Subject: Re: [RFC] [PATCH 0/3] Add group fairness to CFS
Posted by Guillaume Chazarain on Wed, 23 May 2007 18:12:12 GMT
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Hi,

> uid "vatsa" uid "guest"
> (make -s -j4 bzImage) (make -s -j20 bzImage)
>
> 2.6.22-rc1 772.02 sec 497.42 sec (real)
> 2.6.22-rc1+cfs-v13 780.62 sec 478.35 sec (real)
> 2.6.22-rc1+cfs-v13+this patch 776.36 sec 776.68 sec (real)

Impressive numbers :-)

Testing this in qemu/UP/i386, I had to do this:

```
--- linux/kernel/sched_fair.c
+++ linux/kernel/sched_fair.c
@@ -350,9 +350,10 @@

  if (p->wait_start_fair) {
   delta_fair = lrq->fair_clock - p->wait_start_fair;
-  if (unlikely(p->load_weight != lrq->nice_0_load))
-   delta_fair = (delta_fair * p->load_weight) /
-       lrq->nice_0_load;
+  if (unlikely(p->load_weight != lrq->nice_0_load)) {
+   s64 m = delta_fair * p->load_weight;
+   delta_fair = do_div(m, lrq->nice_0_load);
+  }
   add_wait_runtime(lrq, p, delta_fair);
  }
```

to make it compile, otherwise it ends with:
kernel/built-in.o: In function `update_stats_wait_end':
/home/g/linux-group-fair/linux-2.6.21-rc1-cfs-v13-fair/kernel/sched_fair.c:354:
undefined reference to `__divdi3'
/home/g/linux-group-fair/linux-2.6.21-rc1-cfs-v13-fair/kernel/sched_fair.c:354:
undefined reference to `__divdi3'

Some observations:

o Doing an infinite loop as root seems to badly affect interactivity
much more than with a normal user. Note that this is subjective, so
maybe I'm smocking crack here.

o Nice values are not reflected across users. From my test, if user1

has a single busy loop at nice 19, and user2 a single busy loop at nice 0, both process will have a 50% CPU share, this looks wrong. Note that I have no idea how to solve this one.

Thanks for working in this very interesting direction.

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Guillaume

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