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Subject: How does OpenVZ manage memory?

Posted by [rsauvat](#) on Mon, 23 Aug 2010 14:50:31 GMT

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Hi ,

I have a question regarding how the memory is processed in openvz or maybe it is just on Linux in general.

I am running about 10 containers on a host. All containers are web servers running the same distribution (Gentoo) and even the exact same binaries, as I have mount (with bind option) the binary and library directory from one VM to the others. So I have the same containers except for user data (mostly mysql databases ). I have remarked that if I add all the memory used by each vm and compare it to the used memory in the physical host it is almost twice as big. If I add all used memory in each vm I get 8098 Mo. The free command without buffers and cache report 3687Mo.

My guess is that Linux is sharing the memory for all processes so when a process require an already loaded library or binary It doesn't really take more space in RAM. When inside a container, it doesn't know about the shared memory space and display the memory usage as if the processes in the container were the only ones.

If anyone can infirm or confirm my guess it would be a great help as I am trying to understand how memory is used.

I have another question as well. When a container is set to use for example 5Go of RAM and 1Go of Swap. If this container uses 5,5Go of memory and the host has enough free ram for the 0,5Go, does the 0,5Go get allocated in ram or in swap space?

If anyone has the knowledge to answer my questions it would be great.

Regards.

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