

Cisco NEXUS 1000v on VMWARE? ...



[knatesan](#) 78 posts since

Dec 11, 2007

Hi,

Currently we have esx3.5 u3 and VC2.5 infrastructure.

let me know more abt Nexus 1000v and can i use with the current infrastructure(ie)3.5u3+VC2.5?

Which ESX ver will start support nexus1000v ?

what are the infrastructure change i have to do to use Nexus 1000v?



[tom howarth](#) 7,346 posts since

Jul 25, 2005 1. **Re: Cisco NEXUS 1000v on VMWARE?** Oct 28, 2008 11:33 PM

knatesan wrote:

Hi,

Currently we have esx3.5 u3 and VC2.5 infrastructure.

let me know more abt Nexus 1000v and can i use with the current infrastructure(ie)3.5u3+VC2.5?

You can not use the Nexus with the ESX 3.5 version, it is only for the next generation ESX version 4.0 currently in Beta

Which ESX ver will start support nexus1000v ?

See above answer

what are the infrastructure change i have to do to use Nexus 1000v?

When ESX4 comes out, you will need to use the DVS (distrubted Virtual Switch(Not A Beta spoiler as this is public knowledge))

That is as much as you will get, as the rest is subject to NDA

If you found this or any other answer useful please consider the use of the Helpful or correct buttons to award points

Tom Howarth

VMware Communities User Moderator



[Texiwill](#) 10,205 posts since

Jan 13, 2004 2. **Re: Cisco NEXUS 1000v on VMWARE?** Oct 29, 2008 5:30 AM

 in response to: [tom howarth](#) Hello,

The VMworld presentation on the Nexus stated you do not need to use the Distributed Virtual Switch, that you can use it, plus normal virtual switches. This depends on the vNetwork switching fabric more than anything else.

Best regards,

Cisco NEXUS 1000v on VMWARE? ...

Edward L. Haletky

VMware Communities User Moderator

====

Author of the book 'VMWare ESX Server in the Enterprise: Planning and Securing Virtualization Servers', Copyright 2008 Pearson Education.

CIO Virtualization Blog: <http://www.cio.com/blog/index/topic/168354>

As well as the Virtualization Wiki at <http://www.astroarch.com/wiki/index.php/Virtualization>



Rodos 444 posts since

Apr 20, 2007 3. **Re: Cisco NEXUS 1000v on VMWARE?** Oct 30, 2008 3:27 AM

You will also need to purchase it. From whom, how and how much are all open to speculation.

Rodos

Considering awarding points if this is of use



Texiwill 10,205 posts since

Jan 13, 2004 4. **Re: Cisco NEXUS 1000v on VMWARE?** Oct 30, 2008 4:56 AM

👤 in response to: **Rodos** Hello,

In talking to the Cisco folks at VMworld, you would need to purchase it from them.

Best regards,

Edward L. Haletky

VMware Communities User Moderator

====

Author of the book 'VMWare ESX Server in the Enterprise: Planning and Securing Virtualization Servers', Copyright 2008 Pearson Education.

Blue Gears Blogs - <http://www.itworld.com/> and <http://www.networkworld.com/community/haletky>

As well as the Virtualization Wiki at <http://www.astroarch.com/wiki/index.php/Virtualization>



Rodos 444 posts since

Apr 20, 2007 5. **Re: Cisco NEXUS 1000v on VMWARE?** Oct 30, 2008 2:17 PM

👤 in response to: **Texiwill** That was my information to. I just could not remember if I heard it under VMware or Cisco NDA so if you heard it on the floor then its public, not that its to hard to figure out. But you neve know VMware may be making a strong case that they may sell more if they are allowed to add it to their own price book too.

Whats going to be really interesting is the integration piece. To what advantage will their be having some physical Nexus boxes behind this um I am dreaming of that Nexus 5000 getting powered on in the lab.

Considering awarding points if this is of use



[RBurns-WIS](#) 28 posts since

Dec 18, 2007 6. **Re: Cisco NEXUS 1000v on VMWARE?** Dec 1, 2008 1:21 PM

There is no infrastructure change to use the Nexus 1000v. It will be installed onto each ESX host and will operate just as any other Cisco switch. It's not intended to replace vSwitches, but rather to compliment them. You'll still use vSwitches for your Service Console etc.

As stated, the first release of the Nexus 1000v will be with ESX 4.0 & ESXi 4.0 due to release in May 2009.



[RBurns-WIS](#) 28 posts since

Dec 18, 2007 7. **Re: Cisco NEXUS 1000v on VMWARE?** Dec 1, 2008 1:25 PM

in response to: [Rodos](#)

You'll still want your Nexus 5K series behind your ESX hosts to support 10Ge or FCoE. There will be a huge move in the upcoming year for companies to adopt FCoE especially when ESX servers are support 3+ networks and up to 6-8 NICs per host. The cabling consolodation and power savings will also be a big push for FCoE.

There's no better product than the Nexus 5K for accomplishing both these objectives.



[tom howarth](#) 7,346 posts since

Jul 25, 2005 8. **Re: Cisco NEXUS 1000v on VMWARE?** Dec 1, 2008 4:34 PM

in response to: [RBurns-WIS](#) The jury is still out on network convergance and consollidation in my opinion, VLAN's just do not cut it form a security point of view. there are currently at least 5 know VLAN vunerabilities. and now you want to add your FC on to the same cables

If you found this or any other answer useful please consider the use of the Helpful or correct buttons to award points

Tom Howarth

VMware Communities User Moderator



[RBurns-WIS](#) 28 posts since

Dec 18, 2007 9. **Re: Cisco NEXUS 1000v on VMWARE?** Dec 1, 2008 5:23 PM

in response to: [tom howarth](#)

Convergence & Consolodation using FCoE has nothing to do with VLANs. We're talking about Fiber Channel, and Ethernet using the same medium. From the host side they're still on separate adapters (logically) though they flow threw one (or two) physcial CNA adapters. The vulnerabilities are going to exist amoung each protocol regardless of which physical cable it flows through. Priority flow control which is handled by the switches will handle storage and IPC traffic with little/no latency.


I will agree with you that many people are skepticle about the concept of FCoE, but its not far off from the advent of using VLANs and trunks to carry multiple logically separated LAN traffic. Just like any other switch you can implement all your ACLs and security measures so not much has changed at the end of the day.



[tom howarth](#) 7,346 posts since

Jul 25, 2005 10. **Re: Cisco NEXUS 1000v on VMWARE?** Dec 1, 2008 10:51 PM

Cisco NEXUS 1000v on VMWARE? ...

 in response to: [RBurns-WIS](#) other than moving one more set of highly important data the other side of the wire.


Tom Howarth


VMware Communities User Moderator



[RBurns-WIS](#) 28 posts since

Dec 18, 2007 11. **Re: Cisco NEXUS 1000v on VMWARE?** Dec 2, 2008 1:53 AM


 in response to: [tom howarth](#)

Well being the VMware Group moderator I can only assume you put enough faith in technology to put multiple "highly important" servers on the same ESX host..... ? 



[Texiwill](#) 10,205 posts since

Jan 13, 2004 12. **Re: Cisco NEXUS 1000v on VMWARE?** Dec 2, 2008 6:08 AM

 in response to: [RBurns-WIS](#) Hello,

I will agree with you that many people are skeptical about the concept of FCoE, but it's not far off from the advent of using VLANs and trunks to carry multiple logically separated LAN traffic. Just like any other switch you can implement all your ACLs and security measures so not much has changed at the end of the day.

FCoE is not a bad thing in itself, however VLANs do not provide security, they provide a way to tag data to ensure delivery to the proper port within a switch without collisions and possible data loss.

You also mention 'multiple logically separate' which is exactly what a VLAN does, it is logical not physical. You still have data comingling on the wire and due to this the 'trunk' is always a higher risk location than where there is no data comingling on the wire. Use of VLANs is a trust issue more than anything else. You need to know if your physical switches mitigate the current VLAN attacks or not. If they do, then great go for it. If they do not, then you need to be aware that the target of such attacks is the physical switch and that you need to plan accordingly.

Is FCoE going to be fully encrypted? Is FCoE going to support pre-shared keys? There are lots of little issues to be answered from a security perspective before I decide to comingle any of my management, storage, VMotion, and DMZ data.

Best regards,

Edward L. Haletky

VMware Communities User Moderator

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Author of the book 'VMWare ESX Server in the Enterprise: Planning and Securing Virtualization Servers', Copyright 2008 Pearson Education.

SearchVMware Blog: <http://itknowledgeexchange.techtarget.com/virtualization-pro/>

Blue Gears Blogs - <http://www.itworld.com/> and <http://www.networkworld.com/community/haletky>


As well as the Virtualization Wiki at <http://www.astroarch.com/wiki/index.php/Virtualization>



[king@it.ibm.c...](#) 2,927 posts since

Cisco NEXUS 1000v on VMWARE? ...

Jan 16, 2004 13. Re: Cisco NEXUS 1000v on VMWARE? Dec 2, 2008 10:02 AM

 in response to: [Texiwill](#)

I suggest we create a couple of groups on Facebook such as "those that hates VLANs and don't trust them at all" and "those that loves VLANs and think that they fit a purpose"


It would be interesting... 

Massimo.




[tom howarth](#) 7,346 posts since

Jul 25, 2005 14. Re: Cisco NEXUS 1000v on VMWARE? Dec 2, 2008 10:22 AM

 in response to: [king@it.ibm.c...](#)

Massimo

I have no issue with VLANs persay, I do however have issues with lowering a secure network environment for the sake of it  they do have there place and that is in areas for similar security standings.

I would argue that a Management LAN has a higher risk of being attacked and as such merits a seperate segement. you would not put your DMZ traffic on the same trunk would you??

If you found this or any other answer useful please consider the use of the Helpful or correct buttons to award points

Tom Howarth


VMware Communities User Moderator

Blog: www.planetvm.net



[Texiwill](#) 10,205 posts since

Jan 13, 2004 15. Re: Cisco NEXUS 1000v on VMWARE? Dec 2, 2008 11:25 AM

 in response to: [tom howarth](#) Hello,

I have no issues with VLANs either, however the claim that "VLANs provide security" is an issue. They do NOT provide security. No where in the RFC for 802.1q does it state VLANs provide security. They have their uses, and knowing the limitations will help to design safer networks.

Best regards,

Edward L. Haletky

VMware Communities User Moderator

====

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Blue Gears Blogs - <http://www.itworld.com/> and <http://www.networkworld.com/community/haletky>

As well as the Virtualization Wiki at <http://www.astroarch.com/wiki/index.php/Virtualization>



[RBurns-WIS](#) 28 posts since

Dec 18, 2007 16. Re: Cisco NEXUS 1000v on VMWARE? Dec 2, 2008 1:16 PM

 in response to: [tom howarth](#)

When looking at FCoE no one "should" ever suggest trying to throw different security level LANs on the same wire (Corporate LAN, DMZ ect), but I do see a great fit for servers within the same secure subnet such as ESX servers. VLANs are not secure and we're all in agreement there. Are trunks less secure that access ports - No. Are they a higher risk - of course. Discussing the security of Trunks vs. Access ports is a different topic altogether. I would argue that carrying Fiber channel & Ethernet traffic over the same medium is not much greater a risk as them being physically separate on different wires. FCoE switches (at least the Nexus Series) will discard any FC frames that the Fabric doesn't have in its database. All the securities FC has will be present in FCoE.


If your worry is with utilizing Trunks, FCoE will provide no security additional assurances other than those that are/are not present. This may change as the standards mature. Hopefully you're using firewalls, NAC, IPS, IDM, and other security devices/software to keep your networks safe & secure. I don't think the paranoia of being attacked should overshadow the benefits or adoption of new technology. No matter how secure we think we are, malicious attacks will always be present. Show me one enterprise network that has avoided deploying trunks in their network and I'll stand corrected. It hasn't stopped administrators carrying multiple VLANs on the same wire and neither will FCoE...

I appreciate the security comments though. We're trying to get an idea of where people stand on the FCoE issue.



[Texiwill](#) 10,205 posts since

Jan 13, 2004 17. Re: Cisco NEXUS 1000v on VMWARE? Dec 3, 2008 5:40 AM

 in response to: [RBurns-WIS](#) Hello,

When looking at FCoE no one "should" ever suggest trying to throw different security level LANs on the same wire (Corporate LAN, DMZ ect), but I do see a great fit for servers within the same secure subnet such as ESX servers.

ESX has minimally 4 different network security zones. Since they are not at the same level, how is this possible. If you do place them at the same level you may be at risk.

- Administrative/Management Network.... Also used for iSCSI CHAP authentication. - Access to this could give access to everything depending on other security constraints.
- VMotion networks.... A cleartext network of the in use memory image of a the VM. This could give up credentials, SSN, CC#, etc.
- Storage Network.... Other than iSCSI CHAP, all data flows over this unencrypted in many cases. FCoE would fall into this category
- Virtual Machine Network.... Well this one encompasses DMZ, Production, QA, Test, etc.

Which one of these is at the 'same security level' within ESX? That is the problem, people consider them to be the same when they really are not. The conscious choice needs to be made on which of these to combine onto one cable. Some combine all, other combine the first 2 and some combine the first 3... Any combinations whether at the vSwitch or the pSwitch add risk. How much depends more on the data than it does on the network.

Best regards,

Edward L. Haletky

VMware Communities User Moderator

====

Author of the book 'VMWare ESX Server in the Enterprise: Planning and Securing Virtualization Servers', Copyright 2008 Pearson Education.

Cisco NEXUS 1000v on VMWARE? ...

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Blue Gears Blogs - <http://www.itworld.com/> and <http://www.networkworld.com/community/haletky>

As well as the Virtualization Wiki at <http://www.astroarch.com/wiki/index.php/Virtualization>



[virtualesxer](#) 83 posts since

Jul 12, 2008 18. Re: **Cisco NEXUS 1000v on VMWARE?** Jan 15, 2009 8:38 PM

👤 in response to: [RBurns-WIS](#) *There is no infrastructure change to use the Nexus 1000v. It will be installed onto each ESX host and will operate just as any other Cisco switch. It's not intended to replace vSwitches, but rather to compliment them. You'll still use vSwitches for your Service Console etc.*

And I say it's still a bloody shame that vSwitches currently do everything **but** actually act as a switch! And even more of a shame, that, apparently, in Vmware 4.0, we'll still be dependent on a third party tool to get the job done.



[Texiwill](#) 10,205 posts since

Jan 13, 2004 19. Re: **Cisco NEXUS 1000v on VMWARE?** Jan 16, 2009 7:29 AM

👤 in response to: [virtualesxer](#) Hello,

The vSwitch provides a Layer 2 Switch. Nexus 1000V builds on that to provide some more functionality, not a lot but some more. Not sure why you claim the vSwitch is not a switch..... It is not a Layer 3 switch, and actually neither is the Nexus 1000V from what I have seen.

What features do you want?

Best regards,

Edward L. Haletky

VMware Communities User Moderator

====

Author of the book 'VMWare ESX Server in the Enterprise: Planning and Securing Virtualization Servers', Copyright 2008 Pearson Education.

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Top Virtualization Security Links: http://www.astroarch.com/wiki/index.php/Top_Virtualization_Security_Links



[roberbur](#) 3 posts since

Jan 16, 2009 20. Re: **Cisco NEXUS 1000v on VMWARE?** Jan 16, 2009 4:48 PM

👤 in response to: [virtualesxer](#)

VMware already does have a great deal of features - but what they do best is OS virtualization not switching. There's no point in VMware trying to re-invent the wheel when almost all enterprise networks are heavily invested in one of the Networking & Security leaders such as Foundry, Brocade, 3Com and Cisco. The Nexus 1000v was created through a partnership between Cisco and VMware. Allowing Cisco utilize their proven technology from within the virtualization space, allows VMware to focus efforts on what they do best. That being said we can expect other such integrations from other vendors to follow. VMware is not completely closed source application. They do have an extensive API which allows any vendor to right code for virtual appliances. VMware is typically managed by the

Cisco NEXUS 1000v on VMWARE? ...

server admins, and the Nexus 1000v will assist with maintaining the separation between server & network admins, using a switching OS network admins are already accustomed to.



Texiwill 10,205 posts since

Jan 13, 2004 **21. Re: Cisco NEXUS 1000v on VMWARE?** Jan 17, 2009 6:36 AM

in response to: **roberbur** Hello,

However the basic switching functionality is still the VMware vSwitch, the Cisco Nexus 1000v is NOT a replacement, it is built on top of the vSwitch and has to live within the boundaries of the VMware vSwitch.....

But yes, this does allow for better network/server administrative split. I think others are waiting on how well the Cisco vSwitch does and how admins work with it. There will still need to be quite a bit of communication between admin types as deploying a vSwitch is still within the virtualization admins realm. While management of it is not.

But that still does not answer the question of 'what is missing from the Layer 2 VMware vSwitch?'

Best regards,

Edward L. Haletky

VMware Communities User Moderator

====

Author of the book 'VMWare ESX Server in the Enterprise: Planning and Securing Virtualization Servers', Copyright 2008 Pearson Education.

Blue Gears and SearchVMware Pro Blogs: http://www.astroarch.com/wiki/index.php/Blog_Roll

Top Virtualization Security Links: http://www.astroarch.com/wiki/index.php/Top_Virtualization_Security_Links



roberbur 3 posts since

Jan 16, 2009 **22. Re: Cisco NEXUS 1000v on VMWARE?** Jan 17, 2009 3:49 PM

in response to: **Texiwill**

But that still does not answer the question of 'what is missing from the Layer 2 VMware vSwitch?' vSwitches are still unable to:

- implement ACLs
- implement finely tuned QoS
- leverage access control on the switch using RADIUS, TACACS etc
- track network usage & patterns per VM in the same manner as the rest of the network devices leveraging utilities such as NetFlow
- SPAN a VM's virtual port, port group or VLAN for that matter for packet capturing

If you need more reasons I can provide them, assuming the ones above haven't already convinced you **Texiwill** 10,205 posts since

Jan 13, 2004 **23. Re: Cisco NEXUS 1000v on VMWARE?** Jan 19, 2009 7:21 AM

in response to: **roberbur** Hello,

Cisco NEXUS 1000v on VMWARE? ...

Yes those features do not exist, but those are all features of a managed switch, remember the vSwitch is NOT a managed Layer 2 switch and provides all the necessary functionality to perform proper switching + a bit more but unmanaged.

Hopefully the Nexus 1000V will provide some of these.

Best regards,

Edward L. Haletky

VMware Communities User Moderator

=====

Author of the book 'VMWare ESX Server in the Enterprise: Planning and Securing Virtualization Servers', Copyright 2008 Pearson Education.

Blue Gears and SearchVMware Pro Blogs: http://www.astroarch.com/wiki/index.php/Blog_Roll

Top Virtualization Security Links: http://www.astroarch.com/wiki/index.php/Top_Virtualization_Security_Links



roberbur 3 posts since

Jan 16, 2009 24. **Re: Cisco NEXUS 1000v on VMWARE?** Jan 19, 2009 3:24 PM

👤 in response to: [Texiwill](#) I would disagree. I would definately not refer to the vSwitch as an "unmanaged switch". Unmanaged switches are plug n play in a sense and have no configurable options. Wtith the vSwitch there are various bits that need to be configured in order for them to operate in the desired manner. An unmanaged switch does not allow configuring of VLANs, Fail-over, load balancing, traffic shaping etc - all of which the VMware vSwitch does offer. Just like Managed switches from different vendors the features are the only thing that differ. Just as an HP ProCurve switch will have a different set of features than a Foundary switch. The Nexus 1000v is a managed Layer 2 switch that offers nearly all the same featuers of any of Cisco's other Layer 2 switches.



pfazzone 1 posts since

Aug 14, 2008 25. **Re: Cisco NEXUS 1000v on VMWARE?** Jan 22, 2009 7:27 PM

👤 in response to: [Texiwill](#)

Hi Edward,

One point of clarification on the following comment:

However the basic switching functionality is still the VMware vSwitch, the Cisco Nexus 1000v is NOT a replacement, it is built on top of the vSwitch and has to live within the boundaries of the VMware vSwitch.....

[

http://www.astroarch.com/wiki/index.php/Top_Virtualization_Security_Links]

The Cisco Nexus 1000V is actually not built on top of the VMW vSwitch, but is rather a Cisco developed version of the vSwitch that runs in the hypervisor kernel and provides it's own unique feature set. You are correct that the Nexus 1000V has to run within the boundaries of the VMW vNetwork Distributed Switch API for interaction with the ESX host and Virtual Center, but it is not dependant on the vSwitch itself or bound by it's features.

As was pointed out in other posts in this thread, the Nexus 1000V provides a number of networking features that are not available currently in an ESX environment. It also offers management interfaces (CLI, SNMP, XMP API), troubleshooting tools (ERSPAN, detailed interface statistics, Netflow v.5 & v.9 collection) and security features (Port Security, Acces Control Lists, Dynamic Arp Inspection, DHCP Snooping, IP Sourceguard, Private VLANs w/ Isolated, Community and Promiscuous Trunk port options) that many enterprise, service provider, federal and

military customers require to seamlessly integrate their virtual machine and physical server networking environments and operate the data center network as 1 consistent system

Thanks,

pf

Paul Fazzone

Cisco Product Manager



[tom howarth](#) 7,346 posts since

Jul 25, 2005 26. **Re: Cisco NEXUS 1000v on VMWARE?** Jan 23, 2009 12:12 AM

in response to: [pfazzone](#) Thank you for the clarification Paul

Tom Howarth

VMware Communities User Moderator

Blog: www.planetvm.net



[king@it.ibm.c...](#) 2,927 posts since

Jan 16, 2004 27. **Re: Cisco NEXUS 1000v on VMWARE?** Mar 9, 2009 6:16 AM

in response to: [Texiwill](#) I bumped into this thread again (for some reason) and I think there is still a big unanswered question that Ed pointed out here:

ESX has minimally 4 different network security zones. Since they are not at the same level, how is this possible. If you do place them at the same level you may be at risk.

As Ed pointed out there are customers that don't care too much about collapsing everything on a couple of cables (2 x redundancy) and these are usually the small shops (which I doubt are the target for FCoE and converged network designs). Those that care about keeping the zones secured has a number of NICs that ranges from 10 to 20+ and given the fact that, as far as I understand, the Nexus is not going to solve those security concerns... this would only help to have, possibly, FC + 1 of those security zones..... and it turn you would need to configure your server with something like 8->18+ regular NICs as well as 2 x Converged Network Adapters to carry FC traffic + 1 of those network security zones.

Not a real network simplification after all.

Massimo.



[RBurns-WIS](#) 28 posts since

Dec 18, 2007 28. **Re: Cisco NEXUS 1000v on VMWARE?** Mar 9, 2009 1:59 PM

in response to: [king@it.ibm.c...](#)

I'll take a shot at trying to offer an acceptable answer :)

It comes down to a level of paranoia/comfort. You're concerned about collapsing various levels of security over a single FCoE link, however there seems to be a lack of concern about segmenting these disparate networks by means of separate network cards? - If you ask me, the risk of having your server compromised is far more likely than having your switch compromised. FCoE is targetting the hypervisor host as well and HPC. If your traffic is that

high security level then it should even be handled by a ESX server sharing lower security networks. In this case your should have a dedicated ESX host on the other side of your firewall.

I've pointed out the direction this technology is going and a couple points that address it.

1. Cisco's implementation of Datacenter Ethernet/FCoE will make use of TrustSec. This will secure traffic between your host & switch from MITM attacks. As I said before, if you're concerned about collapsing varying security level networks onto a single wire, you should examine if they should even reside on the server.
2. To properly secure ESX we've introduced the Nexus 1000v. A full security feature layer 2 switch. Though its a software switch you can still isolate/separate your higher-level security zones to dedicated uplink adapters if you choose.

FCoE is not the end-all & be-all and it might not suite all topologies or network requirements. However, for the majority of infrastructures its going to offer huge advantages. My hope is that rather than fear this technology continue to examine & scrutinize it, so enhancements and suggestions to make it more appealing to implement & use.

Burnsie



[Ken.Cline](#) 5,146 posts since

Jul 7, 2004 29. **Re: Cisco NEXUS 1000v on VMWARE?** Mar 9, 2009 3:41 PM

in response to: [RBurns-WIS](#) Burnsie,

Appreciate the input. I think a lot of the concern is wrapped in uncertainty. There are very few people who have actually had the opportunity to lay hands on FCoE, and even fewer who have had a 1000v connected to a CNA using FCoE as a transport medium. There also is very little publicly available documentation to allow people to develop a more thorough understanding of the solution set.

All of these items come together to cause forward-looking people to speculate and anticipate worst case scenarios. Until the technology comes out of "stealth mode" and has been in labs with spectrum analyzers and people have had a chance to "see it, touch it" in their own environments, these questions are largely unanswered.

Thanks - and please give us more food for thought!

Ken Cline

VMware vExpert 2009

VMware Communities User Moderator



[RBurns-WIS](#) 28 posts since

Dec 18, 2007 30. **Re: Cisco NEXUS 1000v on VMWARE?** Mar 9, 2009 4:27 PM

in response to: [Ken.Cline](#) There will be a book publicly available at the end of March 2009:

"Data Center Networks and Fibre Channel over Ethernet (FCoE)"

ISBN: 978-1-4357-1424-3

Author: Silvano Gai

Published by Lulu.com

I highly recommend this book for those new to FCoE concepts. Though written by a Nuova Systems Engineer (Subsidiary of Cisco) it concentrates on the technology rather than solely promoting Cisco products.

Cisco NEXUS 1000v on VMWARE? ...


Enjoy!

Rob



[king@it.ibm.c...](#) 2,927 posts since

Jan 16, 2004 31. **Re: Cisco NEXUS 1000v on VMWARE?** Mar 10, 2009 1:30 AM

 in response to: [RBurns-WIS](#) Rob,

thanks.

I am probably personally one of the least paranoid about network security and segmentation (probably because I am not a network expert 😊). I continue to stress on that point because talking to partners and customers that's the concern I usually hear.

There are 3 scenarios that you could usually bump into as far as I have seen so far:

- 1- no paranoia: collapse all network zones (COS, VMOTION, VMs) on a single cable and leverage VLANs / PortGroups for everything
- 2- low paranoia: use dedicated NICs for COS, VMOTION, and VMs. VMs that are on different subnets/networks would use VLANs / PortGroups
- 3- medium paranoia: use dedicated NICs for COS, VMOTION, and also dedicated NICs for VMs that are on different subnets/networks (NO VLANs / PortGroups).
- 4- high paranoia: use dedicated ESX servers for hosting VMs that are on different subnets/networks.

The bigger the organization is, the more paranoid they tend to be. So #1 would be for the SMB shops etc etc.

As far as I can say the vast majority of customers with a relatively medium/big VMware deployment are using #2 and #3.

You might argue that, if you are so paranoid that you shouldn't even have, on the same host a mix of COS, VMotion and VMs if you really really need to separate security zones (and I agree that the server itself in this case is a potential security threat as you are bundling into a single physical servers network connections that are supposed to be either completely physically separated or separated by firewalls - I think). However this is not technically possible since each ESX host has to have VMs dedicated NICs, COS NICs, VMotion NICs etc etc.

What is technically possible and what is not plays a role as well. The problem of the Converged Network at the moment is that it's technically possible to maintain a certain and higher level of separation (as per #3 and #4) above. There is no doubt that it would be better to have only a couple of wires coming out the server and that's it and we would all be doing that if that was the only choice (I think).

It's a trade-off at this point between the level of paranoid you need to keep and what you could achieve if you relax it a little bit. As Ken stated the fact that this is a brand new technology doesn't help relaxing the requirements.

Is this a good summary?

Massimo.