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Subject: How to properly set memory limits

Posted by [rsaylor](#) on Thu, 29 Dec 2005 15:36:48 GMT

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I am trying to set a VPS to use 128 MB RAM but not sure if this is the correct setting. My overall goal is to get WHM/cPanel to work. However, anytime I do something in shell like compile apache or goto secure more on WHM the system just looses it and WHM/cPanel does not work, get just a blank page.

```
vzctl set ID --vmguarpages=32768 --save
```

If my calculations are correct each integer equals 4 KB so the value above should equal 128 MB. Does anybody know if this is the proper way to set memory limits and usage? I have read the pdf docs pretty well but kinda confused on this area for memory.

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Subject: Re: How to properly set memory limits

Posted by [dev](#) on Thu, 29 Dec 2005 17:51:47 GMT

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check the last column in output of `cat /proc/user\_beancounters`  
this column contains number of resource rejects. if it is more than zero than you have a too much strong limit for this resource, so you can increase it via `vzctl set ...`

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Subject: Re: How to properly set memory limits

Posted by [rsaylor](#) on Thu, 29 Dec 2005 18:01:30 GMT

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21652824: kmemsize	1842939	2463286	2457600	2621440	52
lockedpages	0	8	32	32	0
privvmpages	42222	53573	49152	53575	1209
shmpages	91	1371	8192	8192	0
dummy	0	0	0	0	0
numproc	50	65	65	65	219
physpages	20670	35551	0	2147483647	0
vmguarpages	0	0	444416384	444416384	0
oomguarpages	20670	35551	6144	2147483647	0
numtcpsock	23	38	80	80	0
numflock	1	7	100	110	0
numpty	0	3	16	16	0
numsiginfo	0	32	256	256	0
tcpsndbuf	0	69068	319488	524288	0
tcprcvbuf	0	320700	319488	524288	1
othersockbuf	11140	53036	132096	336896	0
dgramrcvbuf	0	128280	132096	132096	850
numothersock	11	37	80	80	0

dcachesize	163590	249690	524288	548864	0
numfile	712	948	1280	1280	0
dummy	0	0	0	0	0
dummy	0	0	0	0	0
dummy	0	0	0	0	0
numiptent	0	0	128	128	0

So it looks like I just need to increase kmemsize, privvmpages, numproc, tcprcvbuf and dgramrcvbuf

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Subject: Re: How to properly set memory limits  
 Posted by [dev](#) on Thu, 29 Dec 2005 18:04:33 GMT  
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yep!  
 CPanel is quite greedy while default VPS config is for moderate applications like simple web server with apache...  
 You can do the followin to setup these limits correctly.  
 Set it to some high value so that everything works.  
 After some time (when VPS was loaded in real life) you can observer how much resources was in used in peaks (maxheld column). Maxheld will give you some understanding of what resources your VPS need, so you can setup say maxhed + 20% for it to work in future.

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Subject: Re: How to properly set memory limits  
 Posted by [rsaylor](#) on Thu, 29 Dec 2005 18:21:27 GMT  
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Thanks, it works great now. Here are the values I used hopefully this will help others who want to run cPanel.

```
vzctl set 21652824 --vmguarpages=32768 --save
vzctl set 21652824 --kmemsize=6400000 --save
vzctl set 21652824 --privvmpages=80000 --save
vzctl set 21652824 --numproc=350 --save
vzctl set 21652824 --tcprcvbuf=540000 --save
vzctl set 21652824 --dgramrcvbuf=150000 --save
```

where 21652824 is the VPS ID

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Subject: Re: How to properly set memory limits

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Posted by [kir](#) on Sat, 07 Jan 2006 13:30:37 GMT

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What you've done is a bit incorrect. See, there is a barrier and a limit for each resource -- for some resources like kmemsize barrier is not equal to limit, so you should scale them up accordingly.

In your particular case, you should have used something like this (I have taken all the parameter's values from /proc/user\_beancounters output you have have provided and doubled all the values):

```
vzctl set NNN \  
--kmemsize 4915200:5242880 \  
--privvmpages 98304:107150 \  
--numproc 130 \  
--tcprcvbuf 638976:1048576 \  
--dgramrcvbuf 264192 \  
--save
```

And the next very important thing to do is to validate the resulting configuration, to make sure it is consistent:

```
$ /usr/sbin/vzcfgvalidate /etc/sysconfig/vz-scripts/NNN.conf  
Validation completed: success
```

If configuration is not valid, you'll get the suggestions of how to fix it.

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Subject: Re: How to properly set memory limits

Posted by [rsaylor](#) on Sun, 08 Jan 2006 18:15:13 GMT

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Ok, I have altered my mem config a little. With this test below I do not get any conflicts anymore.

```
vzctl set 134148 --kmemsize 4915200:5242880 --privvmpages 98304:107150 --vmguarpages  
98304:2147483647 --numproc 130 --tcprcvbuf 638976:1048576 --dgramrcvbuf 264192 --save
```

WHERE 134148 is the VPSID

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