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Subject: Re: [RFC] cgroup basic comounting  
Posted by [Li Zefan](#) on Mon, 19 Dec 2011 07:58:21 GMT  
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Glauber Costa wrote:

> Turns out that most of the infrastructure we need to put two controllers in the  
> same hierarchy is by far already into place. All we need to do is not failing  
> when we specify two of them.  
>

You don't need to change anything to mount with 2 cgroup subsystems:

```
# mount -t cgroup -o cpu,cpuacct xxx /mnt
```

But you may want to revise and make use of the `subsys->bind()` callback, which is called at mount/remount/umount when we attach/remove a controller to/from a hierarchy. It's the place you can check if two controllers are going to be comounted/seperated.

> With this, we can effectively guarantee that by comounting cpu and cpuacct,  
> we'll have the same set of tasks, therefore allowing us to use cpu cgroup data  
> to fill in the usage fields in cpuacct.  
>  
> I decided not to stabilish any dependency between cgroups as Li previously did:  
> cgroups may or may not be comounted, and any of them can be combined (I don't  
> see a reason to prevent any combination).  
>  
> After testing and some trials, I could verify that the current mount behavior  
> plays well under the plans, so I didn't change it. That is:  
>  
> \* If subsystems A and B aren't mounted, we can comount them.  
> \* If subsystem A is mounted, but B is not:  
> \* we can comount them if A has no children,  
> \* we fail otherwise  
> \* If subsystems A and B are comounted at a location, we can't  
> mount any of them separately at another point. We do can mount  
> them together.  
> \* If subsystems A and B are comounted at a location,  
> \* we can comount a third subsystem C, if they have no children  
> \* we fail otherwise  
>  
> Paul,  
>  
> Please let me know if this is tuned with the idea you had in mind.  
> If this is okay, I patch that extracts usage from cpu cgroup data  
> in case of comount would follow.  
>  
> Signed-off-by: Glauber Costa <glommer@parallels.com>

```
> CC: Paul Turner <pjt@google.com>
> CC: Li Zefan <lizf@cn.fujitsu.com>
> ---
> kernel/cgroup.c | 4 ++--
> 1 files changed, 2 insertions(+), 2 deletions(-)
>
> diff --git a/kernel/cgroup.c b/kernel/cgroup.c
> index 1fd7867..e894a4f 100644
> --- a/kernel/cgroup.c
> +++ b/kernel/cgroup.c
> @@ -1211,9 +1211,9 @@ static int parse_cgroupfs_options(char *data, struct cgroup_sb_opts
> *opts)
>     set_bit(i, &opts->subsys_bits);
>     one_ss = true;
>
> - break;
> + continue;
> }
> - if (i == CGROUP_SUBSYS_COUNT)
> + if (opts->subsys_bits == 0)
>     return -ENOENT;
> }
>
```

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