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Subject: [PATCH 2/2] CFS CGroup: Report usage  
Posted by [Paul Menage](#) on Tue, 23 Oct 2007 00:49:39 GMT  
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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>

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kernel/sched.c | 32 ++++++-----  
1 file changed, 27 insertions(+), 5 deletions(-)

Index: container-2.6.23-mm1/kernel/sched.c

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```
--- 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;
+}
+
+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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Containers mailing list

Containers@lists.linux-foundation.org

<https://lists.linux-foundation.org/mailman/listinfo/containers>

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