
Subject: OpenVZ & PostgreSQL: shmpages, shared_buffers, kernel.shmmax
Posted by [cadiolis](#) on Tue, 11 Nov 2008 09:16:55 GMT

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Hi everyone, I am wondering if someone can shed some light on some of the various settings required for running PostgreSQL on OpenVZ

We have a server that has 8GB of ram that is running just one container that has Postgres. I have been trying in vain to figure out some of the above settings

I have read this page (http://wiki.openvz.org/Postgresql_and_shared_memory) but haven't gotten to far. From what I can tell there are 4 adjustments that need to be made

/sbin/sysctl kernel.shmmax in the host node
/sbin/sysctl kernel.shmmax in the VE
shmpages for the VE
shared_buffers in PostgreSQL

Can someone give me some pointers on what kinda values I should be putting in here? Does the shmmax in the host node need to be set the highest, and then each of the other values set to lower amounts? How much can I set for shmpages and shmmax? We would like to give as much of the 8GB as possible

Regards,
Collin

Subject: Re: OpenVZ & PostgreSQL: shmpages, shared_buffers, kernel.shmmax
Posted by [khorenko](#) on Wed, 12 Nov 2008 07:19:32 GMT

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Hi Collin,

1) you don't need to change /sbin/sysctl kernel.shmmax in the host node as those setting would not affect Container's settings.

2) if you really want to run just a single Container on a Node, you can just disable memory limitation for the Container - just set "shmpages" and "privvmpages" UBC to any _big_ number, greater than 8Gb.

And you can also set /sbin/sysctl kernel.shmmax in the Container to the 8Gb (so you'll never reach this limit).

3) i cannot tell you anything useful about shared_buffers in PostgreSQL - know nothing about it. i've googled a bit and seen that people mostly use from 128Mb to 1Gb but suggest to increase this value in case of memory PostgreSQL allocation failures.

Don't know if it's useful for PostgreSQL, but you may increase those parameters - i only guess! - up

to 6-7Gb if you don't run anything else on the Node (i think it makes sense to leave some memory for system itself).

But i'd advise to play with that parameter - it might be optimal for the whole system not to provide ALL the memory to PostgreSQL.

BTW, it will be very useful if you post here values you chosen after your experiments.

Hope this helps.

--

Konstantin

Subject: Re: OpenVZ & PostgreSQL: shmpages, shared_buffers, kernel.shmmax
Posted by [cadiolis](#) on Wed, 12 Nov 2008 18:58:33 GMT

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Thanks for the info Konstantin,

Interesting to know that the shmmax setting does not need to be adjusted in the host. Does that mean I just read the wiki page on the topic incorrectly? Or should it be updated

http://wiki.openvz.org/Postgresql_and_shared_memory

Also good to know about setting the memory options to max if you are only running one VE. I will do that and play around a bit with the shared_buffers in PG

Subject: Re: OpenVZ & PostgreSQL: shmpages, shared_buffers, kernel.shmmax
Posted by [khorenko](#) on Thu, 13 Nov 2008 15:25:10 GMT

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No, wiki page is ok, it says:

Quote: * The sysctl kernel.shmmax value set in the HN/CT0 applies only to the HN, not to containers.

and this is true. Setting kernel.shmmax sysctl won't affect containers in any way and thus no need to touch it if we run PG inside a Container.

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Konstantin
