
Subject: Strange Memory Problem

Posted by [jckdnk111](#) on Thu, 13 Mar 2008 00:37:44 GMT

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Hi,

I have a VE that is constantly reporting it can't allocate memory but I feel I've got plenty of memory allocated to it, way more then it should ever use. Can someone help?

My user_beancounters and VE conf are attached.

File Attachments

1) [help.txt](#), downloaded 311 times

Subject: Re: Strange Memory Problem

Posted by [shuaib85](#) on Thu, 13 Mar 2008 02:30:57 GMT

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Dear

The fail counter of privvmpages is very high as you can see it is 104092

i guess add more to it.

```
vzctl set VEID --privvmpages low_limit:highh_limit --save
```

```
privvmpages    129309    190855    466699    513368    104092
```

cheers

Subject: Re: Strange Memory Problem

Posted by [jckdnk111](#) on Thu, 13 Mar 2008 14:20:11 GMT

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Right, but as you can see I've already allocated more than the vmguarpages to privvmpages ... how could I possibly be getting failcnt's for privvmpages and nothing else?

Very strange.

Subject: Re: Strange Memory Problem

Posted by [rickb](#) on Fri, 14 Mar 2008 08:18:13 GMT

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privvmpages is the memory allocation limit. please see the wiki for a more thorough explanation

and post any specific questions back on the forum.

increase your privvmpages as it is being exhausted.

Subject: Re: Strange Memory Problem
Posted by [jckdnk111](#) on Sat, 15 Mar 2008 01:11:45 GMT
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I've read the wiki.

If you look at my conf for this VE you'll see:

```
VMGUARPAGES="400228:2147483647"  
-- which is a barrier of 1639333888 bytes or ~1.5GB
```

```
PRIVVMPAGES="466699:513368"  
-- which is a barrier of 1911599104 bytes or ~1.7GB
```

As you can see the PRIVVMPAGES setting is more than maxed out.
So my question is how is it that I'm getting failcnt's for PRIVVMPAGES only?

Also, let's say I increase PRIVVMPAGES and not VMGUARPAGES, wouldn't it stand to reason that I'd still run out of memory?

Lastly, I can tell you that this VE never even comes close to using 1GB, let alone 1.5GB or 1.7GB yet it is still throwing memory allocation errors.

Please help.

Subject: Re: Strange Memory Problem
Posted by [rickb](#) on Sat, 15 Mar 2008 08:30:38 GMT
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hi, this is a misunderstanding on your end. please read the following to understand that vmguarpages is not a limit assuming your hardware node is not facing a oom condition.
Quote:

If the current amount of allocated memory space does not exceed the guaranteed amount (the barrier of vmguarpages), memory allocations of container's applications always succeed. If the current amount of allocated memory space exceeds the guarantee but below the barrier of privvmpages, allocations may or may not succeed, depending on the total amount of available memory in the system.

vmguarpages is a method to shape memory allocation under low free memory conditions.

Subject: Re: Strange Memory Problem
Posted by [rickb](#) on Sat, 15 Mar 2008 14:41:38 GMT
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malloc(100000000000)

how much memory did I allocate? How much memory have I used so far?

this is the difference between privvmpages and vmguarpages. its all in the wiki.

Subject: Re: Strange Memory Problem
Posted by [jckdnk111](#) on Sat, 15 Mar 2008 20:08:18 GMT
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I actually understood that just fine (though you are starting to may me think I'm quite stupid).

I'm telling you that the entire server has never used more than 1GB of RAM at any given time (monitored by nagios with historical usage stats).

I've had no problems in any other memory allocation category. This server does nothing more than host an svn repository. I know I've never used this much memory. This is the only VE on the server. The hardware node does nothing at all.

If I increase the PRIVVMPAGES above the physical amount of RAM on the box will it magically fix my problem? I only say this because I know I'm currently not maxing out my physical RAM (verified by a top on the hardware node while the VE is failing memory allocations).

I think this is a very strange problem and you keep telling me I just need to increase PRIVVMPAGES.

Subject: Re: Strange Memory Problem
Posted by [rickb](#) on Sun, 16 Mar 2008 01:39:01 GMT
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total privvmpages among VEs need to be much more then 1GB in your server. this because to actually use 1GB by real application, about 3-4GB will be allocated. all applications allocate more then they use.

you can observe at the imbalance between privvmpages and physpages in a VE running any popular software like named, apache, etc to demonstrate this fact.

Subject: Re: Strange Memory Problem
Posted by [jckdnk111](#) on Sun, 16 Mar 2008 15:17:37 GMT
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Ahh, I see ... this makes sense.
I'll give that a try.

Thanks for your patience in explaining this to me.

Subject: Re: Strange Memory Problem
Posted by [rickb](#) on Sun, 16 Mar 2008 16:57:31 GMT
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you are welcome my friend. good luck with openvz, its great.
