Subject: Re: [PATCH 0/9] namespaces: Introduction
Posted by serue on Sun, 21 May 2006 16:27:59 GMT
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Quoting Eric W. Biederman (ebiederm@xmission.com):
> "Serge E. Hallyn" <serue@us.ibm.com> writes:
>
> > This patchset introduces a per-process utsname namespace. These can
> > be used by openvz, vserver, and application migration to virtualize and
> > isolate utsname info (i.e. hostname). More resources will follow, until
> > hopefully most or all vserver and openvz functionality can be implemented
> > by controlling resource namespaces from userspace.
> >
> > Previous utsname submissions placed a pointer to the utsname namespace
> > straight in the task_struct. This patchset (and the last one) moves
> > it and the filesystem namespace pointer into struct nsproxy, which is
> > shared by processes sharing all namespaces. The intent is to keep
> > the taskstruct smaller as the number of namespaces grows.
>
>
> Previously you mentioned:
> > BTW - a first set of comparison results showed nsproxy to have better
> > dbench and tbench throughput, and worse kernbench performance. Which
> > may make sense given that nsproxy results in lower memory usage but
> > likely increased cache misses due to extra pointer dereference.
>
> Is this still true? Or did our final reference counting tweak fix
> the kernbench numbers?
>
> I just want to be certain that we don't add an optimization,
> that reduces performance.

Here are the numbers with the basic patchsets. But I guess I should
do another round with adding 7 more void*'s to represent additional
namespaces.

(intervals are for 95% CI, tests were each run 15 times)

| with nsproxy | without nsproxy |
kernbench | 68.90 +/- 0.21 | 69.06 +/- 0.22 |
dbench | 386.0 +/- 26.6 | 388.4 +/- 21.0 |
tbench | 391.6 +/- 8.00 | 389.4 +/- 10.95 |

reaim with nsproxy
1 115600.000000 5512.441557
3 246985.712000 9375.780582
5 272309.092000 8029.833742
7 290020.000000 7288.367116

9 298591.580000 5557.531915
11 nan nan
13 nan nan
15 nan nan

reaim without nsproxy
1 110160.000000 5728.697311
3 246985.712000 9375.780582
5 262204.197333 11138.510652
7 288660.000000 6880.898412
9 300631.580000 4351.926692
11 nan nan
13 nan nan
15 nan nan