
Subject: Re: [RFC] Virtualization steps
Posted by [ebiederm](#) on Fri, 24 Mar 2006 19:53:55 GMT
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Dave Hansen <haveblue@us.ibm.com> writes:

> On Sat, 2006-03-25 at 04:33 +1100, Nick Piggin wrote:
>> Oh, after you come to an agreement and start posting patches, can you
>> also outline why we want this in the kernel (what it does that low
>> level virtualization doesn't, etc, etc)
>
> Can you wait for an OLS paper? ;)
>
> I'll summarize it this way: low-level virtualization uses resource
> inefficiently.
>
> With this higher-level stuff, you get to share all of the Linux caching,
> and can do things like sharing libraries pretty naturally.

Also it is a major enabler for things such as process migration,
between kernels.

> They are also much lighter-weight to create and destroy than full
> virtual machines. We were planning on doing some performance
> comparisons versus some hypervisors like Xen and the ppc64 one to show
> scaling with the number of virtualized instances. Creating 100 of these
> Linux containers is as easy as a couple of shell scripts, but we still
> can't find anybody crazy enough to go create 100 Xen VMs.

One of my favorite test cases is to kill about 100 of them
simultaneously :)

I think on a reasonably beefy dual processor machine I should be able
to get about 1000 of them running all at once.

> Anyway, those are the things that came to my mind first. I'm sure the
> others involved have their own motivations.

The practical aspect is that several groups have found the arguments
compelling enough that they have already done complete
implementations. At which point getting us all to agree on a common
implementation is important. :)

Eric
