Subject: Re: Question: memrlimit cgroup's task_move (2.6.26-rc5-mm3) Posted by Balbir Singh on Fri, 20 Jun 2008 13:33:55 GMT

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KAMEZAWA Hiroyuki wrote:
> On Thu, 19 Jun 2008 23:55:56 +0530
> Balbir Singh <balbir@linux.vnet.ibm.com> wrote:
>> * KAMEZAWA Hiroyuki <kamezawa.hiroyu@jp.fujitsu.com> [2008-06-19 12:14:35]:
>>
>>> I used memrlimit cgroup at the first time.
>>> May I ask a question about memrlimit cgroup?
>>>
>> Hi, Kamezawa-San,
>>
>> Could you please review/test the patch below to see if it solves your
>> problem? If it does, I'll push it up to Andrew
>>
> At quick glance,
>> + /*
>> + * NOTE: Even though we do the necessary checks in can_attach(),
>> + * by the time we come here, there is a chance that we still
>> + * fail (the memrlimit cgroup has grown its usage, and the
>> + * addition of total vm will no longer fit into its limit)
>> + */
> I don't like this kind of holes. Considering tests which are usually done
> by developpers, the problem seems not to be mentioned as "rare"...
> It seems we can easily cause Warning. right?
> Even if you don't want to handle this case now, please mention as "TBD"
> rather than as "NOTE".
```

Honestly to fix this problem completely, we need transactional management in cgroups. Both can_attach() and attach() are called with cgroup_mutex held, but total_vm is changed with mmap_sem held.

What we can do is

- Implement a routine attach_failed() in cgroups, that is called for each task for which can_attach() succeeded, if any of the can_attach() routine returns an error
- Do the migration in can_attach() and unroll in attach_failed()

Warm Regards, Balbir Singh Linux Technology Center IBM, ISTL

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