
Subject: [PATCH -mm 0/3] cgroup: use hash table for css_set
Posted by [Li Zefan](#) on Wed, 02 Apr 2008 02:16:39 GMT
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When we attach a process to a different cgroup, the css_set linked-list will be run through to find a suitable existing css_set to use. This patch set uses a hash table for better performance.

As we add the hash table, we can totally remove the css_set linked-list. When we have to run through the linked-list, we can run through the hash table instead.

I tested the following benchmarks:

For N in 1, 5, 10, 50, 100, 500, 1000, create N cgroups with one sleeping task in each, and then move an additional task through each cgroup in turn.

Here is a test result:

N Loop orig - Time(s) hash - Time(s)

```
-----  
1 10000 1.201231728 1.196311177  
5 2000 1.065743872 1.040566424  
10 1000 0.991054735 0.986876440  
50 200 0.976554203 0.969608733  
100 100 0.998504680 0.969218270  
500 20 1.157347764 0.962602963  
1000 10 1.619521852 1.085140172
```

Those patches are based on 2.6.25-rc5-mm1.

Regards,
Li Zefan

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