
Subject: ***SOLVED*** memory limit problem
Posted by [disaster](#) on Tue, 25 Jul 2006 14:50:45 GMT
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Hi!

I've a strange problem. I've set privvmpages to 131072 (limit and barrier) and the system is always running into limit under user_beancounters and in syslog of the system is always written down, out of memory. The funny thing is, that this system runs on a 512MB RAM Machine without swapping anything out.

Any idea?

Stefan

Subject: Re: memory limit problem
Posted by [disaster](#) on Tue, 25 Jul 2006 14:55:08 GMT
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Next funny thing is, I've now that the limit to 2GB eg 524288 pages. And the system is using only 70MB of RAM:

```
free
      total    used    free   shared  buffers   cached
Mem:   2097152  69332  2027820    0         0         0
-/+ buffers/cache:  69332  2027820
Swap:      0         0         0
```

I'm using the new 2.6.16 kernel with meminfo support.

Subject: Re: memory limit problem
Posted by [disaster](#) on Tue, 25 Jul 2006 20:17:26 GMT
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vzmemcheck on host system says:

vzmemcheck -A -v

Output values in Mbytes

veid	LowMem	LowMem	RAM	MemSwap	MemSwap	Alloc	Alloc	Alloc
	util	commit	util	util	commit	util	commit	limit
179	2.44	7.96	70.82	70.82	2055.96	520.04	2055.96	2055.96

Summary: 2.44 7.96 70.82 70.82 2055.96 520.04 2055.96 2055.96
3141.00 3141.00 7854.00 11816.00 11816.00 11816.00 11816.00 11816.00

Subject: Re: memory limit problem
Posted by [Vasily Tarasov](#) on Wed, 26 Jul 2006 05:21:46 GMT
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What exactly do you see in logs?
Can you also post /proc_userbeanconters output here, please.

Subject: Re: memory limit problem
Posted by [Vasily Tarasov](#) on Wed, 26 Jul 2006 05:28:10 GMT
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Quote:Next funny thing is, I've now that the limit to 2GB eg 524288 pages. And the system is using only 70MB of RAM:

```
free
total used free shared buffers cached
Mem: 2097152 69332 2027820 0 0 0
-/+ buffers/cache: 69332 2027820
Swap: 0 0 0
```

I'm using the new 2.6.16 kernel with meminfo support.

free command inside VE usually shows information about the memory on the whole node!

You can change this behaviour using
vzctl set VEID --meminfo <parameter>.

But! This command just sets WHAT to output in VE while reading from /proc/meminfo. It's independent from privvmpages limit/barrier.

Subject: Re: memory limit problem
Posted by [disaster](#) on Wed, 26 Jul 2006 07:32:17 GMT
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I'm already using the --meminfo <parameter> the whole node has 8GB of RAM.

At the moment with limit 2GB (for meminfo and pages) for the VPS i see:

with free command:

```
[email]root@vps-246-179[/email]:~# free
```

```

total   used   free   shared  buffers  cached
Mem:    2097152  77452  2019700    0      0      0
-/+ buffers/cache:  77452  2019700
Swap:      0      0      0

```

```
cat /proc/user_beancounters
```

```
Version: 2.5
```

uid	resource	held	maxheld	barrier	limit	failcnt
179:	kmemsize	3008033	3906778	5242880	5592405	
0	lockedpages	2	2	32	32	0
0	privvmpages	134538	150058	524288	524288	
0	shmpages	652	4108	8192	8192	0
	dummy	0	0	0	0	0
	numproc	53	71	150	150	0
	physpages	19365	29986	0	524288	0
	vmguarpages	0	0	524288	524288	0
0	oomguarpages	19365	29986	524288	524288	
0	numtcpsock	12	15	290	290	0
	numflock	5	8	100	110	0
	numpty	1	1	16	16	0
	numsiginfo	0	13	256	256	0
0	tcpsndbuf	6888	76016	319488	524288	
0	tcprcvbuf	1272	30408	1048576	1048576	
0	othersockbuf	6888	134048	1048576	1048576	
0	dgramrcvbuf	0	4344	132096	132096	0
	numothersock	8	19	80	80	0
0	dcachesize	214368	289212	1048576	1097728	
0	numfile	368	2048	2048	2048	1489
	dummy	0	0	0	0	0
	dummy	0	0	0	0	0
	dummy	0	0	0	0	0
	numiptent	4	4	96	96	0

so free says 70MB which seems to be correct - cause on a normal hardware node the system also uses something about 70MB.

an user_beancounters says:
134538 4kb pages => 525 MB

I hope this helps you.

Subject: Re: memory limit problem

Posted by [Vasily Tarasov](#) on Wed, 26 Jul 2006 07:45:07 GMT

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Oh, let's I understand what's bothering you! =)

Well, free gets information from /proc/meminfo.

Free memory in /proc/meminfo is calculated like:

<TOTAL MEMORY> - <OOMGUARPAGES>. Not privvmpages!

We can see, that in your case oomguarpages holds

19365 pages = 77460 Kb. This memory is marked as used in free!

HTH!

Subject: Re: memory limit problem

Posted by [disaster](#) on Wed, 26 Jul 2006 07:51:23 GMT

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OK - i understand.

But i'm not really clear of this.

Let's go another way. I've a VPS - and i want to give the VPS a maximum of 512MB RAM. At the moment i thought I've to set privvmpages, oomguarpages and vmguarpages the the 512MB in pages.

So this is not correct? Or where is my fault?

Thanks!

Subject: Re: memory limit problem

Posted by [Vasily Tarasov](#) on Wed, 26 Jul 2006 08:18:37 GMT

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Yes, something like that.

Subject: Re: memory limit problem

Posted by [disaster](#) on Wed, 26 Jul 2006 08:27:35 GMT

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Sorry I'm confused. If my way is correct - why does my image use about 525MB on the VPS so it does not run on VPS with limit 512MB in privvmpages. But it runs without any problems on hardware with 256MB without caching...

Subject: Re: ***SOLVED*** memory limit problem

Posted by [aistis](#) on Fri, 28 Jul 2006 15:51:07 GMT

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well, apparently the software you are trying to run likes to allocate a lot of memory in advance, but not necessarily use it. That would explain why you are able to run it on a machine with 256MB of RAM as you definitely have some SWAP space there which is also counted into virtual memory reserve. Or at least that's how i see it

Subject: Re: ***SOLVED*** memory limit problem

Posted by [disaster](#) on Fri, 28 Jul 2006 16:06:11 GMT

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Thanks - it is like you say - i discussed this with vass via icq. Everything is solved.
