Subject: Re: [ckrm-tech] [PATCH] BC: resource beancounters (v4) (added user memory)
Posted by Chandra Seetharaman on Thu, 14 Sep 2006 23:42:44 GMT

View Forum Message <> Reply to Message

On Thu, 2006-09-14 at 11:53 +0400, Pavel Emelianov wrote:

<snip>

> > What if I have 40 containers each with 2% guarantee ? what do we do
> > then ? and many other different combinations (what I gave was not the
> > _only_ scenario).
> >
> Then you need to solve a set of 40 equations. This sounds weird, but
> don't afraid - sets like these are solved lightly.

extrapolate that to a varying # of permutations and real time changes in
the system workload. Won't it be complex ?

Wouldn't it be a lot simpler if we have the guarantee support instead ?
Why you do not like guarantee ? :)

<snip>

> >> Then how do you make sure that memory WILL be available when the group needs
> >> it without limiting the others in a proper way?
> >>
> >
> > You could limit others only if you _know_ somebody is not getting what
> > they are supposed to get (based on guarantee).
> >
> I don't understand your idea. Limit does _not_ imply anything - it's
> just a limit.

I didn't mean "limit" as defined in BC. I meant it in the generic sense.
IOW, if we have to provide guarantees then it would limit other RGs from
getting that (amount of guaranteed) resource.

> You may limit anything to anyone w/o bothering the consequences.
> Guarantee implies that the resource you guarantee will be available and
> this "will be" is something not that easy.
>
> So I repeat my question - how can you be sure that these X megabytes you
> guarantee to some group won't be used by others so that you won't be able
> to reclaim them?

It depends on how the memory controller is implemented. It could be
implemented in different ways:

- reclamation path will _not_ free pages belonging to a RG that is
    below its guarantee.
  - allocation from a "over guarantee" RG can succeed iff there is
    memory after satisfying all guarantees (or will free pages from the
    requesting RG before it will succeed).
  - ...

BTW, my point is to have guarantees for _all_ resources not just memory.

>
>
> -- -------------
> Using Tomcat but need to do more? Need to support web services, security?
> Get stuff done quickly with pre-integrated technology to make your job easier
> Download IBM WebSphere Application Server v.1.0.1 based on Apache Geronimo
> http://sel.as-us.falkag.net/sel?cmd=lnk&kid=120709&b id=263057&dat=121642
> _____
> ckrm-tech mailing list
> https://lists.sourceforge.net/lists/listinfo/ckrm-tech
--

  --- ----------
    Chandra Seetharaman | Be careful what you choose....
        - sekharan@us.ibm.com | ....you may get it.
  --- ----------