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Subject: Re: Measuring and Adjusting CPU utilization

Posted by [kir](#) on Tue, 06 Jun 2006 23:17:15 GMT

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Looks like you misunderstand the concept of `cpuunits`. `cpuunits` is not a hard limit, but just a suggestion, and a CPU time is shared proportionally to the values given. So, if you will have 9 VEs and the host system with `cpuunits` set to 1000 for all of them, and run the loop in all of them, each VE will use 10% of the CPU time.

In case you will stop the loop running in 5 VEs so there will be 4 such VEs (plus the host system) left, each of them will use 20% of the CPU. So, all the CPU time is distributed between VEs which will need it, according with their proportional `cpuunits`.

More to say, the concept of "total CPU units" is purely fiction, and is here just for the convenience. People do want to set CPU units in terms of processor's megahertz, and this is what `cpuunits` does. But in fact it is not a megahertz but just a relative weights. I.e. all the `cpuunits` values are relative to each other, it doesn't matter what the actual numbers are -- what matters is a number given to a VE in relation to the sum of all `cpuweights` (which is expressed as "total CPU units" just for the convenience).

So, `cpuunits`, if you do not oversell them, are a CPU guarantee, not a limit. If you want CPU limit -- use `cpulimit` parameter.

Pradeep Padala wrote:

> Hi,

>

> I am trying to measure the CPU utilization of the VZ containers, and  
> change the `cpu share` dynamically. I have poured over most of the  
> documentation, and looked at the code as well, and it seems like  
> there's no utility that can directly show the current CPU utilization  
> of a container (some thing like 30% of CPU). A search on the user list  
> got me a message, where someone suggested using `loadavg`. However, It  
> seems like the `loadavg` is not showing the proper utilization (or  
> showing the total CPU utilization). This is what I am doing.

>

> I setup a container with 1000 units limit (total CPU units: ~10000). I  
> wrote a small `do {; }while(1);` loop and ran it in the container, now I  
> `do cat /proc/loadavg` in both the container and on the host node.  
> Since, the container is only using 1000 units, I should see something  
> like 100% `loadavg` in the container, and 10% `loadavg` in the hostnode.  
> But, I see 100% at both places. Am I doing something wrong? How do I  
> get the current `cpu` utilization of a container?

>

> Thanks,  
> --  
> Pradeep Padala  
> <http://ppadala.blogspot.com>  
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