

Virtualization Team

VMware ESX/ESXi – MS Hyper-V – ESX server; tutorials, how-to, video

Grab our rss feed


[home](#)
[about](#)
[disclaimer](#)

VMware vSphere TRAINING

Nearly 18 Hrs of VMware vSphere Training Videos on 3 Jam Packed DVDs!



TRAINSIGNAL
WATCH DEMO

Let it i7ro Stal i6



Be the first to find out, by following us on twitter: <http://twitter.com/VirtualizationT>



Jul.30, 2009 in VMware V13, vSphere

Everyone who had been using VMware for a while, would appreciate **VMware VMotion**. Actually VMware VMotion have always been a distinguished feature of VMware ESX servers. Despite of VMotion has always been a great feature, people using it at earlier stages used to have a tough time when having to use it across different CPU generation. That meant companies had to actually put similar hardware server in the same cluster, to guarantee that VMotion work smoothly. This was not possible at all the time, and was a tough call for implementers as they had to cheat masking manually in order to avoid VMotion not accepting to run between different CPU generations.

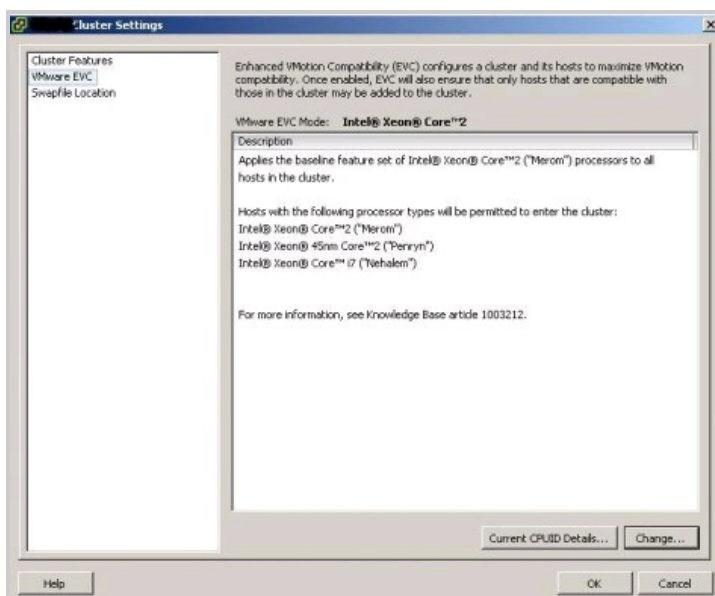
Although **VMware EVC** (Enhanced VMotion Compatibility) has been around for a while, many VMware administrators still does not know about it or just over looked it. **VMware EVC** is actually the defacto solution for VMotion across hosts with different CPU generations. It will automatically masks the non compatible features of different generation cpus from the hosts, which give you the ability to VMotion across hosts with different CPU generations. Please note **VMware EVC** has been supported since **VMware ESX 3.5U2**, but was highly Enhanced in **VMware vSphere**.

Ok, now I got your attention & you want to know how to actually enable VMware EVC & what is the pre-requisite for it. The main pre-requisite for VMware EVC is to have your host to use the same CPU vendors. So if using Intel all servers in a cluster have to use intel & same for AMD. Don't mix intel & AMD in the same VMware cluster so you can use VMotion across all the servers in the cluster. Actually VMware EVC seems to support most of the new AMD & Intel CPUs, but to make sure it support yours you might want to look at the support charts at: http://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=1003212

In order to enable **VMware EVC** on your hosts & Cluster you will have to ensure the following Bios settings are enabled for each of the involved cluster:

- 1- Hardware Virtualization is Intel VT on Intel processors and AMD-V on (supported) AMD processors
- 2- Execute Protection is Intel eXecute Disable (XD) on Intel processors and AMD No eXecute (NX) on AMD processors

The next step after enabling the Hardware Virtualization & Execute protection you will need to go to your VMware Cluster Settings & enable VMware EVC as showing in the below images.



NxTop - Free Download

Experience the power of NxTop virtualization on your PC - Free!
www.virtualcomputer.com

VM Capacity Planning

It's More Than Just Forecasting Capacity Analyzer - 30 Day Trial!
www.VKemel.com/LearnWhy

VMware Capacity Mgmt

Free Capacity Planning Handbook Reduce Costs - Download Now!
www.hyper9.com

VMware vSphere Courses

vSphere, vCenter, i3, ESX Training Nationwide, Onsite, Online, Global
www.rocksolidtechnical.com/VMware

Author: Eiad Al-Aqqad

Name: Eiad Al-Aqqad

Email: vmguru007@gmail.com

Site: <http://www.virtualizationteam.com>



About: I am currently working as a System X & Storage Technical Specialist at Gulf Business Machines. I have implemented few of the largest Virtualization Solutions around the region. I have started virtualizationTeam.com to share knowledge with the world & to spread Virtualization around the globe. I am hoping to get more people to dig in and share more of their knowledge through my blog as well. Thanks to all of those who did & hope more will. You can find more about me at: <http://www.linkedin.com/in/eiadalagqad>

Eiad



Log in

Entries RSS

Comments RSS

WordPress.org



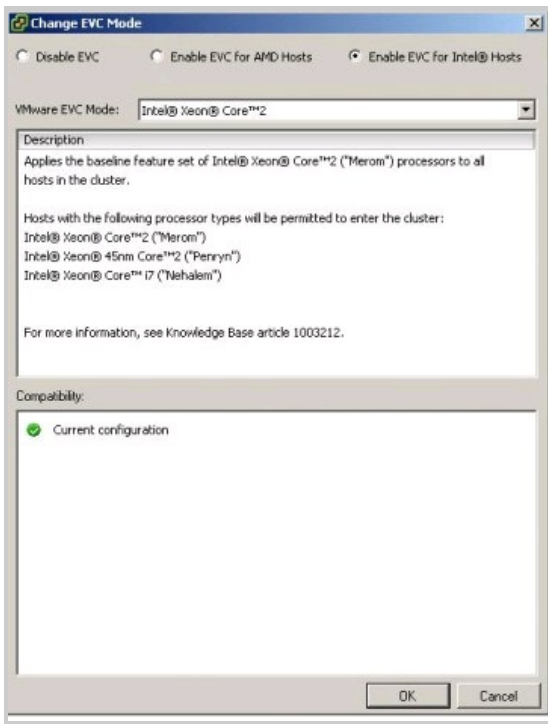
Jason Nash on VMware Design Exam Experience & Study Materials

admin on VMware Design Exam Experience & Study Materials

Jason Nash on VMware Design Exam Experience

Web2PDF

converted by Web2PDFConvert.com



After doing this each server you add to your cluster will have VMware EVC enabled & virtual machines will be able to VMotion across different cpu generations in the cluster.

Please note when you are enabling VMware EVC for an existing cluster, that it will request you to shutdown all the virtual machines running into that cluster to enable VMware EVC for it. For work around on this please check my other post: [How to enable VMware EVC on VMware vSphere & VI3 without downtime](#)

I have here covered the main concept of **VMware EVC** & how to enable it. If you need more details please check the VMware document at: http://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=1003212

I hope this help. Please leave us a comment of any questions, concerns or feedback.

Virtualization Cost Mgmt

Cost allocation, chargeback, TCO, billing in virtual infrastructure.
www.digitalfuel.com/virtualization



Tags: [VMware ESX](#), [vmware vSphere](#), [vSphere](#)

Comments (5)

5 Comments on “VMware EVC (Enhanced VMotion Compatibility) enable VMware VMotion across CPU generations”

[How to enable VMware EVC on VMware vSphere & VI3 without downtime](#)
July 30th, 2009 at 7:42 am

[...] Sponsored Ads « VMware EVC (Enhanced VMotion Compatibility) enable VMware VMotion across CPU generations [...]

[RHEV-H presents a Pentium II CPU to guest operating systems | VCritical](#)
May 3rd, 2010 at 11:28 pm

[...] is present, it's just that Red Hat has not designed a suitable management feature such as VMware EVC to take advantage of [...]

Abyakta

July 23rd, 2010 at 5:10 am

i have a cluster A containing 3 host(dell power edge710) of esx 3.5 and evc is enabled on the cluster with baseline intel core2 merom.and i have another Cluster B with 4 esx host(dell poweredge 1850)EVC is enabled with base line intel xeon core 2 merom,intel 45nm core2. i want to migrate all my host from cluster A to cluster B without any downtime.do i have to power off my vms .is there any workaround. pls give me reply in my mail(abyaktakumar@gmail.com)

Eiad

July 23rd, 2010 at 12:08 pm

Hi Abyakta,

For me it seems that you have the same EVC base for both clusters. Are you able to VMotion your VMs between both clusters? In other word, are they seeing the same LUNS? if so then you can complete your restructuring as follow:

1- Evacuate all the VMs on one of your 3 hosts to migrate to the other 2 in that

Ads by Google



Smooth Virtualization

Diskeeper 2010 Speeds Up Virtualization. Try It Free!
www.Diskeeper.com/VirtualServer

VMware vSphere Courses

vSphere, vCenter, i3, ESX Training Act Now. Get Free Geek Gear w/Class
www.rocksolidtechnical.com/VMv

Virtualization + Control

Download our Community Edition, a free solution for up to 3 ESX hosts
info.hytrust.com/appliance

Design Exam Experience & Study Materials

- ➔ admin on Red Hat Enterprise Virtualization RHEVMDemo
- ➔ admin on Changing the VLAN ID of a ESX Service Console using Command Line
- ➔ admin on When trying to access virtual machine using web access you get "Cannot access virtual machine console, the request timed out"
- ➔ admin on VCDX – VMware Enterprise Administration Exam NPIV Chapter
- ➔ Sandeep on Red Hat Enterprise Virtualization RHEVMDemo
- ➔ Chris on Changing the VLAN ID of a ESX Service Console using Command Line
- ➔ newsgrabber on When trying to access virtual machine using web access you get "Cannot access virtual machine console, the request timed out"

46

- ➔ Citrix (2)
 - ➔ XenServer (1)
- ➔ Funny Vids (3)
- ➔ Hyper9 (1)
 - ➔ VEO (1)
- ➔ IBM (2)
 - ➔ Power Series (2)
- ➔ Mac (2)
 - ➔ Parallel (1)
- ➔ Microsoft (34)
 - ➔ Hyper-V (31)
 - ➔ MS Virtual Server (1)
 - ➔ SCVMM (3)
 - ➔ Virtual Desktop Infrastructure (1)
- ➔ Oracle (1)
 - ➔ Virtual Iron (1)
- ➔ Q & A (3)
- ➔ Red Hat (2)
 - ➔ KVM (2)
- ➔ TelePresence (1)
- ➔ Ubuntu (5)
- ➔ Uncategorized (3)
- ➔ Veeam (3)
 - ➔ nworks MP Microsoft Ops Mgr (1)
 - ➔ Veeam Backup & Replication (2)
- ➔ Virtual Box (1)
- ➔ Vizioncore (4)
 - ➔ esxReplicator (1)
 - ➔ vRanger (3)
- ➔ Vkernel (2)
 - ➔ AppView (1)
 - ➔ Capacity View (1)
- ➔ VMware (95)

48

- ➔ VMware Design Exam Experience & Study Materials
- ➔ Don't use VMware Raw Device Mapping (RDM) for performance, but ..
- ➔ VCDX – VMware Enterprise Administration Exam NPIV Chapter
- ➔ VMware ESX & ESXi Connections & ports
- ➔ VMware VCDX Enterprise Administration Exam & my tough luck
- ➔ VMware Long Distance VMotion is the missing link for cloud computing today
- ➔ Congrats to all 2010 VMware vExperts
- ➔ Vkernel AppVIEW 1.0 is available immediately for free download
- ➔ Vkernel Capacity View
- ➔ MS Windows Server 2008 R2 Hyper-V VS VMware vSphere

48

- ➔ VMware Design Exam Experience & Study Materials
- ➔ Don't use VMware Raw Device Mapping (RDM) for performance, but ..
- ➔ VCDX – VMware Enterprise Administration Exam NPIV Chapter
- ➔ VMware ESX & ESXi Connections & ports

Web2PDF

converted by Web2PDFConvert.com

cluster
2- Enter that host into maintenance mode.
3- move the host which is in standby mode to cluster B.
4- get the host out of maintenance mode.
5- Migrate as many VMs from cluster A to B trying to free up a second host in cluster A.
6- then repeat step 2-4 for the second host.
7- repeat the procedure for the last server.

I hope this help,
Eiad

Abyakta
July 25th, 2010 at 11:43 am

Eiad ,

thanks for your reply i am extremely sorry that i didnot give you one important information .

cluster A is managed by one vcenter and cluster B is managed by another vcenter. i dont know about the same lun but if you could explain me about both possibilites of having same lun and different lun the i will greatfull to you.

how can i migrate the three host along with vms without any down time in this senario.

Abyakta
abyaktakumar@gmail.com

Leave a Reply

Name (required)

Mail (will not be published) (required)

Website

add comment

- ➡ Capacity Planner (2)
- ➡ Certification (3)
 - ➡ VCDX (3)
- ➡ vCenter Converter (1)
- ➡ VMware ESXi (6)
- ➡ VMware Fusion (3)
- ➡ VMware GSX (3)
- ➡ VMware Mobile Virtualization (1)
- ➡ VMware Player (1)
- ➡ VMware SRM (2)
- ➡ VMware VDI (1)
- ➡ VMware VI3 (37)
- ➡ VMware View (1)
- ➡ VMware Virtual Server (7)
- ➡ VMware VMMark (1)
- ➡ VMware Workstation (4)
- ➡ vSphere (17)

- ➡ VMware VCDX Enterprise Administration Exam & my tough luck
- ➡ VMware Long Distance Vmotion is the missing link for cloud computing today
- ➡ Congrats to all 2010 VMware vExperts
- ➡ VKernel AppMEW 1.0 is available immediately for free download
- ➡ VKernel Capacity View
- ➡ MS Windows Server 2008 R2 Hyper-V VS VMware vSphere

VB

- ➡ Hypervisor Comparisons
- ➡ Linux 2 AIX Blog
- ➡ TSM Guru Blog
- ➡ Virtualization Team (Blog)
- ➡ Virtualization Comparisons
- ➡ VMHero.com
- ➡ VMware Tips