Subject: memory consumed suddenly increases inspite of no activity taking place..
Posted by sanjooz_2002 on Wed, 29 Nov 2006 12:59:00 GMT

Hi,

I am a newbee. So, kindly bear with me if this sounds silly. I have created 4 virtual servers (all running centos) on a main hardware node (which has got centos). I am using 1GB RAM. Recently I found a strange anamoly in the RAM space utilization. After I booted the main hardware node I did a "free -m" and found this:

```
           total      used      free    shared   buffers     cached
Mem:         942       535       406         0       106        209
-/+ buffers/cache:     219       723
Swap:       1919         0      1919
```

After some time (approx half an hour), inspite of no activity taking place on the machine, I found the following by using the free -m command:

```
           total      used      free    shared   buffers     cached
Mem:         942       536       406         0       106        209
-/+ buffers/cache:     219       723
Swap:       1919         0      1919
```

I tried it again after an hour, and again I found the memory utilization increasing.

```
           total      used      free    shared   buffers     cached
Mem:         942       537       405         0       107        210
-/+ buffers/cache:     219       723
Swap:       1919         0      1919
```

It keeps increasing this way, although the system is idle.
I have read few articles suggested in the forum (FAQ) like the foll:
http://gentoo-wiki.com/FAQ_Linux_Memory_Management

But, I really doubt if this is the case because the cache and buffer size are the same and only the amount of memory getting utilzed is increasing.

The only thing that is puzzling me is this that, if there is no activity taking place on my system, how come the memory utilized is increasing???
Can anyone help me in this regard????Thanks in advance!!!

[Moderator: added CODE tags to read free output more easy]

Subject: Re: memory consumed suddenly increases inspite of no activity taking place..
Posted by kir on Wed, 29 Nov 2006 13:23:24 GMT

You can only be sure that there is no activity if you will switch to runlevel 1 and check there are no other processes than init. Otherwise, you certainly have crond, syslogd, sshd and a few other services running -- and they do something from time to time. More to say -- since you have 4 VEs running, they also have crond, syslogd and some other stuff which is running and doing something.

And what you see does not mean there is memory leak or smth. To my mind, it's quite normal.

Subject: Re: memory consumed suddenly increases inspite of no activity taking place..
Posted by rickb on Wed, 29 Nov 2006 16:57:48 GMT

For your question about used ram, disregard all lines from 'free -m' except:

-/+ buffers/cache: 219   723

The linux kernel will move data from ram to swap or vice versa and also buffer file reads to try and optimize the overall system. This explains why the values can change despite very little userspace activity. The line above tells you how much ram you have left for allocation by software in your HN and your VEs. This is your main concern. Its good to have extra memory laying around for disk buffers but its not required for your software to function.

When I look at your three free outputs, I only see a few changed values and by only a few megs of ram. This really is nothing to be concerned about.

Subject: Re: memory consumed suddenly increases inspite of no activity taking place..
Posted by sanjooz_2002 on Thu, 30 Nov 2006 06:56:33 GMT

Thanks rickb and kir for the info.

What is puzzling me is this that after couple of hours the memory utilized shoots up to 700+ MB. Furthermore, after that when I try to access my webpage running on one of the virtual servers, which uses mysql db to search for some values, it gave me memory related error.
I believe nobody is accessing the server using any of the available services on the sys for e.g ssh,http,https,mysql etc. Hence, I mentioned that "there was no activity on the system". I apologize if this statement caused any sort of ambiguity. Please do let me know if any further info is required from me inorder to solve this issue (or my doubt incase you dont find this as an issue). Please help!!

Thanks.

Subject: Re: memory consumed suddenly increases inspite of no activity taking place..
Posted by rickb on Thu, 30 Nov 2006 07:12:59 GMT

when you say "utilization", what numbers are you referring to?

for memory error, check /proc/user_beancounters first

Subject: Re: memory consumed suddenly increases inspite of no activity taking place..
Posted by sanjooz_2002 on Thu, 30 Nov 2006 07:40:59 GMT

Hi rickb,

By the term "utilization" im referring to the used coloumn in the following output:

```
           total      used      free    shared    buffers     cached
Mem:        942       561       381         0       106        227
-/+ buffers/cache:      227       715
Swap:       1919         0       191
```

Following is the memory related error, that i had mentioned previously
ERROR --> Warning: mysql_connect(): Can't create a new thread (errno 12); if you are not out of available memory, you can consult the manual for a possible OS-dependent bug

Please do let me know If my assumtpion that this is a result of memory crunch, is correct or not.

Thanks!

Subject: Re: memory consumed suddenly increases inspite of no activity taking place..
Posted by dev on Thu, 30 Nov 2006 14:00:44 GMT

12 == ENOMEM means that fork failed due to processes limit.
Check output of /proc/user_beancounters in host system for this VE.
You most likely hit the numproc or kmemsize VE limit.