Subject: Re: occasional high loadavg without any noticeable cpu/memory/io load
Posted by Rene Dokbua on Tue, 22 May 2012 09:16:00 GMT
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Hi Sirk,

Thanks for your reply. I'm so pleased having found this mailing list after having tried the forum, which seem to have very little activity!

Ploop is a great idea technically, but I'm a little concerned about the " Warning: This is a new feature, not yet ready for production systems. Use with caution." on the OpenVZ Wiki page, so I'm kinda waiting for the green-light that it's ready for production environments.

It did occur to me that disk-IO could be the cause of the problem, but iostat on the hardware node did not suggest any particular IO problems. I still haven't found a way to see the IO activity within a container - iostat just comes up blank when it's run within a container. Is there a way?

We're not using any network storage with this server so that is not the reason.

The server has 4 SATA-3 drives, with the root partition being on one drive, the problem container alone on a second drive, and the remaining containers on a third.

Best,
Rene

On Tue, May 22, 2012 at 3:06 PM, Sirk Johannsen <s.johannsen@satzmedia.de>wrote:

> Hi Rene,
>
> Since CPU and MEM are fine it's most likely to be Disk-IO.
> I have similar Problems with a Cluster Setup based on OpenVZ.
> The problem is that our Storage is way to slow.
> We have been accessing the storage via NFS and put all our CTs private
> areas on it.
> I noticed many times that one CT was doing a lot of disk IO and all
> other were suffering from that... that even lead to total system
> failures.
> This has been solved by converting everything to ploop. Since then our
> system is at least in a stable state.
> IO Performance is still an issue but does not bring our system down.
>
> You should give ploop a try :-) I am very happy with it.
>

> best regards,
>
> Sirk
>
> 2012/5/21 Rene Dokbua <openvz@dokbua.com>:
> > Hello,
> >
> > I occasionally get this extreme load on one of our VPS servers. It is
> quite
> > large, 4 full E31230 cores, 4 GB RAM and hosting ca. 400 websites +
> > parked/addon/subdomains.
> >
> > The hardware node has 12 active VPS servers and most of the time things
> are
> > chugging along just fine, something like this.
> >
> > 1401: 0.00 0.00 0.00 1/23 4561
> > 1402: 0.02 0.05 0.05 1/57 16991
> > 1404: 0.01 0.02 0.00 1/73 18863
> > 1406: 0.07 0.13 0.06 1/39 31189
> > 1407: 0.86 1.03 1.14 1/113 31460
> > 1408: 0.17 0.17 0.18 1/79 32579
> > 1409: 0.00 0.00 0.02 1/77 21784
> > 1410: 0.01 0.02 0.00 1/60 7454
> > 1413: 0.00 0.00 0.00 1/46 18579
> > 1414: 0.00 0.00 0.00 1/41 23812
> > 1415: 0.00 0.00 0.00 1/45 9831
> > 1416: 0.05 0.02 0.00 1/59 11332
> > 12 active
> >
> > The problem VPS is 1407. As you can see below it only uses a bit of the
> cpu
> > and memory.
> >
> > top - 17:34:12 up 32 days, 12:21, 0 users, load average: 0.78, 0.95,
> 1.09
> > Tasks: 102 total,   4 running, 90 sleeping,   0 stopped,   8 zombie
> > Cpu(s): 16.3%us, 2.9%sy, 0.4%ni, 78.5%id, 1.8%wa, 0.0%hi, 0.0%si,
> > 0.1%st
> > Mem: 4194304k total, 2550572k used, 1643732k free,   0k buffers
> > Swap: 8388608k total,   105344k used, 8283264k free, 1793828k cached
> >
> > Also iostat and vmstat shows no particular io or swap activity.
> >
> > Now for the problem. Every once in a while the loadavg of this particular
> > VPS shoots up to like crazy values, 30 or more and it becomes completely
> > sluggish. The odd thing is load goes up for the VPS server, and starts
> > spilling into other VPS serers on the same hardware node - but there are

> > still no particular cpu/memory/io usage going on that I can se. No
> > particular network activity. In this example load has fallen back to
> > around 10 but it was much higher earlier.
> >
> > 16:19:44 up 32 days, 11:19, 3 users, load average: 12.87, 19.11, 18.87
> >
> > 1401: 0.01 0.03 0.00 1/23 2876
> > 1402: 0.00 0.11 0.13 1/57 15334
> > 1404: 0.02 0.20 0.16 1/77 14918
> > 1406: 0.01 0.13 0.10 1/39 29595
> > 1407: 10.95 15.71 15.05 1/128 13950
> > 1408: 0.36 0.52 0.57 1/81 27167
> > 1409: 0.09 0.26 0.43 1/78 17851
> > 1410: 0.09 0.17 0.18 1/61 4344
> > 1413: 0.00 0.03 0.00 1/46 16539
> > 1414: 0.01 0.01 0.00 1/41 22372
> > 1415: 0.00 0.01 0.00 1/45 8404
> > 1416: 0.05 0.10 0.11 1/58 9292
> > 12 active
> >
> > top - 16:20:02 up 32 days, 11:07, 0 users, load average: 9.14, 14.97,
> > 14.82
> > Tasks: 135 total, 1 running, 122 sleeping, 0 stopped, 12 zombie
> > Cpu(s): 16.3%us, 2.9%sy, 0.4%ni, 78.5%id, 1.8%wa, 0.0%hi, 0.0%si,
> > 0.1%st
> > Mem: 4194304k total, 1173844k used, 3020460k free, 0k buffers
> > Swap: 8388608k total, 115576k used, 8273032k free, 725144k cache
> >
> > Notice how cpu is plenty idle, and only 1/4 of the available memory is
> being
> > used.
> >
> > http://wiki.openvz.org/Ploop/Why explains "One such property that
> deserves a
> > special item in this list is file system journal. While journal is a good
> > thing to have, because it helps to maintain file system integrity and
> > improve reboot times (by eliminating fsck in many cases), it is also a
> > bottleneck for containers. If one container will fill up in-memory
> journal
> > (with lots of small operations leading to file metadata updates, e.g.
> file
> > truncates), all the other containers I/O will block waiting for the
> journal
> > to be written to disk. In some extreme cases we saw up to 15 seconds of
> such
> > blockage.". The problem I noticed last much longer than 15 seconds
> though
> > - typically 15-30 minutes, then load goes back where it should be.

> >
> > Any suggestions where I could look for the cause of this? It's not like
> it
> > happens everyday, maybe once or twice per month, but it's enough to cause
> > customers to complain.
> >
> > Regards,
> > Rene
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