Subject: Re: Re: [RFC] Virtualization steps
Posted by Herbert Poetzl on Sat, 15 Apr 2006 19:29:11 GMT
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On Fri, Apr 14, 2006 at 11:56:21AM +0200, Cedric Le Goater wrote:
> Bonjour !
>
> Herbert Poetzl wrote:
>
> > I would be really interested in getting comparisons
> > between vanilla kernels and linux-vserver patched
> > versions, especially vs2.1.1 and vs2.0.2 on the
> > same test setup with a minimum difference in config
>
> We did the tests last month and used the stable version : vs2.0.2rc9
> on a 2.6.15.4. Using benchmarks like dbench, tbench, lmbench, the
> vserver patch has no impact, vserver overhead in a context is hardly
> measurable (<3%), same results for a debian sarge running in a
> vserver.

with 2.1.1-rc16 they are not supposed to be measurable
at all, so if you measure any difference here, please
let me know about it, as I consider it an issue :)

> It is pretty difficult to follow everyone patches. This makes the
> comparisons difficult so we chose to normalize all the results with
> the native kernel results. But in a way, this is good because the goal
> of these tests isn't to compare technologies but to measure their
> overhead and stability. And at the end, we don't care if openvz is
> faster than vserver, we want containers in the linux kernel to be fast
> and stable, one day :)

I'm completely with you here ...

> > I doubt that you can really compare across the
> > existing virtualization technologies, as it really
> > depends on the setup and hardware
>
> I agree these are very different technologies but from a user point
> of view, they provide a similar service. So, it is interesting to see
> what are the drawbacks and the benefits of each solution. You want
> fault containment and strict isolation, here's the price. You want
> performance, here's another.

precisely, taht's why there are different projects
and different aims ...

> Anyway, there's already enough focus on the virtual machines so we

> should focus only on lightweight containers.
>
> >> We'd like to continue in an open way. But first, we want to
> >> make sure we have the right tests, benchmarks, tools, versions,
> >> configuration, tuning, etc, before publishing any results :) We
> >> have some materials already but before proposing we would like to
> >> have your comments and advices on what we should or shouldn't use.
> >
> > In my experience it is extremely hard to do 'proper'
> > comparisons, because the slightest change of the
> > environment can cause big differences ...
> >
> > here as example, a kernel build (-j99) on 2.6.16
> > on a test host, with and without a chroot:
> >
> > without:
> >
> > 451.03user 26.27system 2:00.38elapsed 396%CPU
> > 449.39user 26.21system 1:59.95elapsed 396%CPU
> > 447.40user 25.86system 1:59.79elapsed 395%CPU
> >
> > now with:
> >
> > 490.77user 24.45system 2:13.35elapsed 386%CPU
> > 489.69user 24.50system 2:12.60elapsed 387%CPU
> > 490.41user 24.99system 2:12.22elapsed 389%CPU
> >
> > now is chroot() that imperformant? no, but the change
> > in /tmp being on a partition vs. tmpfs makes quite
> > some difference here
> >
> > even moving from one partition to another will give
> > measurable difference here, all within a small margin
>
> very interesting thanks.
>
> > an interesting aspect is the gain (or loss) you have
> > when you start several guests basically doing the
> > same thing (and sharing the same files, etc)
>
> we have these in the pipe also, we called them scalability test:
> trying to run as much containers as possible and see how performance
> drops (when the kernel survives the test :)

yes, might want to check with and without unification
here too, as I think you can reach more than 100% native
speed in the multi guest scenario with that :)

> ok, now i guess we want to make some kind of test plan.

sounds good, please keep me posted ...

best,
Herbert

> C.
> -
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