
Subject: Re: [patch] unprivileged mounts update
Posted by [serge](#) on Wed, 25 Apr 2007 17:56:09 GMT
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Quoting Eric W. Biederman (ebiederm@xmission.com):

> "Serge E. Hallyn" <serue@us.ibm.com> writes:

>

> > Quoting H. Peter Anvin (hpa@zytor.com):

> >> Miklos Szeredi wrote:

> >> >

> >> > Andrew, please skip this patch, for now.

> >> >

> >> > Serge found a problem with the fsuid approach: setsuid(nonzero) will

> >> > remove filesystem related capabilities. So even if root is trying to

> >> > set the "user=UID" flag on a mount, access to the target (and in case

> >> > of bind, the source) is checked with user privileges.

> >> >

> >> > Root should be able to set this flag on any mountpoint, regardless

> >> > of permissions.

> >> >

> >>

> >> Right, if you're using fsuid != 0, you're not running as root

> >

> > Sure, but what I'm not clear on is why, if I've done a

> > prctl(PR_SET_KEEPCAPS, 1) before the setsuid, I still lose the

> > CAP_FS_MASK perms. I see the special case handling in

> > cap_task_post_setuid(). I'm sure there was a reason for it, but

> > this is a piece of the capability implementation I don't understand

> > right now.

>

> So we drop CAP_CHOWN, CAP_DAC_OVERRIDE, CAP_DAC_READ_SEARCH,

> CAP_FOWNER, and CAP_FSETID

>

> Since we are checking CAP_SETUID or CAP_SYS_ADMIN how is that

> a problem?

>

> Are there other permission checks that mount is doing that we

> care about.

Not mount itself, but in looking up /share/fa/root/home/fa,
user fa doesn't have the rights to read /share, and by setting
fsuid to fa and dropping CAP_DAC_READ_SEARCH the mount action fails.

But the solution you outlined in your previous post would work around
this perfectly.

> >> (fsuid is

> >> the equivalent to euid for the filesystem.)

> >
> > If it were really the equivalent then I could keep my capabilities :)
> > after changing it.
>
> We drop all capabilities after we change the euid.

Not if we've done `prctl(PR_SET_KEEPCAPS, 1)`

> >> I fail to see how ruid should have *any* impact on `mount(2)`. That seems
> >> to be a design flaw.
> >
> > May be, but just using `fsuid` at this point stops me from enabling user
> > mounts under `/share` if `/share` is `chmod 000` (which it is).
>
> I'm dense today. If we can't work out the details we can always use a flag.
> But what is the problem with `fsuid`?

See above.

> You are not trying to test this using a non-default security model are you?

Nope, at the moment `CONFIG_SECURITY=n` so I'm running with capabilities only.

thanks,
-serge

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