
Subject: Fine Tuning system resources and power of VE / asterisk optimizations

Posted by [martink1703](#) on Wed, 26 Nov 2008 13:35:37 GMT

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We are using a Dual Opteron with 8 cores and 32 GB RAM running Ubuntu with this Kernel :

2.6.24-openvz #2 SMP Fri Oct 31 23:39:58 CET 2008 x86_64 GNU/Linux

We need to increase the power of our VE 106 !

vzcpucheck

Current CPU utilization: 255000

Power of the node: 880229

vzcpucheck give us the Power of the node: 880229

VE0CPUUNITS=5000 /etc/vz.conf

with vzsplit we have divided the unit into 3 VE and with

vzctl set 106 --cpuunits 220037 --save

we have reached the maximum value of cpuunits

increasing cpuunits gives us an error :

```
vzctl set 106 --cpuunits 293383 --save
```

```
Setting CPU units: 293383
```

```
Saved parameters for VE 106
```

```
root@vic:/etc/vz/conf# vzcpucheck
```

```
ERROR: VE0 CPU units not set, or set too high!
```

```
Probably you have not started /etc/init.d/vz
```

This is our configuration for VE 106

```
# Configuration file generated by vzsplit for 3 VEs
```

```
# on HN with total amount of physical mem 32249 Mb
```

```
# low memory 32249 Mb, swap size 0 Mb, Max treads 8000
```

```
# Resource commit level 0:
```

Free resource distribution. Any parameters may be increased

Primary parameters

NUMPROC="55038:55038"

AVNUMPROC="27519:27519"

NUMTCPSOCK="55038:55038"

NUMOTHERSOCK="55038:55038"

VMGUARPAGES="1646882:9223372036854775807"

Secondary parameters

KMEMSIZE="2254368494:2479805343"

TCPSNDBUF="526020517:751456165"

TCPRCVBUF="526020517:751456165"

OTHERSOCKBUF="263010258:488445906"

DGRAMRCVBUF="263010258:263010258"

OOMGUARPAGES="1646882:9223372036854775807"

PRIVVMPAGES="4953446:5448790"

Auxiliary parameters

LOCKEDPAGES="110076:110076"

SHMPAGES="495344:495344"

PHYSPAGES="0:9223372036854775807"

NUMFILE="880608:880608"

NUMFLOCK="1000:1100"

NUMPTY="512:512"

NUMSIGINFO="1024:1024"

DCACHESIZE="492456512:507230208"

NUMIPTENT="200:200"

DISKSPACE="3439495:3783445"

DISKINODES="15339078:16872986"

CPUUNITS="220037"

What can we do to give this VE more Power ?

Which asterisk optimizations can be done ?

Greets

Martin

Subject: Re: Fine Tuning system resources and power of VE / asterisk optimizations

Posted by [explidous](#) on Wed, 26 Nov 2008 14:01:26 GMT

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Some more information om this problem...

- VE0 shows barely any load / CPU utilization usually < 10%
- Guest VEs show frequently 100% usage on all 8 CPU cores.
- processes seem to be stalled and system/kernel time is very/unusually high on the guest VEs

System should have plenty of power available but obviously it does not get to the guests...

```
root@vici106:~# cat /proc/user_beancounters
```

```
Version: 2.5
```

uid	resource	held	maxheld	barrier	limit	failcnt
106:	kmemsize	36701631	48079881	1690776371		1859854008
0	lockedpages	0	0	82557	82557	0
0	privvmpages	97219	126466	4953446	5448790	
0	shmpages	16398	29287	495344	495344	
0	dummy	0	0	0	0	0
0	numproc	163	246	41278	41278	0
0	physpages	57903	79643	0	9223372036854775807	
0	vmguarpages	0	0	3332643	9223372036854775807	
0	oomguarpages	57903	79643	3332643	9223372036854775807	
0	numtcpsock	79	128	41278	41278	0
0	numflock	6	8	1000	1100	0
0	numpty	9	10	512	512	0
0	numsiginfo	5	16	1024	1024	0
0	tcpsndbuf	1605888	6303744	394517435	563592123	
0	tcprcvbuf	1826560	2740224	394517435	563592123	
0	othersockbuf	39168	70144	197258717	366333405	
0	dgramrcvbuf	0	487424	197258717	197258717	
0	numothersock	21	35	41278	41278	0
0	dcachesize	503685	625086	369337910	380418048	
0	numfile	5757	6657	660448	660448	0
0	dummy	0	0	0	0	0
0	dummy	0	0	0	0	0
0	dummy	0	0	0	0	0
0	numiptent	10	10	200	200	0

```
root@vici106:~#
```

top

Linux vici106 2.6.24-openvz #2 SMP Fri Oct 31 23:39:58 CET 2008 x86_6

4

root@vici106:~# cat /proc/user_beancounters

Version: 2.5

uid	resource	held	maxheld	barrier	limit	failcnt
106:	kmemsize	36701631	48079881	1690776371		1859854008
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0	shmpages	16398	29287	495344	495344	
0	dummy	0	0	0	0	0
0	numproc	163	246	41278	41278	0
0	physpages	57903	79643	0	9223372036854775807	
0	vmguarpages	0	0	3332643	9223372036854775807	
0	oomguarpages	57903	79643	3332643	9223372036854775807	
0	numtcpsock	79	128	41278	41278	0
0	numflock	6	8	1000	1100	0
0	numpty	9	10	512	512	0
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0	tcpsndbuf	1605888	6303744	394517435	563592123	
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0	othersockbuf	39168	70144	197258717	366333405	
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0	dcachesize	503685	625086	369337910	380418048	
0	numfile	5757	6657	660448	660448	0
0	dummy	0	0	0	0	0
0	dummy	0	0	0	0	0
0	dummy	0	0	0	0	0
0	numiptent	10	10	200	200	0

root@vici106:~# top

top - 14:52:53 up 3:47, 1 user, load average: 1.22, 0.87, 0.75

Tasks: 102 total, 1 running, 101 sleeping, 0 stopped, 0 zombie

Cpu0 : 50.0%us, 50.0%sy, 0.0%ni, 0.0%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st

Cpu1 : 75.0%us, 25.0%sy, 0.0%ni, 0.0%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st

```

Cpu2 : 73.3%us, 26.7%sy, 0.0%ni, 0.0%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st
Cpu3 : 0.0%us, 0.0%sy, 0.0%ni,100.0%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st
Cpu4 : 40.9%us, 59.1%sy, 0.0%ni, 0.0%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st
Cpu5 : 79.2%us, 20.8%sy, 0.0%ni, 0.0%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st
Cpu6 : 50.0%us, 50.0%sy, 0.0%ni, 0.0%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st
Cpu7 : 9.5%us, 3.2%sy, 0.0%ni, 87.3%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st
Mem: 19813784k total, 401188k used, 19412596k free, 0k buffers
Swap: 0k total, 0k used, 0k free, 0k cached

```

```

PID USER PR NI VIRT RES SHR S %CPU %MEM TIME+ COMMAND
530 root 20 0 518m 17m 4996 S 17 0.1 17:05.63 asterisk
561 root 20 0 48184 9552 2612 S 2 0.0 5:23.39 AST_update.pl
32205 root 20 0 41800 7260 2528 S 2 0.0 0:00.07 agi-VDAD_ALL_ou
32216 root 20 0 41800 7256 2528 S 2 0.0 0:00.06 agi-VDAD_ALL_ou
32201 root 20 0 26688 6120 1788 S 2 0.0 0:00.05 AST_send_action
32186 root 20 0 26688 6128 1788 S 1 0.0 0:00.04 AST_send_action
569 root 20 0 44300 9812 2532 S 0 0.0 0:35.67 AST_VDauto_dial
576 root 20 0 41484 10m 2480 S 0 0.1 0:30.53 AST_VDadapt.pl
630 root 20 0 53876 9948 1452 S 0 0.1 0:02.90 FastAGI_log.pl
631 root 20 0 53876 9948 1452 S 0 0.1 0:02.77 FastAGI_log.pl
7278 www-data 20 0 198m 10m 5764 S 0 0.1 0:02.91 apache2
7737 www-data 20 0 198m 11m 5888 S 0 0.1 0:03.32 apache2
11342 www-data 20 0 198m 11m 5856 S 0 0.1 0:02.49 apache2
13932 www-data 20 0 198m 9624 4600 S 0 0.0 0:02.09 apache2
16468 www-data 20 0 199m 10m 5516 S 0 0.1 0:03.36 apache2
16479 www-data 20 0 198m 10m 5452 S 0 0.1 0:01.85 apache2
24286 www-data 20 0 198m 9.9m 5100 S 0 0.1 0:00.93 apache2
24287 www-data 20 0 198m 10m 5244 S 0 0.1 0:01.00 apache2
25023 www-data 20 0 198m 10m 5160 S 0 0.1 0:01.34 apache2
25581 www-data 20 0 198m 9m 5176 S 0 0.1 0:00.75 apache2
27031 www-data 20 0 198m 9148 4140 S 0 0.0 0:00.58 apache2
27089 www-data 20 0 198m 9552 4536 S 0 0.0 0:00.70 apache2
27092 www-data 20 0 198m 9572 4524 S 0 0.0 0:00.59 apache2

```

Sometimes it even looks worse.

top on VE0 at about the same time:

Linux vicidial 2.6.24-openvz #2 SMP Fri Oct 31 23:39:58 CET 2008 x86_64

Last login: Wed Nov 26 13:38:19 2008 from

xxx@vicidial:~\$ top

top - 14:55:08 up 5 days, 11:55, 1 user, load average: 0.77, 0.76, 0.72

Tasks: 242 total, 1 running, 241 sleeping, 0 stopped, 0 zombie

Cpu0 : 2.0%us, 0.3%sy, 0.0%ni, 97.7%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st

Cpu1 : 2.0%us, 1.0%sy, 0.0%ni, 97.0%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st

Cpu2 : 0.0%us, 0.7%sy, 0.0%ni, 99.3%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st

Cpu3 : 0.3%us, 0.3%sy, 0.0%ni, 99.4%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st

Cpu4 : 4.0%us, 4.0%sy, 0.6%ni, 89.1%id, 0.0%wa, 0.0%hi, 2.3%si, 0.0%st
Cpu5 : 1.5%us, 0.9%sy, 0.0%ni, 97.3%id, 0.0%wa, 0.0%hi, 0.3%si, 0.0%st
Cpu6 : 1.2%us, 0.9%sy, 0.0%ni, 97.6%id, 0.0%wa, 0.0%hi, 0.3%si, 0.0%st
Cpu7 : 12.7%us, 3.4%sy, 0.0%ni, 82.1%id, 0.0%wa, 0.3%hi, 1.5%si, 0.0%st
Mem: 33022976k total, 8305536k used, 24717440k free, 177108k buffers
Swap: 33559704k total, 0k used, 33559704k free, 7142256k cached

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1419	root	20	0	518m	17m	4996	S	5	0.1	17:19.07	asterisk
1457	root	20	0	48184	9552	2612	S	3	0.0	5:27.31	AST_update.pl
4396	root	20	0	41800	7260	2528	S	2	0.0	0:00.07	agi-VDAD_ALL_ou
303	www-data	20	0	198m	9996	4964	S	0	0.0	0:00.47	apache2
1458	root	20	0	23592	1020	600	S	0	0.0	0:00.61	screen
1460	root	20	0	41268	6772	2536	S	0	0.0	0:49.39	AST_manager_sen
1465	root	20	0	44300	9832	2532	S	0	0.0	0:36.14	AST_VDauto_dial
1472	root	20	0	41600	10m	2480	S	0	0.0	0:30.83	AST_VDadapt.pl
1528	root	20	0	53876	9952	1452	S	0	0.0	0:02.86	FastAGI_log.pl
1676	www-data	20	0	198m	9636	4188	S	0	0.0	0:00.53	apache2

and here

```
root@vicidial:/etc/vz/conf# vzcpucheck -v
```

```
VEID          CPUUNITS
```

```
-----  
0             5000
```

```
106          250000
```

```
Current CPU utilization: 255000
```

```
Power of the node: 880229
```