Subject: OpenVZ docker version mismatch with CentOS and daemon fails to start
Posted by abufrejoval on Mon, 21 Nov 2016 01:49:36 GMT
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This came out when I tried to make the Nvidia CUDA docker container images work.

Installed the Docker deaemon, noticed it was 1.8.2-vl7 (October 2015).
Installed docker on my CentOS 7 control system and notced it was 1.10<something> (Spring 2016) but not the current 1.12.3-1.el7 from Docker.com either.

I understand that the CentOS version will always be behind the Docker.com bleeding edge, but why the big gap between CentOS and OpenVZ?

And why doesn't work (quite independly of the version)?

I'll go into details, once I understand your attitude towards Docker and OpenVZ co-existence, because currently I'm a bit shocked!

In my view (and that's also what I got from follwing everything I could ever find from Kir Kolyshkin), OpenVZ and Docker solve two very distinct issues hopefully and eventually with the same base technology:

* OpenVZ caters to the IaaS crowd, offering IaaS abstractions at a PaaS price point and elasticity. It's mostly bottom up and centered around operational security and multi-tenancy. It's natural perspective (not limitation) is scale-in.

* Docker caters to the scale-out crowd who couldn't decide who to follow in the PaaS API wars. Actually it allows applications to largely work with IaaS abstractions, too, but to be operated with PaaS handles attached to the outside of the containers. It's great for scale out deployment, not so hot for local resource containment or multi-tenancy.

That's why I'd always figured that I'd be transforming my current OpenVZ environment to including Docker containers inside OpenVZ containers to get the best of both worlds.

And I really want to nest containers anyway, because trees and sub-budget allocations are so natural to computer scientists and their commercial bosses.

I was very heartened to find that I could run Docker containers inside an OpenVZ container on the early OpenVZ Betas.

But I also expect them to run on the host, just in case or because I have some corporate friends who won't run OpenVZ containers because in their book they are 'German' (just because I am): I want to be able to have them use OpenVZ as a 100% CentOS replacement (standards!!) so they cannot argue that 'my' OpenVZ adds overhead or violates their standard.

Same story for LXC: I notice LXC won't run on OpenVZ7 while the CentOS base only deprecates it.
I don't see myself massively deploying LXC containers mixed with OpenVZ or Docker on a single

system, but it shouldn't *break* on a CentOS based derivative.

The big question is:
* Is OpenVZ a CentOS enhanced with great containers, common and augmented KVM tools?
* Or is OpenVZ a (still great) augmented container and KVM run-time cherry picked from CentOS?

The old RHEL 4-6 OpenVZ were generally the former, adding to REHL/CentOS not subtracting from it.
I kinda assumed that would remain...

Subject: Re: OpenVZ docker version mismatch with CentOS and daemon fails to start
Posted by abufrejoval on Mon, 21 Nov 2016 03:15:50 GMT
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Just tried working with LXC on Xenial.. What a cgroup nightmare!

I want my Multics back, that was so simple

Subject: Re: OpenVZ docker version mismatch with CentOS and daemon fails to start
Posted by abufrejoval on Mon, 21 Nov 2016 03:50:36 GMT
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...but at least it works with LXC on Ubuntu (host + guest)!

Since LXC container has full visibility of the host's /proc, the runtime doesn't attempt to load any kernel modules and opening the '/dev/nvidia*' devices succeeds, even for an otherwise non-privileged container in accordance to the story published here:
http://sqream.com/setting-cuda-linux-containers-2/

Perhaps I'll try a Fedora host next, but I can't shake the feeling that the free recombination of kernels and userlands side-by-side is growing more distant, not closing.

Subject: Re: OpenVZ docker version mismatch with CentOS and daemon fails to start
Posted by abufrejoval on Wed, 07 Dec 2016 12:03:40 GMT
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While the LXC and CUDA issues aren't completely sorted out just yet, I am happy to report that I

managed to get Docker to work inside and outside OpenVZ containers.

The problem was that connection tracking is disabled by default on the host and Docker relies on that to set up its networking.

Discussion and solution is here: https://forum.openvz.org/index.php?t=threadt&frm_id=2&S=9eb5165a9ea8d9586d9be94d03070a9e

Closed, thank you!
