Subject: Re: [RFC PATCH 0/5] Resend - Use procfs to change a syscall behavior
Posted by serue on Tue, 08 Jul 2008 21:47:21 GMT
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Quoting Pavel Machek (pavel@ucw.cz):
> Hi!
>
> >>> An alternative to this solution consists in defining a new field in the
> >>> task structure (let's call it next_syscall_data) that, if set, would change
> >>> the behavior of next syscall to be called. The sys_fork_with_id() previously
> >>> cited can be replaced by
> >>> 1) set next_syscall_data to a target upid nr
> >>> 2) call fork().
> >>
> >>
> >> ...bloat task struct and
> >>
> >>
> >>> A new file is created in procfs: /proc/self/task/<my_tid>/next_syscall_data.
> >>> This makes it possible to avoid races between several threads belonging to
> >>> the same process.
> >>
> >>
> >> ...introducing this kind of uglyness.
> >>
> >> Actually, there were proposals for sys_indirect(), which is slightly
> >> less ugly, but IIRC we ended up with adding syscalls, too.
>
> > I had a look at the lwn.net article that describes the sys_indirect()
> > interface.
> > It does exactly what we need here, so I do like it, but it has the same
> > drawbacks as the one you're complaining about:
> > . a new field is needed in the task structure
> > . looks like many people found it ugly...
>
> > Now, coming back to what I'm proposing: what we need is actually to change
> > the behavior of *existing* syscalls, since we are in a very particular
> > context (restarting an application).
>
> Changing existing syscalls is _bad_: for backwards compatibility
> reasons. strace will be very confusing to read, etc...

I dunno... if you normally open(), you get back a random fd. If you do
it having set the next_id inadvertently, then as far as you know you get
back a random fd, no?

> > Defining brand new syscalls is very touchy: needs to be careful about the
> > interface + I can't imagine the number of syscalls that would be

> > needed.
>
> Of course new syscalls is touchy... modifying _existing_ should be
> even more touchy.

-serge