Subject: *SOLVED* Limit the VE number of processor usage
Posted by jmslkn on Tue, 12 Jun 2007 11:12:29 GMT
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Is there any way to limit the number of processor associated to a VE? Eg.: processor1 used by VE101 50%, VE102 50%; processor2 used by ve110 100%.

Regards.
J.

Subject: Re: Limit the VE number of processor usage
Posted by ugob on Tue, 12 Jun 2007 11:42:42 GMT
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[root@server dump]# vzcpucheck
Current CPU utilization: 278775
Power of the node: 445874

[root@server dump]# grep CPU /etc/vz/conf/101.conf
CPUUNITS="51125"

Subject: Re: Limit the VE number of processor usage
Posted by rickb on Tue, 12 Jun 2007 11:51:56 GMT
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On a SMP kernel, this is not possible.

OpenVZ distributes/limits according to cputime only. Openvz does not allow you to control which cpu the cputime is spent on.

Subject: Re: Limit the VE number of processor usage
Posted by jmslkn on Tue, 12 Jun 2007 12:07:54 GMT
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Thanks for the answer. However I have found a standard tool (taskset) which can modify the processor affinity mask for a task. [1] [2]

It is possible to change the VE init process CPU affinity mask? As far as I know the affinity mask inherinted from the parent process. The OpenVZ cputime counter prepared for these kinds of affinity modifications?

Thanks,

J.

[1] http://www.linuxcommand.org/man_pages/taskset1.html
[2] http://en.wikipedia.org/wiki/Affinity_mask

Subject: Re: Limit the VE number of processor usage
Posted by rickb on Tue, 12 Jun 2007 12:14:04 GMT
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In that case, yes you can request a set of processes to be restricted to a specific set of cpus. I am not sure how this will effect performance but I am assuming you are not looking for an overall gain, more like extreme fairness control. Download the openvz patch and towards the beginning there is a few paragraphs on the 2nd level cpu scheduler. This will illustrate how openvz selects a process and decides which physical cpu it gets run on. The final choice is made with the normal scheduler, which is where processor affinity would take effect.

Subject: Re: Limit the VE number of processor usage
Posted by Vasily Tarasov on Thu, 14 Jun 2007 09:53:54 GMT
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Hello,

you can set the number of available CPUs in VE by --cpus command:

vzctl set <veid> --cpus 1

HTH,
Vasily.

Subject: Re: Limit the VE number of processor usage
Posted by rickb on Thu, 14 Jun 2007 14:25:49 GMT
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yes, I believe he knew about that as its in the man page. what he wants to do is bind VEs to specific CPU(s). solaris supports this, I don't really know how useful it is unless you have some massive mainframe where you want better isolation.
