Subject: Re: [ckrm-tech] [patch00/05]: Containers(V2)- Introduction
Posted by Chandra Seetharaman on Wed, 20 Sep 2006 19:09:14 GMT
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On Wed, 2006-09-20 at 09:25 -0700, Christoph Lameter wrote:

For some reason the email i sent about 30 mins back didn't make it...
her is a resend.

> On Tue, 19 Sep 2006, Rohit Seth wrote:
>
> > For example, a user can run a batch job like backup inside containers.
> > This job if run unconstrained could step over most of the memory present
> > in system thus impacting other workloads running on the system at that
> > time. But when the same job is run inside containers then the backup
> > job is run within container limits.
>
> I just saw this for the first time since linux-mm was not cced. We have
> discussed a similar mechanism on linux-mm.
>
> We already have such a functionality in the kernel its called a cpuset. A

Christoph,

There had been multiple discussions in the past (as recent as Aug 18,
2006), where we (Paul and CKRM/RG folks) have concluded that cpuset and
resource management are orthogonal features.

cpuset provides "resource isolation", and what we, the resource
management guys want is work-conserving resource control.

cpuset partitions resource and hence the resource that are assigned to a
node is not available for other cpuset, which is not good for "resource
management".

chandra
PS:
Aug 18 link: http://marc.theaimsgroup.com/?l=linux-
kernel&m=115593114408336&w=2

Feb 2005 thread: http://marc.theaimsgroup.com/?l=ckrm-
tech&m=110790400330617&w=2

> container could be created simply by creating a fake node that then
> allows constraining applications to this node. We already track the
> types of pages per node. The statistics you want are already existing.
> See /proc/zoneinfo and /sys/devices/system/node/node*/*.
>

> > We use the term container to indicate a structure against which we track
> > and charge utilization of system resources like memory, tasks etc for a
> > workload. Containers will allow system admins to customize the
> > underlying platform for different applications based on their
> > performance and HW resource utilization needs. Containers contain
> > enough infrastructure to allow optimal resource utilization without
> > bogging down rest of the kernel. A system admin should be able to
> > create, manage and free containers easily.
>
> Right thats what cpusets do and it has been working fine for years. Maybe
> Paul can help you if you find anything missing in the existing means to
> control resources.
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>
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Chandra Seetharaman | Be careful what you choose....
- sekharan@us.ibm.com | .....you may get it.
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