
Subject: Does OpenVZ require Hyper-Threading
Posted by [redham](#) on Mon, 20 Aug 2012 01:38:01 GMT
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Hi,

Since OpenVZ doesn't create individual containers does it require CPUs with Hyper-Threading?

I have 6 servers that aren't being used and I'd like to expand my OpenVZ VPS operation.

The server specifications are:

> INTEL XEON E3-1220 3.1GHZ 5GT/S 8MB CACHE QUAD CORE L1155 CPU

> SUPERMICRO X9SCL+-F SATA3, L1155 MOTHERBOARD

> 8GB DDR-3 1333MHZ ECC MEMORY 6GB/S

> 2 each WESTERN DIGITAL 500GB 16MB SATA3 6GB/S HARD DRIVE

Do the above specifications meet requirements for multiple OpenVZ containers installation on each server?

The Intel E3-1220 does have "Intel® Virtualization Technology for Directed I/O (VT-d)".
I think this is all that is required but not positive.

Also, will I be giving up any performance (or will there be any other repercussions) by not having Hyper-Threading?

I THINK Hyper-Threading IS necessary for a Xen VPS. I'll deal with Xen later. Right now I need to utilize these 6 servers either by OpenVZ VPS or cloud utilization. The bottom has fallen out of the dedicated server market.

I need help answering this as soon as possible so if you can't answer all of my question but your sure of 1 of them, please reply.

I'm fairly good at Google searches but darn if I could find anything on this. I even searched the SolusVM forums. I use SolusVM to manage my VPS.

Thanks in advance for your help with this,
redham

Subject: Re: Does OpenVZ require Hyper-Threading
Posted by [Ales](#) on Mon, 20 Aug 2012 12:19:32 GMT
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OpenVZ's CPU requirements are very versatile. Basically, anything including Pentium II should work. Technologies like VT-d are not required.

Your servers should simply fly with OpenVZ.

Edit:

Come to think of it, if one uses RHEL 6 OpenVZ kernels, one will be limited with the RHEL 6 hardware requirements. RHEL 6 kernels require PAE capabilities of the CPU. PAE is available since Pentium Pro, except for the early versions of Pentium M, which don't have it. I'm sure this is purely theoretical, as I doubt someone will try to put early Pentium Ms into a server production environment these days, but I thought I'd mention it for the sake of completeness.

Subject: Re: Does OpenVZ require Hyper-Threading
Posted by [redham](#) on Mon, 20 Aug 2012 14:08:10 GMT
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Ales,

I certainly do appreciate your fast and helpful reply.

That is what I thought but wanted to be absolutely sure.

How about the Xen & KVM? Those do need Hyper-Threading don't they?

Thank you very much,
redham

Subject: Re: Does OpenVZ require Hyper-Threading
Posted by [amissus](#) on Tue, 21 Aug 2012 03:45:05 GMT
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I'm using RHEL6 kernel with VIA C3 CPU, where PAE isn't present and it works well. It is necessary to manually disable PAE in RHEL6 kernel configuration. If not, kernel is unbootable on VIA C3.

KVM nor Xen don't require Intel Hyper-Threading technology. Intel HTT isn't related to any for me known virtualization technology. It's type of multithreading processing over CPU (called SMT).

Subject: Re: Does OpenVZ require Hyper-Threading
Posted by [Ales](#) on Wed, 22 Aug 2012 18:38:09 GMT
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I'm compiling my own nonPAE RHEL 6 kernels too, as I maintain a line of Pentium M machines. Recent RHEL 6.3 kernels don't need patches anymore, if I remember correctly, just a rebuild with PAE disabled. I had to patch kernel sources before or nonPAE build would fail. Really minor patches, though.

Anyway, I don't know about XEN, never used it much, but KVM needs VT-x on Intel CPUs and AMD-V on AMD CPUs. As mentioned, this isn't related to hyperthreading.

Subject: Re: Does OpenVZ require Hyper-Threading
Posted by [amissus](#) on Wed, 22 Aug 2012 21:33:27 GMT

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Xen has support for two types of virtualization - paravirtualization and hardware assisted virtualization. Second one needs AMD-V (SVM) or VT-x CPU support, first one has no special requirements on CPU (as OpenVZ). HTT isn't related to any type of virtualization type.

Subject: Re: Does OpenVZ require Hyper-Threading
Posted by [redham](#) on Thu, 23 Aug 2012 14:55:03 GMT

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Guys,

I have one more question. I think I remember that if OpenVZ is upgraded to CentOS v6 then memory swap can be enabled and any burstable memory goes to swap instead of live RAM.

Is this correct? I'm almost sure I read about that some time ago but I didn't want to get o CentOS v6 until it had been tested a while longer. People were having trouble wit it at that time.

That would be great news since currently these machines only have 8GB of RAM. I'll upgrade to 16GB one day but for now I'd like to put more accounts on these OpenVZ machines than the 8 GB would allow with live burstable.

Has anyone here went to CentOS 6 and can tell me about any trouble they have with it and if the drive swap indeed works now?

Thanks,
redham
