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.

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 ...`

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.

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

Subject: Re: How to properly set memory limits

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.

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