

This patchset is a prototype using the container infrastructure and the swsusp freezer to freeze a group of tasks.

2 files are defined by the freezer subsystem in the container filesystem :

- * "freezer.freeze"

- writing 1 will freeze all tasks and 0 unfreeze
 - reading will return the status of the freezer

- * "freezer.kill"

- writing <n> will send signal number <n> to all tasks

- * Usage :

- # mkdir /containers/freezer
 - # mount -t container -ofreezer freezer /containers/freezer
 - # mkdir /containers/freezer/0
 - # echo \$some_pid > /containers/freezer/0/tasks

to get status of the freezer subsystem :

- # cat /containers/freezer/0/freezer.freeze
 - RUNNING

to freeze all tasks in the container :

- # echo 1 > /containers/freezer/0/freezer.freeze
 - # cat /containers/freezer/0/freezer.freeze
 - FREEZING
 - # cat /containers/freezer/0/freezer.freeze
 - FROZEN

to unfreeze all tasks in the container :

- # echo 1 > /containers/freezer/0/freezer.freeze
 - # cat /containers/freezer/0/freezer.freeze
 - RUNNING

to kill all tasks in the container :

- # echo 9 > /containers/freezer/0/freezer.kill

* Caveats:

- the FROZEN status is calculated and changed when the container file "freezer.freeze" is read.
- frozen containers will be unfreeze when a system is resumed after a suspend. This is addressed by the last patch.

* Series

The first patches make the freezer available to all architectures before implementing the freezer subsystem.

- add the TIF_FREEZE flag to all archs
- make refrigerator() available to all archs
- implement freezer subsystem
- do not unfreeze a frozen container when the system is resumed

Comments are welcome.

Thanks,

C.

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

Subject: Re: [RFC][PATCH 0/4] Container Freezer
Posted by [Cedric Le Goater](#) on Thu, 21 Jun 2007 11:07:08 GMT
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[...]

```
>
> to freeze all tasks in the container :
>
> # echo 1 > /containers/freezer/0/freezer.freeze
> # cat /containers/freezer/0/freezer.freeze
> FREEZING
> # cat /containers/freezer/0/freezer.freeze
> FROZEN
>
> to unfreeze all tasks in the container :
>
> # echo 1 > /containers/freezer/0/freezer.freeze
> ^
```

that's a 0

thanks Masahiko !

C.

```
> # cat /containers/freezer/0/freezer.freeze
> RUNNING
```

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Subject: Re: [RFC][PATCH 0/4] Container Freezer
Posted by [serue](#) on Thu, 21 Jun 2007 16:37:59 GMT
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Quoting Cedric Le Goater (clg@fr.ibm.com):

> Serge E. Hallyn wrote:

> > Quoting Cedric Le Goater (clg@fr.ibm.com):

> > > This patchset is a prototype using the container infrastructure and
> > > the swsusp freezer to freeze a group of tasks.

> > >

> > > 2 files are defined by the freezer subsystem in the container

> > > filesystem :

> > >

> > > * "freezer.freeze"

> > >

> > > writing 1 will freeze all tasks and 0 unfreeze

> > > reading will return the status of the freezer

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> > > * "freezer.kill"

> > >

> > > writing <n> will send signal number <n> to all tasks

> > >

> > > * Usage :

> > >

> > > # mkdir /containers/freezer

> > > # mount -t container -ofreezer freezer /containers/freezer

> > > # mkdir /containers/freezer/0

> > > # echo \$some_pid > /containers/freezer/0/tasks

> >

> > I'd like to point out that by composing this with the nsproxy subsystem

> > (which I've done and tested), you can

> >

> > mount -t container -ons,freezer nsproxy /containers/freezer

> >
> > Then you get a new freezer subsystem automatically for every unshare
> > that you do, avoiding the need to manually do
> >
> > echo \$some_pid > /containers/freezer/0/tasks
>
> I guess that's true for any subsystem. right ?

Sure, but when this goes to lkml I expect there to be plenty of people who don't know about that quite yet, and might come away thinking this is more intrusive to use than it is.

thanks,
-serge

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