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Subject: Multiple kernel versions

Posted by [Tsujigiri](#) on Tue, 29 Apr 2008 02:02:56 GMT

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Hi all. I've been looking round the FAQs and the forum and I'm a little bit unclear on something. I am looking to set up a sandboxed build environment to do legacy builds. I'm developing some simulation software on CentOS4 but am looking to upgrade to CentOS5. I also need to do builds on CentOS3. I'd like to be able to build all on the one box. Both CentOS 4 and 5 use the 2.6 (.9 and .18 respectively) kernel but CentOS 3 uses 2.4.21.

Would this be an issue using OpenVZ? I'm a bit unsure as to whether or not it would be. I see that you can install other OS systems, but do they all need to run using the same kernel. I think that I understand that just the one kernel is run and that is used to operate each OS installed. So you can have many different filesystems with various other libraries and usermode software all running sandboxed, but you can't run more than one kernel.

Is this correct? Thanks!

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Subject: Re: Multiple kernel versions

Posted by [khorenko](#) on Tue, 29 Apr 2008 06:07:36 GMT

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Hi.

Yes, in general you are right - all the Containers on a Node use the same kernel and you cannot run different kernels in different Containers using OpenVZ technology, but!...

Kernel API is really very stable and kernel provides a good backward compatibility and thus for most userspace apps it does not matter what kernel they use. (Ok, this is true in only one direction - surely newer kernel might provide some new syscalls and if an app uses it, it will fail if one tries to run the app under an older kernel where this syscall was not implemented.) In particular I highly believe that a Container with CentOS 3 will work fine on a Node with 2.6.18-x ovz kernel.

Moreover, OpenVZ has a possibility to change the kernel name reported inside a Container by 'uname' - might be helpful if some app uses this.

The other problem you'll face trying to create a Container with CentOS 3 - absence of a precreated CentOS 3 template. OpenVZ project started when CentOS 4 has been already widely used (and thus kernel 2.6.9) so up to now seems that nobody created/shared a template for CentOS 3. But you can create a template yourself and may be even share it.

Hope this helps.

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Konstantin

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