Subject: Re: Loadable cgroup subsystems
Posted by Paul Menage on Tue, 08 Apr 2008 05:43:43 GMT
View Forum Message <> Reply to Message

On Mon, Apr 7, 2008 at 10:39 PM, Nikanth Karthikesan <knikanth@suse.de> wrote:
>
> Why not provide a interface to add subsystems at run-time instead?
> Are there any reason for not letting a subsystem to be implemented as a
> loadable module? IOW make cgroups usable by modules?
>

Having all the subsystems declared at compile time makes a lot of
things (number of subsystems, size of css_set, etc) statically known,
which makes the code clearer and more importantly eliminates a bunch
of locking/synchronization overhead.

It would be possible to make cgroups support dynamically-loaded
subsystems, and in fact, some of the earliest cgroups patches did
support this, for a predefined max number of subsystems. But it would
introduce more complexity and overhead.

I'd rather not add support for this without a strong case of a
subsystem that really needs to be dynamically loaded.

Paul

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

Subject: Re: Loadable cgroup subsystems
Posted by Balbir Singh on Tue, 08 Apr 2008 09:07:12 GMT
View Forum Message <> Reply to Message

Paul Menage wrote:
> On Mon, Apr 7, 2008 at 10:39 PM, Nikanth Karthikesan <knikanth@suse.de> wrote:
>> Why not provide a interface to add subsystems at run-time instead?
>> Are there any reason for not letting a subsystem to be implemented as a
>> loadable module? IOW make cgroups usable by modules?
>>
>
> Having all the subsystems declared at compile time makes a lot of
> things (number of subsystems, size of css_set, etc) statically known,
> which makes the code clearer and more importantly eliminates a bunch
> of locking/synchronization overhead.
>
> It would be possible to make cgroups support dynamically-loaded

> subsystems, and in fact, some of the earliest cgroups patches did
> support this, for a predefined max number of subsystems. But it would
> introduce more complexity and overhead.
>
> I'd rather not add support for this without a strong case of a
> subsystem that really needs to be dynamically loaded.
>

I agree with most of what you just said. The biggest advantage I see of dynamic
modules is that they can be unloaded/loaded on demand. The biggest disadvantage
is that they come in much later after system initialization and might not be
fully aware of the state of the system when the specific controller is loaded.
It is trade-off, we need to see if it is worth doing.

--
Warm Regards,
Balbir Singh
Linux Technology Center
IBM, ISTL

_____

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