flags & MS_REC)
> - mnt = copy_tree(old_nd.path.mnt, old_nd.path.dentry, clone_fl);
> + mnt = copy_tree(old_nd.path.mnt, old_nd.path.dentry, clone_fl,
> + owner);
> else
> - mnt = clone_mnt(old_nd.path.mnt, old_nd.path.dentry, clone_fl);
> + mnt = clone_mnt(old_nd.path.mnt, old_nd.path.dentry, clone_fl,
> + owner);
>
> err = PTR_ERR(mnt);
> if (IS_ERR(mnt))
> @@ -1535,7 +1545,7 @@ static int do_new_mount(struct nameidata
> }
>
> if (flags & MS_SETUSER)
> - __set_mnt_user(mnt);
> + __set_mnt_user(mnt, current->fsuid);

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>
> return do_add_mount(mnt, nd, mnt_flags, NULL);
>
> @@ -1931,7 +1941,7 @@ static struct mnt_namespace *dup_mnt_ns(
> down_write(&namespace_sem);
> /* First pass: copy the tree topology */
> new_ns->root = copy_tree(mnt_ns->root, mnt_ns->root->mnt_root,
> - CL_COPY_ALL | CL_EXPIRE);
> + CL_COPY_ALL | CL_EXPIRE, 0);
> if (IS_ERR(new_ns->root)) {
> up_write(&namespace_sem);
> kfree(new_ns);
> Index: linux/fs/pnode.c
> =====
> --- linux.orig/fs/pnode.c 2008-01-04 13:47:49.000000000 +0100
> +++ linux/fs/pnode.c 2008-01-04 13:49:12.000000000 +0100
> @@ -181,15 +181,28 @@ int propagate_mnt(struct vfsmount *dest_
>
> for (m = propagation_next(dest_mnt, dest_mnt); m;
> m = propagation_next(m, dest_mnt)) {
> - int type;
> + int clflags;
> + uid_t owner = 0;
> struct vfsmount *source;
>
> if (IS_MNT_NEW(m))
> continue;
>
> - source = get_source(m, prev_dest_mnt, prev_src_mnt, &type);
> + source = get_source(m, prev_dest_mnt, prev_src_mnt, &clflags);
>
> - child = copy_tree(source, source->mnt_root, type);
> + if (m->mnt_flags & MNT_USER) {
> + clflags |= CL_SETUSER;
> + owner = m->mnt_uid;
> +
> + /*
> + * If propagating into a user mount which doesn't
> + * allow suid, then make sure, the child(ren) won't
> + * allow suid either
> + */
> + if (m->mnt_flags & MNT_NOSUID)
> + clflags |= CL_NOSUID;
> + }
> + child = copy_tree(source, source->mnt_root, clflags, owner);
> if (IS_ERR(child)) {
> ret = PTR_ERR(child);
> list_splice(tree_list, tmp_list.prev);

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```
> Index: linux/fs/pnode.h
> =====
> --- linux.orig/fs/pnode.h 2008-01-04 13:45:45.000000000 +0100
> +++ linux/fs/pnode.h 2008-01-04 13:49:12.000000000 +0100
> @@ -24,6 +24,7 @@
> #define CL_PROPAGATION 0x10
> #define CL_PRIVATE 0x20
> #define CL_SETUSER 0x40
> +#define CL_NOSUID 0x80
>
> static inline void set_mnt_shared(struct vfsmount *mnt)
> {
> @@ -36,4 +37,6 @@ int propagate_mnt(struct vfsmount *, str
> struct list_head *);
> int propagate_umount(struct list_head *);
> int propagate_mount_busy(struct vfsmount *, int);
> +struct vfsmount *copy_tree(struct vfsmount *, struct dentry *, int, uid_t);
> +
> #endif /* _LINUX_PNODE_H */
> Index: linux/include/linux/fs.h
> =====
> --- linux.orig/include/linux/fs.h 2008-01-04 13:48:14.000000000 +0100
> +++ linux/include/linux/fs.h 2008-01-04 13:49:12.000000000 +0100
> @@ -1492,7 +1492,6 @@ extern int may_umount(struct vfsmount *)
> extern void umount_tree(struct vfsmount *, int, struct list_head *);
> extern void release_mounts(struct list_head *);
> extern long do_mount(char *, char *, char *, unsigned long, void *);
> -extern struct vfsmount *copy_tree(struct vfsmount *, struct dentry *, int);
> extern void mnt_set_mountpoint(struct vfsmount *, struct dentry *,
> struct vfsmount *);
> extern struct vfsmount *collect_mounts(struct vfsmount *, struct dentry *);
>
> --
```

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