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Subject: Re: Re: [patch 05/10] add "permit user mounts in new namespace" clone flag

Posted by [ebiederm](#) on Mon, 16 Apr 2007 19:16:48 GMT

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Miklos Szeredi <miklos@szeredi.hu> writes:

>> > That depends. Current patches check the "unprivileged submounts  
>> > allowed under this mount" flag only on the requested mount and not on  
>> > the propagated mounts. Do you see a problem with this?

>>

>> I think privileges of this sort should propagate. If I read what you  
>> just said correctly if I have a private mount namespace I won't be able  
>> to mount anything unless when it was setup the unprivileged submount  
>> command was explicitly set.

>

> By design yes. Why is that a problem?

It certainly doesn't match my intuition.

Why are directory permissions not sufficient to allow/deny non-privileged mounts?  
I don't understand that contention yet.

I should probably go back and look and see how plan9 handles mount/unmount permissions. Plan9 gets away with a lot more because it doesn't have a suid bit and mount namespaces were always present, so they don't have backwards compatibility problems.

My best guess at the moment is that plan9 treated mount/unmount as completely unprivileged and used the mount namespaces to limit the scope of what would be affected by a mount/unmount operation. I think that may be reasonable in linux as well but it will require the presence of a mount namespace to limit the affects of what a user can do.

So short of a more thorough audit I believe the final semantics should be:

- mount/unmount for non-privileged processes should only be limited by the mount namespace and directory permissions.
- CLONE\_NEWNS should not be a privileged operation.

What prevents us from allowing these things?

- Unprivileged CLONE\_NEWNS and unprivileged mounts needs resource accounting so we don't have a denial of service attack.
- Unprivileged mounts must be limited to directories that we have permission to modify in a way that we could get the same effect

as the mount or unmount operation in terms of what files are visible otherwise we can mess up SUID executables.

- Anything else?

There are user space issues such as a reasonable pam module and how to do backups. However those are user space issues.

What am I missing that requires us to add MNT\_USER and MNT\_USERMNT?

Eric

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