Subject: Re: [patch 0/8] unprivileged mount syscall
Posted by ebiederm on Mon, 16 Apr 2007 15:40:35 GMT
View Forum Message <> Reply to Message

Miklos Szeredi <miklos@szeredi.hu> writes:

>> Arn't there ways to escape chroot jails? Serge had pointed me to a URL
>> which showed chroots can be escaped. And if that is true than having all
>> user's private mount tree in the same namespace can be a security issue?
>
> No. In fact chrooting the user into /share/$USER will actually
> _grant_ a privilege to the user, instead of taking it away. It allows
> the user to modify it's root namespace, which it wouldn't be able to
> in the initial namespace.
>
> So even if the user could escape from the chroot (which I doubt), s/he
> would not be able to do any harm, since unprivileged mounting would be
> restricted to /share. Also /share/$USER should only have read/search
> permission for $USER or no permissions at all, which would mean, that
> other users' namespaces would be safe from tampering as well.

A couple of points.
- chroot can be escaped, it is just a chdir for the root directory it
  is not a security feature. The only security is that you have to be root to call chdir.
  A carefully done namespace setup won't have that issue.

- While it may not violate security as far as what a user is allowed to modify it may
  violate security as far as what a user is allowed to see.

There are interesting per login cases as well such as allowing a user to replicate
their mount tree from another machine when they log in. When /home is on a network
filesystem this can be very practical and can allow propagation of mounts across
machines not just across a single login session.

Eric

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

Subject: Re: [patch 0/8] unprivileged mount syscall
Posted by Miklos Szeredi on Mon, 16 Apr 2007 15:55:39 GMT

> >> Arn't there ways to escape chroot jails? Serge had pointed me to a URL
> >> which showed chroots can be escaped. And if that is true than having all
> >> user's private mount tree in the same namespace can be a security issue?
> >
> > No. In fact chrooting the user into /share/$USER will actually
> > _grant_ a privilege to the user, instead of taking it away. It allows
> > the user to modify it's root namespace, which it wouldn't be able to
> > in the initial namespace.
> >
> > So even if the user could escape from the chroot (which I doubt), s/he
> > would not be able to do any harm, since unprivileged mounting would be
> > restricted to /share. Also /share/$USER should only have read/search
> > permission for $USER or no permissions at all, which would mean, that
> > other users' namespaces would be safe from tampering as well.
>
> A couple of points.
> - chroot can be escaped, it is just a chdir for the root directory
> it is not a security feature. The only security is that you have to
> be root to call chdir. A carefully done namespace setup won't have
> that issue.
>
> - While it may not violate security as far as what a user is allowed
> to modify it may violate security as far as what a user is allowed
> to see.

I think that's just up to the permissions in the global namespace. In
this example if you 'chmod 0 /share' there won't be anything for the
user to see.

> There are interesting per login cases as well such as allowing a
> user to replicate their mount tree from another machine when they
> log in. When /home is on a network filesystem this can be very
> practical and can allow propagation of mounts across machines not
> just across a single login session.

Yeah, sounds interesting, but I think it's better to get the basics
working first, and then we can start to think about the extras.

Btw, there's nothing that prevents cloning the namespace _after_
chrooting into the per-user tree. That would still be simpler than
doing it the other way round: first creating per-session namespaces
and then setting up mount propagation between them.

Miklos

____
Containers mailing list
Containers@lists.linux-foundation.org

https://lists.linux-foundation.org/mailman/listinfo/containers