Subject: cpuunits
Posted by grep on Sun, 08 Dec 2013 05:37:56 GMT
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Hello,

i know, this topic was already often here and on google, but i dont understand completly cpuunits.

My test server: 200% CPU, 2 Cores.
Current CPU utilization: 121111
Power of the node: 180006
When i want to garantuee one VE 50% CPU share then i would need to assign 90000 cpuunits, right?

I made some tests with stress testers.
When i assign one VE 2000 cpu units, it get on stresser 100% cpu and the other two VEs get 50% cpu (i checked with top).

Shouldnt it be, that at 2000 cpuunits the VE gets around 55% cpu and not 100%? 100% is the half of the total node and i took only 2000.
If i use the full cpu units of the node to the VE (vzctl set 101 --cpuunits 180000), then it is the same result as when i assign only 2000.

Can please sometime spend his time and explain a dumb person like me how this can be?

Please see my test results. Already when i make the interger value +1 the ve get much more cpu. It dont make the results better when i make the interger more high.

Thanks so much, my head is already smoking and my brain working and working but, hmm... ok, please help))

PS: If every VE have the same cpuunits, then it is like fair use of all containers?

Test results:
VE 100, cpuunit 1000
real 1m43.342s
user 1m5.196s
sys 0m0.101s
VE 101, cpuunit 1000
real 1m42.879s
user 1m5.365s
sys 0m0.084s
VE 102, cpuunit 1000
real 1m29.582s
user 1m5.063s
sys 0m0.135s

VE 100, cpuunit 1001

real 0m13.094s
VE 101, cpuunit 1000
real 0m17.058s
VE 102, cpuunit 1000
real 0m16.851s

VE 100, cpuunit 20000
real 1m15.323s
user 1m5.034s
sys 0m0.069s
VE 101, cpuunit 1000
real 1m40.064s
user 1m5.291s
sys 0m0.100s
VE 102, cpuunit 1000
real 1m43.121s
user 1m4.120s
sys 0m0.135s

VE 100, cpuunit 180000
real 1m5.432s
user 1m5.188s
sys 0m0.035s
VE 101, cpuunit 1000
real 1m44.517s
user 1m5.314s
sys 0m0.115s
VE 102, cpuunit 1000
real 1m45.020s
user 1m5.059s
sys 0m0.225s

VE 100, cpuunit 180000
real 1m5.673s
user 1m5.115s
sys 0m0.105s
VE 101, cpuunit 1000
real 1m47.805s
user 1m0.395s
sys 0m0.106s
VE 102, cpuunit 500
real 1m32.997s
user 1m5.217s
sys 0m0.151s

VE 100, cpuunit 1500
real 1m31.839s
user 1m5.296s

sys 0m0.092s
VE 101, cpuunit 1000
real 1m46.488s
user 1m0.188s
sys 0m0.104s
VE 102, cpuunit 2000
real 1m12.817s
user 1m5.029s
sys 0m0.076s

Subject: Re: cpuunits
Posted by Paparaciz on Sun, 08 Dec 2013 09:55:14 GMT
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http://forum.openvz.org/index.php?t=msg&goto=49227&# msg_49227

Subject: Re: cpuunits
Posted by grep on Sun, 08 Dec 2013 10:22:03 GMT
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But at max cpuunits for this server it still needs:
real 1m5.673s
user 1m5.115s
sys 0m0.105s

Normally this needs just 30 sek if the VE has full ressources. But when other VEs are running with 1000 cpuunits it needs 1min 5 sek.
Shouldnt the VE which has all cpuunits get the full cpu?

Quote:if ct1 has 1000 cpuunits and ct2 had 3000 cpuunits it means only that ct3 gets 3times more cpu.
But 3000 cpu units are just (as example) 1% guaranteed, depending on hardware node, right?

Subject: Re: cpuunits
Posted by Paparaciz on Sun, 08 Dec 2013 13:27:08 GMT
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Quote:Shouldnt the VE which has all cpuunits get the full cpu?

Quote:

if ct1 has 1000 cpuunits and ct2 had 3000 cpuunits it means only that ct3 gets 3times more cpu.

But 3000 cpu units are just (as example) 1% guaranteed, depending on hardware node, right?

no. and why 1%? if you want limit CT cpu resources for example no more than 10% so set cpus to 1 and cpulimit to 10.

please read my answer again.

repeating:
cpuunits is relative value. it doesn't matter if you give 10000/30000 or 1000/3000 or 100000/300000. it only means that CT with more cpuunits will get relatively more cpu on high load. AFAIK it doesn't mean that say one CT will get 1000 cpu cycles, other CT 3000, or with more cpuunits it will get 100000 cpu cycles and other CT 300000.

if you want to limit CT cpu resources it is cpulimit, cpus, and cpumask parameters.

Subject: Re: cpuunits
Posted by grep on Sun, 08 Dec 2013 17:01:53 GMT
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thanks, i think i understand it now.
i have just one more questions:

Is there no need to scale my cpuunits to the hn node power output of vzcpucheck? My english is too bad to absolutly understand the man page, but i think i need to scale it?

Example, total cpu units of hn node 110000. so i make
ve 100 - 10000
ve 101 - 20000 - get ~2 time more cpu
ve 102 - 30000 - get ~3 time more cpu
ve 103 - 50000 - get ~6 time more cpu, and get about 2.5 time more than ve 101.is this correct?

Subject: Re: cpuunits
Posted by grep on Thu, 19 Dec 2013 16:05:20 GMT
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Van somebody answer my final question?

thanks

Subject: Re: cpuunits

Posted by grep on Mon, 23 Dec 2013 19:46:11 GMT
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push

Subject: Re: cpuunits
Posted by Paparaciz on Mon, 23 Dec 2013 21:38:56 GMT
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Hi,
what is real problem you want to solve?

btw. https://wiki.openvz.org/CPU_Fair_scheduler

Subject: Re: cpuunits
Posted by grep on Mon, 23 Dec 2013 21:44:53 GMT
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Quote:Is there no need to scale my cpuunits to the hn node power output of vzcpucheck? My english is too bad to absolutly understand the man page, but i think i need to scale it?

Example, total cpu units of hn node 110000. so i make
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ve 103 - 50000 - get ~6 time more cpu, and get about 2.5 time more than ve 101.is this correct?

Thanks.

Subject: Re: cpuunits
Posted by Paparaciz on Mon, 23 Dec 2013 22:04:11 GMT
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it seems you don't get it so I repeat:

what is real problem you want to solve?

If you want direct answer, imho leave cpuunits as is. for better control of cpu limitations for CT's I already answered in my first reply.

Subject: Re: cpuunits

Posted by grep on Tue, 24 Dec 2013 01:10:56 GMT
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I want to know:
- would my example caluclation be correct?
- does i need to make calculation depended of output from vzcpucheck? So VEs from server A have other cpuunit value at server B to get same result?

>what is real problem you want to solve?
have no problem. i want to understand the calculation and this information is the missing part.