

Single vs Multi Processor VM's ...



[gjeff80](#) 17 posts since

May 23, 2006

Hi,

I'm looking for someone to clarify an outstanding question we've had here at my company. The debate is if you get better performance out of a virtual machine with 1 or multiple virtual processors. It's my understanding that when you give a VM a virtual processor it only gets 1 core of a physical processor in the ESX to use. So one would only assume if you give the VM multiple processors you would make more processing power available to the VM. I know back in the esx 2.5 days they said multi processor VM's could perform slower than single processor vm's. Is that still the case?

We are deploying some domain controllers on virtual machines and I would expect that we would see better performance out of multi processor virtual machines to host the DC's but I've heard that you see a decrease in VM performance when you give it multiple virtual processors.

Can anyone provide an answer on this and any backup documentation that might be useful that I can pass around to my co workers.

hanks

Glenn



[oreeh](#) 9,872 posts since

Nov 30, 2005 1. **Re: Single vs Multi Processor VM's** Jul 26, 2008 8:26 AM

See [VMkernel Scheduler, Co-scheduling SMP VMs in VMware ESX Server](#) and [CPU Performance Analysis and Monitoring](#)



[gjeff80](#) 17 posts since

May 23, 2006 2. **Re: Single vs Multi Processor VM's** Jul 26, 2008 8:31 AM

 in response to: [oreeh](#)

I will check those links out.. but do you have a quick summary you could give me? Do you see better performance out of multi proc VM's if they can utilize multi threads in the VM?

-Glenn



[oreeh](#) 9,872 posts since

Nov 30, 2005 3. **Re: Single vs Multi Processor VM's** Jul 26, 2008 8:37 AM

 in response to: [gjeff80](#) This depends on the actual application used.

With "SMP aware" applications like MSSQL, Oracle I'd use vSMP if necessary.

Multithread applications however can be run on single vCPU VMs as well and usually perform well.

My opinion: always start with a single vCPU VM

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I don't see a reason why a DC would ever need vSMP.

Message was edited by: oreeh



[weinstein5](#) *6,331 posts since*

Nov 19, 2005 4. **Re: Single vs Multi Processor VM's** Jul 26, 2008 10:16 AM

You might check this thread out - a great discussion on single vs multiple vcpus - <http://communities.vmware.com/thread/157849?tstart=0> and I agree with oreeh start with one vcpu - you can always add extras if needed -