Subject: Re: [PATCH 2/2] CFS CGroup: Report usage
Posted by Balbir Singh on Tue, 23 Oct 2007 03:17:09 GMT
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Paul Menage wrote:
> Report CPU usage in CFS Cgroup directories
>
> Adds a cpu.usage file to the CFS cgroup that reports CPU usage in
> milliseconds for that cgroup's tasks
>
> This replaces the "example CPU Accounting CGroup subsystem" that
> was merged into mainline last week.
>
> Signed-off-by: Paul Menage <menage@google.com>
>
> ---
> kernel/sched.c | 32 ++++++++++++++++++++++++++++-----
> 1 file changed, 27 insertions(+), 5 deletions(-)
>
> Index: container-2.6.23-mm1/kernel/sched.c
> ==========
> --- container-2.6.23-mm1.orig/kernel/sched.c
> +++ container-2.6.23-mm1/kernel/sched.c
> @@ -7005,15 +7005,37 @@ static u64 cpu_shares_read_uint(struct c
> return (u64) tg->shares;
> }
>
> -static struct cftype cpu_shares = {
> - .name = "shares",
> - .read_uint = cpu_shares_read_uint,
> - .write_uint = cpu_shares_write_uint,
> +static u64 cpu_usage_read(struct cgroup *cgrp, struct cftype *cft)
> +{
> + struct task_group *tg = cgroup_tg(cgrp);
> + int i;
> + u64 res = 0;
> + for_each_possible_cpu(i) {
> +   unsigned long flags;
> +   spin_lock_irqsave(&tg->cfs_rq[i]->rq->lock, flags);
> +   res += tg->se[i]->sum_exec_runtime;
> +   spin_unlock_irqrestore(&tg->cfs_rq[i]->rq->lock, flags);
> + }
> + /* Convert from ns to ms */
> + do_div(res, 1000000);
> + return res;
> +}
> +

I think we also need the notion of load, like we have in cpu_acct.c
Don't we need to do a css_get() on the cgrp to ensure that the cgroup
does not go away if it's empty and someone does an rmdir on it?

```
> +static struct cftype cpu_files[] = {
> +    {
> +        .name = "shares",
> +        .read_uint = cpu_shares_read_uint,
> +        .write_uint = cpu_shares_write_uint,
> +    },
> +    {
> +        .name = "usage",
> +        .read_uint = cpu_usage_read,
> +    },
> };
>
> static int cpu_cgroup_populate(struct cgroup_subsys *ss, struct cgroup
> *cont)
> {
> -    return cgroup_add_file(cont, ss, &cpu_shares);
> +    return cgroup_add_files(cont, ss, cpu_files, ARRAY_SIZE(cpu_files));
> }
>
> struct cgroup_subsys cpu_cgroup_subsys = {
```

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Warm Regards,
Balbir Singh
Linux Technology Center
IBM, ISTL

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Containers mailing list
Containers@lists.linux-foundation.org
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