
Subject: Re: [PATCH 3/5] page_cgroup: make page tracking available for blkio
Posted by [Andrea Righi](#) on Tue, 22 Feb 2011 23:01:47 GMT

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On Tue, Feb 22, 2011 at 01:01:45PM -0700, Jonathan Corbet wrote:

> On Tue, 22 Feb 2011 18:12:54 +0100

> Andrea Righi <arighi@develer.com> wrote:

>

> > The page_cgroup infrastructure, currently available only for the memory

> > cgroup controller, can be used to store the owner of each page and

> > opportune track the writeback IO. This information is encoded in

> > the upper 16-bits of the page_cgroup->flags.

> >

> > A owner can be identified using a generic ID number and the following

> > interfaces are provided to store a retrieve this information:

> >

> > unsigned long page_cgroup_get_owner(struct page *page);

> > int page_cgroup_set_owner(struct page *page, unsigned long id);

> > int page_cgroup_copy_owner(struct page *npage, struct page *opage);

>

> My immediate observation is that you're not really tracking the "owner"

> here - you're tracking an opaque 16-bit token known only to the block

> controller in a field which - if changed by anybody other than the block

> controller - will lead to mayhem in the block controller. I think it

> might be clearer - and safer - to say "blkcg" or some such instead of

> "owner" here.

>

Basically the idea here was to be as generic as possible and make this feature potentially available also to other subsystems, so that cgroup subsystems may represent whatever they want with the 16-bit token. However, no more than a single subsystem may be able to use this feature at the same time.

> I'm tempted to say it might be better to just add a pointer to your
> throtl_grp structure into struct page_cgroup. Or maybe replace the
> mem_cgroup pointer with a single pointer to struct css_set. Both of
> those ideas, though, probably just add unwanted extra overhead now to gain
> generality which may or may not be wanted in the future.

The pointer to css_set sounds good, but it would add additional space to the page_cgroup struct. Now, page_cgroup is 40 bytes (in 64-bit arch) and all of them are allocated at boot time. Using unused bits in page_cgroup->flags is a choice with no overhead from this point of view.

Thanks,
-Andrea

Containers mailing list
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