
Subject: Re: [RFC][PATCH 1/7] Resource counters
Posted by [Herbert Poetzl](#) on Mon, 12 Mar 2007 01:16:13 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Sun, Mar 11, 2007 at 01:00:15PM -0600, Eric W. Biederman wrote:

> Herbert Poetzl <herbert@13thfloor.at> writes:
>
> >
> > Linux-VServer does the accounting with atomic counters,
> > so that works quite fine, just do the checks at the
> > beginning of whatever resource allocation and the
> > accounting once the resource is acquired ...
>
> Atomic operations versus locks is only a granularity thing.
> You still need the cache line which is the cost on SMP.
>
> Are you using `atomic_add_return` or `atomic_add_unless` or
> are you performing you actions in two separate steps
> which is racy? What I have seen indicates you are using
> a racy two separate operation form.

yes, this is the current implementation which is more than sufficient, but I'm aware of the potential issues here, and I have an experimental patch sitting here which removes this race with the following change:

- doesn't store the accounted value but limit - accounted (i.e. the free resource)
- uses `atomic_add_return()`
- when negative, an error is returned and the resource amount is added back

changes to the limit have to adjust the 'current' value too, but that is again simple and atomic

best,
Herbert

PS: `atomic_add_unless()` didn't exist back then (at least I think so) but that might be an option too ...

> >> If we'll remove `failcnt` this would look like
> >> `while (atomic_cmpxchg(...))`
> >> which is also not that good.
> >>
> >> Moreover - in RSS accounting patches I perform page list

> >> manipulations under this lock, so this also saves one atomic op.

> >

> > it still hasn't been shown that this kind of RSS limit

> > doesn't add big time overhead to normal operations

> > (inside and outside of such a resource container)

> >

> > note that the 'usual' memory accounting is much more

> > lightweight and serves similar purposes ...

>

> Perhaps....

>

> Eric

>

> Containers mailing list

> Containers@lists.osdl.org

> <https://lists.osdl.org/mailman/listinfo/containers>

Containers mailing list

Containers@lists.osdl.org

<https://lists.osdl.org/mailman/listinfo/containers>
