
Subject: [PATCH] Report usage in CFS cgroup
Posted by [menage](#) on Mon, 29 Oct 2007 17:19:08 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

Signed-off-by: Paul Menage <menage@google.com>

kernel/sched.c | 36 ++++++-----
1 file changed, 31 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 +7005,41 @@ 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;
+        /*
+         * Lock to prevent races with updating 64-bit counters
+         * on 32-bit arches.
+         */
+        spin_lock_irqsave(&cpu_rq(i)->lock, flags);
+        res += tg->se[i]->sum_exec_runtime;
+        spin_unlock_irqrestore(&cpu_rq(i)->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 = {
```

Containers mailing list

Containers@lists.linux-foundation.org

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