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Subject: Re: [dm-devel] [PATCH 0/2] dm-band: The I/O bandwidth controller: Overview

Posted by [Alasdair G Kergon](#) on Wed, 23 Jan 2008 14:47:17 GMT

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On Wed, Jan 23, 2008 at 09:53:50PM +0900, Ryo Tsuruta wrote:

- > Dm-band gives bandwidth to each job according to its weight,
- > which each job can set its own value to.
- > At this time, a job is a group of processes with the same pid or pgrp or uid.

It seems to rely on 'current' to classify bios and doesn't do it until the map function is called, possibly in a different process context, so it won't always identify the original source of the I/O correctly: people need to take this into account when designing their group configuration and so this should be mentioned in the documentation.

I've uploaded it here while we consider ways we might refine the architecture and interfaces etc.:

<http://www.kernel.org/pub/linux/kernel/people/agk/patches/2.6/editing/dm-add-band-target.patch>

Alasdair

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[agk@redhat.com](mailto:agk@redhat.com)

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Subject: Re: [dm-devel] [PATCH 0/2] dm-band: The I/O bandwidth controller: Overview

Posted by [Hirokazu Takahashi](#) on Wed, 23 Jan 2008 16:21:03 GMT

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Hi,

- > On Wed, Jan 23, 2008 at 09:53:50PM +0900, Ryo Tsuruta wrote:
- > > Dm-band gives bandwidth to each job according to its weight,
- > > which each job can set its own value to.
- > > At this time, a job is a group of processes with the same pid or pgrp or uid.
- >
- > It seems to rely on 'current' to classify bios and doesn't do it until the map
- > function is called, possibly in a different process context, so it won't
- > always identify the original source of the I/O correctly:

Yes, this should be mentioned in the document with the current implementation as you pointed out.

By the way, I think once a memory controller of cgroup is introduced, it will help to track down which cgroup is the original source.

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> this into account when designing their group configuration and so this should  
> be mentioned in the documentation.  
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> I've uploaded it here while we consider ways we might refine the architecture and  
> interfaces etc.:  
>  
>  
<http://www.kernel.org/pub/linux/kernel/people/agk/patches/2.6/editing/dm-add-band-target.patch>  
>  
> Alasdair  
> --  
> [agk@redhat.com](mailto:agk@redhat.com)

Thank you,  
Hirokazu Takahashi.

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Subject: Re: [dm-devel] [PATCH 0/2] dm-band: The I/O bandwidth controller:  
Overview

Posted by [yamamoto](#) on Thu, 24 Jan 2008 03:38:07 GMT

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> Hi,  
>  
> > On Wed, Jan 23, 2008 at 09:53:50PM +0900, Ryo Tsuruta wrote:  
> > > Dm-band gives bandwidth to each job according to its weight,  
> > > which each job can set its own value to.  
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> as you pointed out.  
>  
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> help to track down which cgroup is the original source.

do you mean to make this a part of the memory subsystem?

YAMAMOTO Takashi

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Subject: Re: [dm-devel] [PATCH 0/2] dm-band: The I/O bandwidth controller: Overview

Posted by [Hirokazu Takahashi](#) on Thu, 24 Jan 2008 10:14:56 GMT

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Hi,

> > > On Wed, Jan 23, 2008 at 09:53:50PM +0900, Ryo Tsuruta wrote:  
> > > Dm-band gives bandwidth to each job according to its weight,  
> > > which each job can set its own value to.  
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> > as you pointed out.  
> >  
> > By the way, I think once a memory controller of cgroup is introduced, it will  
> > help to track down which cgroup is the original source.  
>  
> do you mean to make this a part of the memory subsystem?

I just think if the memory subsystem is in front of us, we don't need to reinvent the wheel.

But I don't have a concrete image how the interface between dm-band and the memory subsystem should be designed yet. I'd be appreciate if some of the cgroup developers give some ideas about it.

Thanks,  
Hirokazu Takahashi.

> YAMAMOTO Takashi

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Subject: Re: [dm-devel] [PATCH 0/2] dm-band: The I/O bandwidth controller:  
Overview

Posted by [yamamoto](#) on Fri, 25 Jan 2008 06:26:41 GMT

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> Hi,  
>  
> > > On Wed, Jan 23, 2008 at 09:53:50PM +0900, Ryo Tsuruta wrote:  
> > > > Dm-band gives bandwidth to each job according to its weight,  
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> reinvent the wheel.  
>  
> But I don't have a concrete image how the interface between dm-band and  
> the memory subsystem should be designed yet. I'd be appreciate if some of  
> the cgroup developers give some ideas about it.

the current implementation of memory subsystem associates pages to  
cgroups directly, rather than via tasks. so it isn't straightforward to  
use the information for other classification mechanisms like yours which  
might not share the view of "hierarchy" with the memory subsystem.

YAMAMOTO Takashi

>  
> Thanks,  
> Hirokazu Takahashi.  
>  
>  
> > YAMAMOTO Takashi

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