

Can all apps be virtualized? -- Turning...



Jim Blakley 5

2008-8-7

So, building off Bob's post from September (<http://communities.intel.com/openport/thread/1905>), I contend that, at least from a performance perspective, with the new capabilities in the next generation of virtualized infrastructure coming this year, the answer is yes!

As we look at the availability of ESX 4.0 from VMWare and servers based on the Intel Nehalem-based Xeon servers with new VT features for CPU, chipset and IO later this year, we're not seeing any of the mainstream applications that can't be virtualized. In the past, some of the mainstream apps that (allegedly) couldn't be virtualized that we've consistently heard are SAP and other complex business processing apps, middle sized databases and large enterprise email systems like Microsoft Exchange. While it's a little early to declare victory, we're thinking the next generation of technology will be more than good enough to run these workloads in most environments. We're currently running testing on the latest generation infrastructure software and not seeing any reason why most of these apps won't be capable of being virtualized over the next couple of years.

Anyone think differently? Why?

Note, other issues remain:

Can all apps be virtualized? -- Turning...

- Even if I don't run the applications on the same physical server as other applications, is the virtual infrastructure secure and reliable enough to support these important applications?
- And, if I try to consolidate the app with other apps, can I be guaranteed that the app won't interfere or be interfered with by other apps. Interference could be either unintentional resource contention or intentional security attacks.
- Do I have the tools and support infrastructure to do such a critical application in a virtual infrastructure.

I'm making no claims on whether these particular challenges have been solved but I would be interested in whether they are real issues for you.

What do you think?

Jim Blakley



Jim Blakley 5

2008-8-7 1. Re: Can all apps be virtualized? -- Turning up the contrast. 2009-2-25 9:37

Can all apps be virtualized? -- Turning...

So, we talked to our IT Exchange Experts yesterday. They said that when they looked at performance of Exchange on ESX3 even on Xeon 5400 (aka Harpertown) servers, they didn't really see any performance issues.

Their issue was really more about storage: their architecture is based around keeping the storage on local JBODs. To get any value out of virtualization with Exchange, they would want live migration capabilities. Since they wouldn't consolidate Exchange with other workloads from a interference/security perspective, static virtualization isn't of much value. (Until and unless, of course, IT makes a standardization decision that forces all applications to virtualization. Something that our IT organization has not yet done.)

To get live migration, they would need to move the storage to central NAS or SAN storage. The cost/benefit trade off of moving to central storage to get mobility hasn't yet penciled out. It may eventually and a standardization decision may trump anyway.

Is this an issue for anyone else?

-- Jim



ocbwilg 3

2009-2-26 2. Re: Can all apps be virtualized? -- Turning up the contrast. 2009-2-26 10:04

Can all apps be virtualized? -- Turning...

I can't speak for ALL apps, but the two that you cited as examples (SAP and Exchange) are already supported under ESX. Microsoft has recommendations for deploying Exchange on virtual platforms that were rolled out at TechEd last year (<http://technet.microsoft.com/en-us/library/cc794548.aspx>). SAP has supported installations on ESX for awhile now.

Now, both apps obviously have some fairly important implementation guidelines/requirements that you need to follow to ensure supportability, but they can definitely be virtualized and are supported by their respective vendors.



Jim Blakley 5

2008-8-7 3. Re: Can all apps be virtualized? -- Turning up the contrast. 2009-2-26 10:36

 ocbwilg

Hey, thanks for the info. I've gotten a couple of others, too.

Here's one from Dell.

<http://www.dell.com/downloads/global/power/ps4q07-20080147-Muirhead.pdf>

And, here's one from VMWare.

Can all apps be virtualized? -- Turning...

http://www.vmware.com/files/pdf/solutions/08Q4_VM_Exchange_Server_2007_VI3_WP.pdf

What's interesting about all three of these is that I don't actually see a neutral IT organization reference customer in any of them. (VMWare's shows VMWare IT deploying Exchange on ESX. That's the closest I see to an end user proof point.) Not that I'm casting aspersions at Microsoft, Dell or VMWare. They seem to have done a pretty decent job proving feasibility. But, can anyone give me a production proof point in a neutral IT org?



Jim Blakley 5

2008-8-7 4. Re: Can all apps be virtualized? -- Turning up the contrast. 2009-2-26 11:26

 Jim Blakley

OK, I found one. So far, the only production deployment case study I've found is from University of Plymouth in the UK (aside from the VMWare IT one mentioned above).

http://searchservvirtualization.techtarget.com/news/article/0,289142,sid94_gci1334563,00.html#

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