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Subject: Re: [RFC] memory controller : backgorund reclaim and avoid excessive locking [4/5] borrow resource

Posted by [KAMEZAWA Hiroyuki](#) on Mon, 18 Feb 2008 02:05:53 GMT

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On Mon, 18 Feb 2008 09:53:35 +0900 (JST)

yamamoto@valinux.co.jp (YAMAMOTO Takashi) wrote:

```
> > + /* try to charge */
> > + ret = res_counter_charge(&mem->res, mem->borrow_unit);
> > + if (!ret) { /* success */
> > +     *bwp += (mem->borrow_unit - size);
> > +     goto out;
> > + }
> > + }
> > + spin_lock(&mem->res.lock);
> > + ret = res_counter_charge_locked(&mem->res, size);
> > + spin_unlock(&mem->res.lock);
>
> although i don't know if it matters, this retrying of charge affects failcnt.
>
> Hmm, yes. But what failcnt means is not so clear anyway.
```

```
> > +static void mem_cgroup_return_and_uncharge(struct mem_cgroup *mem, int size)
> > +{
> > + unsigned long flags;
> > + int uncharge_size = 0;
> > +
> > + local_irq_save(flags);
> > + if (mem->borrow_unit) {
> > +     int limit = mem->borrow_unit * 2;
> > +     int cpu;
> > +     s64 *bwp;
> > +     cpu = smp_processor_id();
> > +     bwp = &mem->stat.cpusat[cpu].count[MEM_CGROUP_STAT_BORROW];
> > +     *bwp += size;
> > +     if (*bwp > limit) {
> > +         uncharge_size = *bwp - mem->borrow_unit;
> > +         *bwp = mem->borrow_unit;
> > +     }
> > + } else
> > +     uncharge_size = size;
> > +
> > + if (uncharge_size) {
> > +     spin_lock(&mem->res.lock);
> > +     res_counter_uncharge_locked(&mem->res, size);
> > + }
```

> s/size/uncharge\_size/

>

Oops...will fix.

> > @@ -1109,12 +1202,29 @@ static u64 mem\_throttle\_read(struct cgro

> > return (u64)mem->throttle.limit;

> > }

> >

> > +static int mem\_bulkratio\_write(struct cgroup \*cont, struct cftype \*cft, u64 val)

> > +{

> > + struct mem\_cgroup \*mem = mem\_cgroup\_from\_cont(cont);

> > + int unit = val \* PAGE\_SIZE;

> > + if (unit > (PAGE\_SIZE << (MAX\_ORDER/2)))

> > + return -EINVAL;

> > + mem->borrow\_unit = unit;

> > + return 0;

> > +}

>

> it seems unsafe with concurrent mem\_cgroup\_borrow\_and\_charge or

> mem\_cgroup\_return\_and\_uncharge.

>

Hmm, making this to be not configurable will be good.

Thanks,

-Kame

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