Subject: Re: [RFC][-mm] [1/2] Simple stats for cpu resource controller
Posted by Peter Zijlstra on Mon, 07 Apr 2008 13:24:53 GMT
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On Sun, 2008-04-06 at 02:01 +0530, Balaji Rao wrote:

> > > +static s64 cpu_cgroup_read_stat(struct cpu_cgroup_stat *stat,
> > > + enum cpu_cgroup_stat_index idx)
> > > +{
> > > + int cpu;
> > > + s64 ret = 0;
> > > + unsigned long flags;
> >
> > > +
> > > + local_irq_save(flags);
> >
> > I am just wondering. Is local_irq_save() enough?
> >
> Hmmm.. You are right.This does not prevent concurrent updates on other CPUs
> from crossing a 32bit boundary. Am not sure how to do this in a safe way. I
> can only think of using atomic64_t now..
>
> > > + for_each_possible_cpu(cpu)
> > > + ret += stat->cpustat[cpu].count[idx];
> > > + local_irq_restore(flags);
> > > +
> > > + return ret;
> > > +}
> > > +

So many stats to steal code from,.. but you didn't :-(

Look at mm/vmstat.c, that is a rather complete example.

The trick to solving the above is to use per cpu deltas instead, the
deltas can be machine word size and are thus always read in an atomic
manner (provided they are also naturally aligned).