

# VMware vSphere 5.0 Migration

## vCenter Server 5.0 Pre-Upgrade Checklist (version 1)

Prior to upgrading refer to the ESXi Info Center for the latest information on migrating to ESXi 5.0.  
<http://www.vmware.com/products/vsphere/esxi-and-esx/index.html>

Use the following *vCenter Server 5.0 Pre-upgrade Checklist* to help guide your vCenter Server 5.0 upgrade activities. These tasks should be completed in order. Required tasks are mandatory and care should be taken to resolve any issues before moving on to the next task. Recommended tasks, while optional, are highly encouraged. Following the upgrade use the *vCenter Server 5.0 Post Upgrade Checklist* to guide the post upgrade activities.

Category	Description	Reference/Notes
<input type="checkbox"/> Required	Ensure vCenter Server is running at 4.x or above	In-place upgrades allowed for 64-bit servers running vCenter 4.x. Can also migrate existing DBs from VirtualCenter 2.5u6 or later by installing vCenter 5.0 on a new server and migrating the exiting database. vSphere 5.0 Upgrade Guide, pg. 23.
<input type="checkbox"/> Required	Ensure hardware requirements are met	vCenter Server 5.0 requires 64-bit hardware. Consider upgrading server CPU and memory to take on future growth. vSphere 5.0 Upgrade Guide, pg. 14.
<input type="checkbox"/> Required	Ensure Operating System requirements are met	vCenter Server requires a 64-bit OS. vSphere 5.0 Upgrade Guide, pg. 17.
<input type="checkbox"/> Required	Ensure database requirements are met	It may be necessary to upgrade your vCenter database before upgrading the vCenter Server. vSphere 5.0 Upgrade Guide, pg. 29.
<input type="checkbox"/> Required	Ensure vCenter Server has 64-bit DSN	vSphere 5.0 Upgrade Guide, pg. 17.
<input type="checkbox"/> Required	For Microsoft SQL database, ensure the System DSN is using SQL Native Client driver	vSphere 5.0 Upgrade Guide, pg. 28.

<input type="checkbox"/> Required	Confirm the vCenter database login, instance name, and server name (or ODBC DSN)	Verify the vCenter database login has db_owner permissions. vSphere 5.0 Upgrade Guide, pg 28.
<input type="checkbox"/> Required	Ensure that the installation path of the existing vCenter Server does NOT have commas (,) or periods (.)	vSphere 5.0 Upgrade Guide, pg 49.
<input type="checkbox"/> Required	Confirm the vCenter system is not an Active Directory domain controller	vSphere 5.0 Upgrade Guide, pg 26.
<input type="checkbox"/> Required	Confirm that the vCenter Server system name is no more than 15 characters and is registered in DNS	vSphere 5.0 Upgrade Guide, pg 26.
<input type="checkbox"/> Required	Verify the required ports are open to/from the vCenter Server system	vSphere 5.0 Upgrade Guide, pg 19.
<input type="checkbox"/> Required	If the vCenter Server 4.x environment includes Guided Consolidation, uninstall it before upgrading to vCenter Server 5.0	vSphere 5.0 Upgrade Guide, pg 26.
<input type="checkbox"/> Required	Verify configured vCenter plug-ins are compatible with vCenter Server 5.0 (Re-install/reconfigure plug-ins after the vCenter Server upgrade)	Refer to the VMware Product Interoperability Matrix at <a href="http://www.vmware.com/resources/compatibility/sim/interop_matrix.php">http://www.vmware.com/resources/compatibility/sim/interop_matrix.php</a>
<input type="checkbox"/> Recommended	Accomplish a reliable backup of the vCenter Server database	Follow your local database backup procedures. Refer to the vSphere 5.0 Upgrade Guide, pg. 32 for more information.
<input type="checkbox"/> Recommended	Accomplish a reliable backup of the vCenter vpxd.cfg file	vSphere 5.0 Upgrade Guide, pg. 32.
<input type="checkbox"/> Recommended	Accomplish a reliable backup of the vCenter Server SSL certificates	vSphere 5.0 Upgrade Guide, pg. 32.

<input type="checkbox"/> Recommended	Run the vCenter Host Agent Pre-Upgrade Checker	Reports known issues that might prevent a successful vCenter Upgrade. Refer to the vSphere 5.0 Upgrade Guide, pg. 33 for more information.
<input type="checkbox"/> Recommended	If VMware Heartbeat is being used to protect the vCenter server disable it prior to the upgrade	Precautionary step done to prevent unintentional failovers during the upgrade.
<input type="checkbox"/> Recommended	If Microsoft Cluster Server (MSCS) is being used to protect the vCenter, disable it prior to the upgrade	Precautionary step done to prevent unintentional failovers during the upgrade.

# VMware vSphere 5.0 Migration

## vCenter Server 5.0 Post Upgrade Checklist (version 1)

Prior to upgrading refer to the ESXi Info Center for the latest information on migrating to ESXi 5.0.  
<http://www.vmware.com/products/vsphere/esxi-and-esx/index.html>

Use the following vCenter Server 5.0 Post Upgrade Checklist to help guide your vCenter Server post upgrade activities. These tasks should be completed in order. Required tasks are mandatory and care should be taken to resolve any issues before moving on to the next task. Recommended tasks, while optional, are highly encouraged. Prior to following the vCenter Server 5.0 post upgrade tasks use the vCenter Server 5.0 Pre-Upgrade Checklist to guide your pre-upgrade activities.

Category	Description	
<input type="checkbox"/> Required	Re-install and re-configured vCenter plug-ins	Refer to the vSphere 5.0 Upgrade Guide, page 55 for more information.
<input type="checkbox"/> Required	Install vSphere 5.0 license keys	Leverage the free vCenter 60-day trial license until all ESX hosts have been migrated to ESXi 5.0. Apply your permanent 5.0 license keys after you complete the ESXi migration. For info on vCenter licensing refer to: <a href="http://www.vmware.com/products/vSphere/upgrade-center/licensing.html">http://www.vmware.com/products/vSphere/upgrade-center/licensing.html</a>
<input type="checkbox"/> Required	If you will continue to manage VI 3.x hosts install a VirtualInfrastructure 2.5 license server	Refer to the vSphere 5.0 Upgrade Guide, page 55 for more information.
<input type="checkbox"/> Recommended	If VMware Heartbeat is being used, re-enable protection	Refer to your vCenter Heartbeat documentation for more information.
<input type="checkbox"/> Recommended	If Microsoft Cluster Server (MSCS) is being used re-enable protection	Refer to your MSCS documentation for more information.
<input type="checkbox"/> Recommended	Perform a full vCenter Server and database backup	Follow your local database backup procedures.

# VMware vSphere 5.0 Migration

## ESXi 5.0 Host Pre-Migration Checklist (version 1)

Prior to upgrading refer to the ESXi Info Center for the latest information on migrating to ESXi 5.0.  
<http://www.vmware.com/products/vsphere/esxi-and-esx/index.html>

Use the following *ESX 5.0 Pre-migration Checklist* to help guide your ESXi 5.0 pre-migration activities. These tasks should be completed in order. Required tasks are mandatory and care should be taken to resolve any issues before moving on to the next task. Recommended tasks, while optional, are highly encouraged. Following the host upgrade use the *ESXi 5.0 Post Migration Checklist* to guide the post migration activities.

Category	Task	Reference/Notes
<input type="checkbox"/> Required	Verify your vCenter Server is running at version 5.0	Upgrade to vCenter Server 5.0 before you upgrade your ESX/ESXi hosts to ESXi 5.0. Refer to the vSphere 5.0 Upgrade Guide for steps to upgrade vCenter Server.
<input type="checkbox"/> Required	Verify the host to be upgraded is running ESX/ESXi 4.x	ESX/ESXi 3.5 hosts first need to be upgraded to ESX/ESXi 4.x before being upgraded to ESXi 5.0.
<input type="checkbox"/> Required	Verify the host to be upgraded meets the hardware requirements for ESXi 5.0	Refer to the vCenter Server Installation Guide, page 13 for more information.
<input type="checkbox"/> Required	Determine if additional device drivers are required for your server hardware	Use Image Builder CLI to add additional drivers that are not included with the default ESXi image. Refer to the vSphere Installation and Setup Guide, pg. 117 for more information.
<input type="checkbox"/> Required	Verify the ESX/ESXi hosts boot disk partition table meets the requirements for upgrading to 5.0	The first 1GB of the boot disk is repartitioned for ESXi 5.0. The VMFS volume must start beyond the 1GB mark (after sector 1843200). Refer to the vSphere 5.0 Upgrade Guide, pg. 75 for more information.

<input type="checkbox"/> Required	Verify 50MB of free space on the boot disk VMFS datastore	50MB of free space is required on the boot disk VMFS datastore. Refer to the <i>vSphere 5.0 Upgrade Guide</i> , pg. 70 for more information.
<input type="checkbox"/> Required	<b>ESX Only:</b> for upgrades using Update Manager verify an additional 350MB of free in the /boot partition	Update Manager requires 350MB in the /boot partition. If you do not have 350MB free in /boot use the ESXi installer to upgrade. Refer to the <i>vSphere 5.0 Upgrade Guide</i> , pg. 90 for more information.
<input type="checkbox"/> Required	<b>ESX Only:</b> Identify alternative for any agents, scripts, or other tools running inside the ESX COS	Most scripts/agents will become obsolete when you migrate to ESXi, however you may need to implement an alternate solution in some cases.
<input type="checkbox"/> Required	<b>ESXi Only:</b> If the ESXi 4.x host was upgrade from ESXi 3.5 determine if the host has lopsided bootbanks	Cannot use Update Manager to upgrade a host with lopsided bootbanks. Use the ESXi installer to upgrade. Refer to <a href="http://blogs.vmware.com/esxi/2011/08/esxi-and-lopsided-bootbanks.html">http://blogs.vmware.com/esxi/2011/08/esxi-and-lopsided-bootbanks.html</a>
<input type="checkbox"/> Required	Evacuate/shutdown VMS running on the ESX/ESXi 4.x host to be upgraded	Use vMotion to migrate running VMs off the host. If VMs cannot be migrated shut them down during the migration. (Note for DRS enabled clusters DRS will automatically evacuate VMs when placed into maintenance mode.)
<input type="checkbox"/> Required	Place the ESX/ESXi 4.x host into maintenance mode and remove it from the HA/DRS cluster	Removing the host from the cluster will remove CPU and Memory resources out of the HA/DRS cluster, it may be necessary to adjust cluster admission control settings.
<input type="checkbox"/> Recommended	Backup/Document the ESX/ESXi host configuration	There is no automated roll-back for a failed upgrade. Rolling back requires re-installing ESX/ESXi 4.x and restoring from backup. Refer to the <i>vSphere Command-Line Interface Concepts and Examples Guide</i> , page 22 for more information.
<input type="checkbox"/> Recommended	Complete/validate hardware changes that may coincide with the upgrade to ESXi 5.0 (i.e. add CPU/memory, NICs, HBAs, etc.)	Changing hardware at the same time you upgrade to ESXi 5.0 could complicate troubleshooting should problems arise. It is recommended that you complete and validate hardware changes on ESX/ESXi 4.x prior to migrating to ESXi.
<input type="checkbox"/> Recommended	Review the ESX/ESXi 4.x host's alerts, alarms, and log files for any issues that should be resolved prior to upgrading to ESXi 5.0	Identify and resolve any host issues prior to migrating. Refer to the following Knowledge Base article for more information: <a href="http://kb.vmware.com/kb/1021800">http://kb.vmware.com/kb/1021800</a>

<input type="checkbox"/> Recommended	Complete/validate storage changes that may coincide with the ESXi 5.0 upgrade. Verify all storage and datastores are healthy and accessible by the ESX Host	Changing storage at the same time you upgrade to ESXi 5.0 could complicate troubleshooting should problems arise. It is recommended that you complete and validate storage changes on ESX/ESXi 4.x prior to migrating to ESXi.
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# VMware vSphere 5.0 Migration

## ESXi 5.0 Post Migration Checklist (version 1)

Prior to upgrading refer to the *ESXi Info Center* for the latest information on migrating to ESXi 5.0.

<http://www.vmware.com/products/vsphere/esxi-and-esx/index.html>

Use the *ESXi 5.0 Post Migration Checklist* to help guide your ESXi 5.0 post upgrade activities. Required tasks are mandatory and care should be taken to resolve any issues before moving on to the next task. Recommended tasks, while optional, are highly encouraged. Prior to using this checklist use the *ESXi 5.0 Pre-Migration Checklist* to guide your ESXi pre-migration activities.

Category	Task	Notes
<input type="checkbox"/> Required	Assigned permanent vSphere 5.0 License Keys	Prior to the expiration of the vCenter 60-day trial period install permanent license keys for your ESXi 5.0 hosts. (if using the 60-day trial you can complete this task last)
<input type="checkbox"/> Required	Verify the ESXi host's root password, hostname and TCP/IP settings	Use the vSphere client or Direct Console User Interface (DCUI) to access the host and verify the host password and management network settings.
<input type="checkbox"/> Required	Re-connect the ESX host in vCenter	If the host was not automatically reconnected following the upgrade, reconnect it using the vSphere client. You may be prompted to provide the ESXi host's login credentials.
<input type="checkbox"/> Required	Verify configured vSwitches and Port Groups	Verify vSwitches and Port Groups were retained with the proper settings during the ESXi 5.0 upgrade.
<input type="checkbox"/> Required	Verify Datastores are accessible	Verify all VMFS datastores were retained with the proper settings during the upgrade.

<input type="checkbox"/> Required	Verify NFS shares are accessible/mounted	Verify all NFS datastores were retained with the proper settings. Reconfigure missing NFS datastores.
<input type="checkbox"/> Required	Verify iSCSI storage configuration	Verify the iSCSI storage configuration and settings were retained during the upgrade. Reconfigure missing iSCSI initiators.
<input type="checkbox"/> Required	Verify VMs and Templates on local storage are properly registered on the ESXi host	Verify local VM and templates are properly registered. Re-register VMs with missing registrations using the vSphere client by browsing the local datastores.
<input type="checkbox"/> Recommended	Use vSphere Update Manager to apply latest ESXi patches and updates	Prior to putting the upgraded host back into production apply the latest ESXi patches and updates. Refer to the <i>vSphere Update Manager 5.0 Product Guide</i> for more information.
<input type="checkbox"/> Recommended	Add ESX host back to the HA/DRS cluster	If the host was removed from the HA/DRS cluster prior to the upgrade, move it back. When the host is added to the cluster vCenter will push the HA components to the host. Monitor this activity and ensure it completes successfully.
<input type="checkbox"/> Recommended	Verify/Configure the ESXi Scratch Partition	Verify the host's scratch partition is not on a ramdisk. Refer to the <i>vSphere Installation and Setup Guide</i> , pg. 148).
<input type="checkbox"/> Recommended	Configure SMTP and SNMP	Refer to the vCenter Server and Host Management Guide, page 31 for more information.
<input type="checkbox"/> Recommended	Configure ESXi host core dump collection	Configuring an network dump collector can facilitate core dump management and troubleshooting. Refer to the vCenter Server and Host Management Guide, page 46 for more information.
<input type="checkbox"/> Recommended	Configure ESXi host logging	Configuring network logging can facilitate log collection and troubleshooting. Refer to the <i>vSphere Installation and Setup Guide</i> pages 149 and 208.

<input type="checkbox"/> Recommended	Backup ESXi host configuration	Complete a backup of the ESXi host. Refer to the <i>vSphere Command-Line Interface Concepts and Examples Guide</i> , page 22 for more information.
<input type="checkbox"/> Recommended	Create/Attach a host profile	Host Profiles facilitate configuration management of ESXi hosts. Refer to the <i>vSphere Host Profiles Guide</i> , page 7 for more information.
<input type="checkbox"/> Recommended	Upgrade VMware Tools inside your VMs	Upgrade the VMware Tools inside each VM in order to leverage the latest improvements. Both VMware Tools version 4.0 and 5.0 are supported on vSphere 5.0. Refer to the <i>vSphere 5.0 Upgrade Guide</i> , pg. 138 for more information.
<input type="checkbox"/> Recommended	After <b>ALL</b> hosts in the cluster have been migrated to ESXi, upgrade the VM virtual hardware version	Upgrade the VM Hardware Version to access new capabilities. All hosts must be running ESXi 5.0. Upgrade VMware Tools first. Refer to the <i>vSphere 5.0 Upgrade Guide</i> , pg. 138 for more information.
<input type="checkbox"/> Recommended	After <b>ALL</b> hosts in the cluster have been migrated to ESXi 5.0, upgrade the VMFS volumes	To benefit from the latest VMFS features upgrade your VMFS volumes. vSphere 5.0 supports VMFS-3 and VMFS-5. VMFS upgrade can be done online. Refer to the <i>vSphere 5.0 Upgrade Guide</i> , pg. 138 for more information.