Subject: [RFC][PATCH 0/4] Container Freezer
Posted by Cedric Le Goater on Wed, 20 Jun 2007 15:07:59 GMT
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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.

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

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

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