Subject: Strange Memory Problem
Posted by jckdnk111 on Thu, 13 Mar 2008 00:37:44 GMT
View Forum Message <> Reply to Message

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 447 times

Subject: Re: Strange Memory Problem
Posted by shuaib85 on Thu, 13 Mar 2008 02:30:57 GMT
View Forum Message <> Reply to Message

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
View Forum Message <> Reply to Message

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
View Forum Message <> Reply to Message

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
View Forum Message <> Reply to Message

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
View Forum Message <> Reply to Message

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

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

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

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

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

you are welcome my friend. good luck with openvz, its great.