
Subject: [PATCH 26/33] memory controller task migration v7
Posted by [Paul Menage](#) on Mon, 17 Sep 2007 21:03:33 GMT
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From: Balbir Singh <balbir@linux.vnet.ibm.com>
(container->cgroup renaming by Paul Menage <menage@google.com>)

Allow tasks to migrate from one cgroup to the other. We migrate
mm_struct's mem_cgroup only when the thread group id migrates.

Signed-off-by: Balbir Singh <balbir@linux.vnet.ibm.com>
Signed-off-by: Paul Menage <menage@google.com>

mm/memcontrol.c | 35 ++++++++++++++++++++++++++++++++++++++
1 files changed, 35 insertions(+)

diff -puN mm/memcontrol.c~memory-controller-task-migration-v7 mm/memcontrol.c

--- a/mm/memcontrol.c~memory-controller-task-migration-v7

+++ a/mm/memcontrol.c

@@ -326,11 +326,46 @@ static int mem_cgroup_populate(struct
 ARRAY_SIZE(mem_cgroup_files));
}

+static void mem_cgroup_move_task(struct cgroup_subsys *ss,
+ struct cgroup *cont,
+ struct cgroup *old_cont,
+ struct task_struct *p)
+{
+ struct mm_struct *mm;
+ struct mem_cgroup *mem, *old_mem;
+
+ mm = get_task_mm(p);
+ if (mm == NULL)
+ return;
+
+ mem = mem_cgroup_from_cont(cont);
+ old_mem = mem_cgroup_from_cont(old_cont);
+
+ if (mem == old_mem)
+ goto out;
+
+ /*
+ * Only thread group leaders are allowed to migrate, the mm_struct is
+ * in effect owned by the leader
+ */
+ if (p->tgid != p->pid)
+ goto out;

```
+
+ css_get(&mem->css);
+ rcu_assign_pointer(mm->mem_cgroup, mem);
+ css_put(&old_mem->css);
+
+out:
+ mmput(mm);
+ return;
+}
+
+struct cgroup_subsys mem_cgroup_subsys = {
+    .name = "memory",
+    .subsys_id = mem_cgroup_subsys_id,
+    .create = mem_cgroup_create,
+    .destroy = mem_cgroup_destroy,
+    .populate = mem_cgroup_populate,
+    + .attach = mem_cgroup_move_task,
+    .early_init = 1,
+};
```

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