

VMware ESXi Migration

vCenter Server Pre-Upgrade Checklist (version 5)

Prior to migrating to ESXi refer to the ESXi Info Center for the latest information to help with your ESXi Migration.

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

Use the following pre-upgrade checklist to help guide your vCenter Server 4.1 upgrade activities. These tasks should be completed in order. Required tasks are mandatory and care should be taken to resolve any issues and questions before moving on to the next task. Recommended tasks, while optional, are highly encouraged. Following the upgrade use the vCenter Server Post Upgrade Checklist to guide the post upgrade activities.

Category	Description	Reference/Notes
<input type="checkbox"/> Required	Ensure vCenter Server is running at 2.5 or above	You can do an in-place upgrade if running vCenter 4.0 if on a 64-bit server. However, for VirtualCenter 2.5 and vCenter 4.0 running on a 32-bit server you will need to install vCenter 4.1 on a new machine and migrate the existing database.
<input type="checkbox"/> Required	Ensure hardware requirements are met	As of vCenter 4.1 a 64-bit server is required. Also consider adding CPU/Memory for future growth. Refer to the vCenter Server Installation Guide, page 16 for more information.
<input type="checkbox"/> Required	Ensure Operating System requirements are met	As of vCenter 4.1 a 64-bit OS required for the vCenter Server. Refer to the vCenter Server Installation Guide, page 16 for more information.
<input type="checkbox"/> Required	Ensure database requirements are met	Refer to the vSphere 4.1 Upgrade Guide, page 27 for more information. Note that SQL2000 and Oracle 9i support was dropped with vCenter 4.1.
<input type="checkbox"/> Required	Ensure vCenter Server has 64-bit DSN	Refer to the vCenter Server Installation Guide, page 71 for more information.
<input type="checkbox"/> Required	For Microsoft SQL database, ensure the System DSN is using SQL Native Client driver	Refer to the vCenter Server Installation Guide, page 84 for more information.

<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. Refer to KB article http://kb.vmware.com/kb/1003052 for more information.
<input type="checkbox"/> Required	Ensure that the installation path of the existing vCenter Server does NOT have commas (,) or periods (.)	Refer to the vSphere 4.1 Upgrade Guide, page 23 for more information.
<input type="checkbox"/> Required	Confirm the vCenter system is not an Active Directory domain controller	Refer to the vSphere 4.1 Upgrade Guide, page 23 for more information.
<input type="checkbox"/> Required	Confirm that the vCenter Server system name is no more than 15 characters and is registered in DNS	Refer to the vSphere 4.1 Upgrade Guide, page 28 for more information.
<input type="checkbox"/> Required	Verify the required ports are open to/from the vCenter Server system	Refer to the vSphere 4.1 Upgrade Guide, page 18 for more information.
<input type="checkbox"/> Required	For Guided Consolidation Service on VirtualCenter 2.5, complete the consolidation plan before upgrading	Refer to the vSphere 4.1 Upgrade Guide, page 23 for more information.
<input type="checkbox"/> Required	Accomplish a reliable backup of the vCenter database	Follow your local database backup procedures.
<input type="checkbox"/> Required	Accomplish a reliable backup of vCenter vpxd.cfg file	Precautionary step. Refer to the vSphere 4.1 Upgrade Guide, page 29 for more information.
<input type="checkbox"/> Required	Document configured vCenter plug-ins and verify compatibility with vCenter 4.1 (reconfig after upgrade)	Refer to the following guides for more information: http://www.vmware.com/pdf/vsphere4/r40/vsp_compatibility_matrix.pdf http://www.vmware.com/resources/compatibility/sim/interop_matrix.php
<input type="checkbox"/> Recommended	Ensure that you have a reliable backup of vCenter Server SSL certificates	Refer to the vSphere 4.1 Upgrade Guide, page 29 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 ESXi Migration

ESXi 4.1 Host Pre-Migration Checklist (version 5)

Prior to migrating to ESXi refer to the ESXi Info Center for the latest information to help with your ESXi Migration.

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

Use the following pre-migration checklist to help guide your ESXi 4.1 pre-migration activities. These tasks should be completed in order. Required tasks are mandatory and care should be taken to resolve any issues and questions before moving on to the next task. Recommended tasks, while optional, are highly encouraged. Following the migration use the ESXi 4.1 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 4.1 or higher	Upgrading to the latest release of vCenter Server is the first step in your the ESXi migration. Refer to the vSphere Upgrade Guide for steps to upgrade vCenter Server.
<input type="checkbox"/> Required	Verify the ESX host to be migrated is running ESX 3.5 or higher	vCenter 4.1 does not support managing ESX 2.5 hosts. Consider replacing or upgrading ESX 2.5 prior to migrating to ESXi.
<input type="checkbox"/> Required	Verify the ESX host meets the hardware requirements for ESXi	Refer to the vCenter Server Installation Guide, page 13 for more information.
<input type="checkbox"/> Required	Determine if any additional device drivers are required for your server hardware	Newer hardware may require additional drivers not included with ESXi. Check with your vendor to determine if additional drivers are required. To install 3rd part drivers reference http://kb.vmware.com/1032936
<input type="checkbox"/> Required	Verify our storage meets ESXi requirements	Refer to ESXi 4.1 Configuration Guide, Page 75 for more information.
<input type="checkbox"/> Required	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	Migrate templates and VMs off the ESX boot disk	The ESXi install will overwrite the boot disk to include reformatting the boot disk VMFS partition. Use Storage vMotion or cold migration to move VMs/templates off the boot disk. If VMs/templates cannot be migrated perform a reliable backup.
<input type="checkbox"/> Required	Evacuate running VMs off the ESX host	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 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"/> Required	Document/save the ESX host configuration	Installing ESXi will remove host specific settings such as vSwitches, PortGroups, NFS and iSCSI configurations. These configurations will need to be restored following the migration.
<input type="checkbox"/> Recommended	Complete and validate any hardware changes on the host prior to migrating to ESXi (i.e. add CPU/memory, NICs, HBAs, etc.)	Changing hardware at the same time you migrate to ESXi could complicate troubleshooting should problems arise. It is recommended that you complete and validate hardware changes prior to migrating to ESXi.
<input type="checkbox"/> Recommended	Review the ESX host's alerts, alarms, and log files for any issues to be resolved prior to migrating to ESXi	Identify and resolve any host issues prior to migrating. Refer to the following Knowledge Base article for more information: http://kb.vmware.com/kb/1021800
<input type="checkbox"/> Recommended	Verify all storage and datastores are healthy and accessible by the ESX Host	Changing storage at the same time you migrate to ESXi could complicate troubleshooting should problems arise. It is recommended that you complete and validate all storage changes prior to migrating to ESXi.

VMware ESXi Migration

vCenter Server Post Upgrade Checklist (version 5)

Prior to migrating to ESXi refer to the ESXi Info Center for the latest information to help with your ESXi Migration.

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

Use the following vCenter Post Upgrade checklist to help guide your vCenter Server 4.1 post upgrade activities. These tasks should be completed in order. Required tasks are mandatory and care should be taken to resolve any issues and questions before moving on to the next task. Recommended tasks, while optional, are highly encouraged. Prior to following the vCenter post upgrade tasks use the vCenter Server 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 4.1 Upgrade Guide, page 47 for more information.
<input type="checkbox"/> Required	Convert and Install license keys	It is recommend that you use the free vCenter 60 day trial license until all ESX hosts have been migrated to ESXi. Apply your permanent license keys after you complete the ESXi migration. For info on vCenter licensing refer to the following website: http://www.vmware.com/products/vSphere/upgrade-center/licensing.html
<input type="checkbox"/> Required	If you will continue to manage VI 3.x hosts install a VirtualInfrastructure license server	Refer to the following website for more information: http://www.vmware.com/products/vSphere/upgrade-center/licensing.html
<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 Backup	Follow your local database backup procedures.

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Use the following post migration checklist to help guide your ESXi 4.1 post migration activities. These tasks should be completed in order. Required tasks are mandatory and care should be taken to resolve any issues and questions before moving on to the next task. Recommended tasks, while optional, are highly encouraged. Prior to using this checklist use the ESXi 4.1 Pre-Migration Checklist to guide your ESXi pre-migration activities.

Category	Task	Notes
<input type="checkbox"/> Required	Configure ESXi host's root password, hostname and TCP/IP settings	Access the host console and use the ESXi Direct Console User Interface (DCUI)
<input type="checkbox"/> Required	Re-connect the ESX host in vCenter	From the vSphere client right-click the host and choose connect. You will be prompted to provide the ESXi host's login credentials.
<input type="checkbox"/> Required	Configure vSwitches and PortGroups	Refer to the ESXi Configuration Guide, pg 19 for information on configuring ESXi hosts networking.
<input type="checkbox"/> Required	Configure NFS mounts	Refer to the ESXi Configuration Guide, pg 104 for information on configuring NFS datastores.
<input type="checkbox"/> Required	Configure iSCSI Storage	Refer to the ESXi Configuration Guide, pg 88 for information on configuring iSCSI.

<input type="checkbox"/> Required	Re-register VMs and Templates on local storage	VMs on local datastores that were registered on the host prior to migrating to ESXi may appear as "orphaned" when the ESXi host is re-connected to vCenter Server. Use the vSphere client to remove any orphaned VMs and then browse the datastores to locate the VM's .vmx files and re-register them on the host.
<input type="checkbox"/> Recommended	Use vSphere Update Manager (VUM) to apply latest ESXi patches and updates	Prior to putting the host back into production it is recommended that the latest ESXi patches and updates be applied. Refer to the ESXi Installable and vCenter Server Setup Guide, pg 116 for more information.
<input type="checkbox"/> Required	Add ESX host back to the HA/DRS cluster	Use the vSphere client to move server back to the HA/DRS cluster. 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	Configure ESXi Scratch Partition	ESXi hosts using SAS drives will not have a persistent "scratch partition" mounted during installation (refer to the vSphere Upgrade Guide, pg 15). In this case you should manually configure the ESXi Scratch Partition. Refer to the ESXi Installable and vCenter Server Setup Guide, pg 57 for more information.
<input type="checkbox"/> Recommended	Configure SNMP on ESXi host	Refer to the vSphere Datacenter Administration Guide, pg 129 for more information.
<input type="checkbox"/> Recommended	Setup syslog on ESXi host	By default ESXi logs are saved in memory and do not persist across host reboots. It is recommended that a persistent log store be configured. Refer to the vSphere Datacenter Administration Guide, pg 183 for more information.
<input type="checkbox"/> Recommended	Backup ESXi host configuration	Complete a backup of the ESXi host configuration. Refer to the ESXi Installable and vCenter Server Setup Guide, pg 65 for more information.
<input type="checkbox"/> Recommended	Create/Attach a host profile	Once your first host has been configured, use this host as a template to create a Host Profile. The Host Profile can then be used to facilitate configuring the remaining hosts in your cluster. Refer to the ESXi Configuration Guide, pg 199 for more information.
<input type="checkbox"/> Recommended	After ALL hosts in the cluster have been migrated to ESXi, upgrade VMware Tools inside the VMs	Upgrade the VMware Tools inside each VM. Refer to the vSphere 4.1 Upgrade Guide, pg 75 for more information.

<input type="checkbox"/> Recommended	After ALL hosts in the cluster have been migrated to ESXi, upgrade the VM virtual hardware version	To benefit from the latest VM features and capabilities it is recommended that you upgrade the VM Hardware Version. Refer to the vSphere 4.1 Upgrade Guide, pg 75 for more information. Note that you must upgrade the VMware Tools prior to <u>upgrading the VM Hardware Version.</u>
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