Subject: VPS&cPanel: High processor load
Posted by fransonline on Tue, 28 Nov 2006 11:15:13 GMT

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Hello!,

I am running cPanel on a VPS.
The avarage processor load is much to high: 8
Sometimes it goes up to 20 à 30.
Although it's a Dual Opteron server.

I tuned the UBC paramaters, which helped a little but not enough.
May be I am over looking something.
I would be very glad to have some tips on my config of this VPS or may be a visit to my server
with expert eyes

Thanks in advance,

Frans

vzcpucheck
Current CPU utilization: 163500
Power of the node: 204589

Config VPS
# UBC parameters (in form of barrier:limit)
# Primary parameters
AVNUMPROC="40:40"
NUMPROC="800:800"
NUMTCPSOCK="512:512"
NUMOTHERSOCK="140:140"
VMGUARPAGES="98304:2147483647"
# Secondary parameters
KMEMSIZE="1101004800:1200000000"
TCPSNDBUF="1300000:2900000"
TCPRCVBUF="800000:2110720"
OTHERSOCKBUF="732096:1136896"
DGRAMRCVBUF="800000:900000"
OOMGUARPAGES="6144:2147483647"
# Auxiliary parameters
LOCKEDPAGES="32:32"
SHMPAGES="8192:8192"
PRIVVMPAGES="450000:500000"
NUMFILE="60000:60000"
NUMFLOCK="100:110"
NUMPTY="16:16"
NUMSIGINFO="256:256"
DCACHESIZE="1572854:23040000"

```
PHYSPAGES="0:2147483647"
NUMIPTENT="2048:2048"

# Disk quota parameters (in form of softlimit:hardlimit)
DISKSPACE="90000000:93000000"
#DISKINODES="200000:220000"
DISKINODES="2147483647:2147483647"
QUOTATIME="0"

# CPU fair sheduler parameter
CPUUNITS="100000"
VE_ROOT="/vz/root/$VEID"
VE_PRIVATE="/vz/private/$VEID"
OSTEMPLATE="centos-4-i386-default"
ORIGIN_SAMPLE="vps.basic"
IP_ADDRESS="85.x.x.x"
HOSTNAME="srv01.xxxxxxx.nl"

#QUOTAUGIDLIMIT="200"
QUOTAUGIDLIMIT="2000"

CPULIMIT="75"
CAPABILITY="SYS_TIME:on
```

Subject: Re: VPS&cPanel: High processor load
Posted by rickb on Tue, 28 Nov 2006 15:20:03 GMT
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Sounds like the vps is hitting its cpulimit, set it to 200 so that the VE can utilize all cpu resources in the server. If its a dual core, dual cpu opteron, it will be 400.

Subject: Re: VPS&cPanel: High processor load
Posted by fransonline on Tue, 28 Nov 2006 23:07:36 GMT
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Thanks for this great tip!
It solve my problem.

Still don't know what the numbers for parameter exactly stand for.
Why 200 t use all resources?

Subject: Re: VPS&cPanel: High processor load
Posted by rickb on Tue, 28 Nov 2006 23:11:08 GMT
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What specific resource do you find confusing? Have you read the UBC page on the wiki?

Rick Blundell

Subject: Re: VPS&cPanel: High processor load
Posted by fransonline on Wed, 29 Nov 2006 08:44:42 GMT
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Rick,

I know the Wiki UBC info.
But I did not find an explanation about what you wrote:
 cpulimit, set it to 200 so that the VE can utilize all cpu resources in the server. If its a dual core, dual cpu opteron, it will be 400
So it's the cpulimit parameter, what does 200 / 400 mean exactly?

Thanks!

Subject: Re: VPS&cPanel: High processor load
Posted by rickb on Wed, 29 Nov 2006 08:48:36 GMT
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Quote:CPULIMIT

Allowed CPU power. This is a positive number
indicating the share of the CPU time in per cent the
VPS may never exceed. You may estimate this share
as (allowed VPS CPUUNITS/CPU power)*100%.

http://download.openvz.org/doc/OpenVZ-Users-Guide.pdf

Subject: Re: VPS&cPanel: High processor load
Posted by fransonline on Wed, 29 Nov 2006 12:27:20 GMT
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Thanks!
Still don't get it

My situation of the HN / VE
HN powernode = 204589

VE cpuunits = 120000

Now the guide cpulimit: (allowed VPS CPUUNITS/CPU power)*100%.
Becomes: (120000/204589)*100% = 0,344

I don't see the link for the value 200 / 400 for cpulimit.
Or am I doing/reading something wrong?

Subject: Re: VPS&cPanel: High processor load
Posted by rickb on Wed, 29 Nov 2006 13:39:20 GMT
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Cpulimit and cpuunits are related but not dependent on each other. It took me a while to wrap my head around these concepts, I will explain them in detail..

cpulimit is an equivalent approximate MHz value that the VE can burst to. I say equivalent because its a number between 1 & 100*X where X is the number of cpus in your server. hyperthreading, dual core counts as another cpu in this case. cpulimit is easy to understand, if your server has two 3GHz processors, and you set the cpulimit to 50, your ve can burst to ~1500Mhz.

cpuunits is harder to understand because its specific to a shared resource architecture. Much like QOS on an IP network allows you to guarantee throughput to a class of traffic, cpuunits allows you to guarantee a certain slice of the cputime to a VE. Network QOS allows you to guarantee 7mbit/sec to WWW traffic on a 10mbit pipe. If you guarantee WWW 7mbit and FTP 5 mbit, when your traffic approaches 10mbit/sec, unpredictable things will happen to each traffic set. The same applies for cpuunits. cpuunits is a number based on the number of bogomips in your server. Its scaled up so its easier to divy out to many VEs. The number itself isn't important, it could be 100 or 1,000,000. A server with more cpuunits then another server doesn't necessarily make it faster- a P4 3GHz hyperthreaded will have more cpuunits then your dual opteron with 2Ghz one ach chip. what does that mean? nothing.

[root@neon ~]# vzcpucheck
Current CPU utilization: 454109
Power of the node: 478633

This server has 478633 cpunits to distribute. If you give half of them to a VE, that VE is guaranteed half the cputime in the server. You can say if this server has 6GHz of processing power and it has half the cpuunits allocated to it, its guaranteed around 3GHz of cpu power.

Hope this helps!
Rick Blundell

Subject: Re: VPS&cPanel: High processor load

Posted by dev on Thu, 30 Nov 2006 14:09:41 GMT

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cpulimit is measured in percents of CPU.
100 means 1 CPU (100%), 200 means 2 CPUs etc.
if you have 4 CPUs, then you can tune cpulimit from 1 to 400, which
allows VE to use from 0 to 4CPUs available.

when you set cpulimit to 75 you have limited VE to 0.75*N_CPUS of your CPU power.
NOTE: cpulimit has nothing to do with cpuunits!

Subject: Re: VPS&cPanel: High processor load
Posted by fransonline on Thu, 30 Nov 2006 22:08:40 GMT

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Both thanks for your help and extra info!
It made cpulimit a lot more clear.

Subject: Re: VPS&cPanel: High processor load
Posted by jonwatson on Mon, 16 Apr 2007 15:42:20 GMT

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Hello All

This is a little bit off topic for this thread, but mostly on...

I am attempting to determine what a good CPUUNITS value is for one of my VEs. I understand
from reading that I can determine the total amount of CPUUNITS available to me by running
vzcpucheck. However, when I do that I get the following error:

/usr/sbin/vzcpucheck
ERROR: Unknown format of /proc/fairsched column: weight not found

When I set up my HWNode I chose the 2.6.15-025stab014.1 kernel which, at the time, seemed a
good choice. I've since learned that it is not supported and I've had a few issues where things
don't work as expected before because of this.

I see that my /proc/fairsched file is empty:

-r--r--r-- 1 root root 0 Apr 16 09:42 /proc/fairsched

Is this yet another problem with the kernel I've selected or is there some other way to determine
my total CPUUNITS?

Alternatively, can someone give me a decent number that might be reflective of a Celeron 2.4 with

1GB RAM?

Thanks!