

HP VMware ESXi 4.0

Getting Started



Overview

Thank you for downloading HP VMware ESXi 4.0. HP has seamlessly integrated VMware ESXi 4.0, delivering active HP ProLiant management and consolidated lifecycle management for a consistent, reliable ProLiant experience.

HP CIM (Common Information Module) provides proactively surface hardware monitoring data to deliver the most up-to-date server state information possible. HP CIM provides and VMware ESXi provide active hardware management using HP SIM (Systems Insight Manager).

You can update VMware ESXi using the standard VMware update tools. The integrated hypervisor installation is partitioned with redundant images, enabling a robust upgrade and recovery process.

The *HP VMware ESXi 4.0 Getting Started Guide* is for ESXi Standalone Edition or HP VMware vSphere Enterprise Edition.

The ESXi Stand-Alone Edition is well suited for single server virtualization installations and is managed using the free VMware vSphere Client management console. HP Technical Software Support and Update Service is optional.

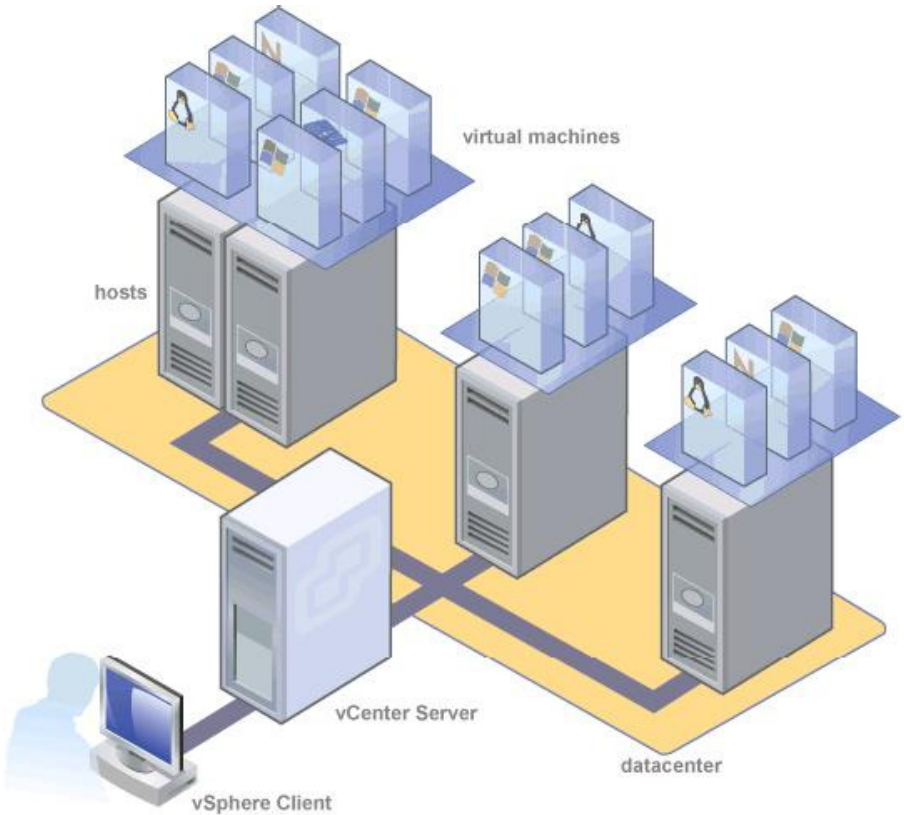
The installation ISO includes a trial license for standalone edition. To obtain a permanent license for standalone edition, go to the VMware website (<https://www.vmware.com/tryvmware/?p=esxi>) and register to obtain the serial number license.

You can also upgrade HP VMware ESXi Stand-Alone Edition to a fully integrated VMware vSphere Enterprise Edition functionality.

HP VMware vSphere Enterprise Edition enables distributed service capabilities for multi-server VMware vSphere Enterprise installations. This edition includes one-year, 9x5 unlimited HP Technical Software Support and Update Service.

To learn more about license delivery and enabling enterprise entitlement, see *Activating standalone license* ("Activating stand-alone license") or *Enabling enterprise entitlement* (on page 7).

Understanding VMware infrastructure



VMware vSphere includes the following components:

Virtual machine—A virtual machine is a software-based computer capable of running an operating system such as Microsoft® Windows® or GNU/Linux just as if the operating system is installed on a physical machine.

Host—A host is a physical machine running platform virtualization software such as ESXi. Hosts provide processor, memory, storage, and network resources for one or more virtual machines.

vCenter Server—vCenter Server continuously monitors your virtual infrastructure, automates system administration tasks, and centralizes remote management sessions. It coordinates the resources and activities of individual hosts to efficiently distribute virtual machines and tolerate hardware downtime across a data center.

vSphere Client—vSphere Client is the primary interface for interacting with hosts and virtual machines. vSphere Client can manage a standalone host by connecting directly to the host, or manage multiple hosts by connecting to a vCenter Server machine.

Additional HP components that complete your virtualization infrastructure

Management network—A management network enables the server administrator to manage discrete, physical servers without relying on a general purpose communications network. This dedicated network enables a reliable connection to the hardware in the event of a network failure.

Virtual machine communication network—A virtual machine communication network is built on the traditional, general-purpose communication network. As with physical servers, virtual machine traffic is brokered through a general-purpose network if the virtual machines are on different, discrete servers. Virtual machine communication on the same physical server is handled by a virtual switch within the server.

HP storage network—A storage network enables virtual machines to access Storage Area Network (SAN) devices similarly to physical servers. The medium for a storage network can be Fibre Channel or Ethernet. HP recommends HP StorageWorks SAN solutions.

Configuring your HP ProLiant server to use VMware ESXi

HP recommends upgrading to the latest ProLiant firmware revisions. For more information, see your server documentation.

VMware ESXi only supports the following installation destinations for HP VMware ESXi:

- Any HP hard drive supported for a server
- Secure Digital (SD) memory card
- Flash media (USB flash drive)

The following flash devices are supported:

- Kingston Flash Memory Secure Digital Elite Pro: Description—2GB Secure Digital Card (50x), Part Number: HP-SD/2GB-S available from the Kingston website (<http://www.kingston.com/hpoffer/>).
- v100ss 2GB USB Flash Drive, part number FD2GBHP100-BLK-SMA-T

To purchase the v100ss USB flash drive, call PNY at 800-769-4221.

VMware ESXi does not support any other USB or SD card devices.

To configure your ProLiant server using VMware ESXi:

1. Download the installation ISO from the HP website (<http://h20392.www2.hp.com/portal/swdepot/index.do>).
2. Burn the installation ISO to a CD, or move the ISO image to a location accessible using the virtual media capabilities of HP iLO 2.

NOTE: The CD-is bootable. Boot the server and choose to install the HP VMware ESXi product either to the hard drive or to flash media (USB key or SD card). You must install the flash media into the internal port on your ProLiant server.

3. Set up the server hardware, and if desired, connect your server to the network.
4. If you install to flash media (USB or SD card,) you must install the flash media into the internal port on your ProLiant server.

For instructions on how to access the internal flash media (USB or SD card) port, see the server documentation included with your server.

For hardware requirements, see the server documentation included with your server.

5. Access the server console in one of the following ways:
 - o Locally—Use your local keyboard and monitor.
 - o Remotely—Use iLO Integrated Remote Console remotely from a network client using a web browser.

Remote setup requires HP iLO2 Advanced Pack, which is sold separately for HP ProLiant ML and DL servers. The remote graphics capability is included with BL servers.



IMPORTANT: After you boot up the server, you must press the correct function key when prompted to enter setup mode to configure boot order, configure hardware virtualization, and configure iLO and the Smart Array controller. Familiarize yourself with the following steps and prompts; each prompt is available for only a few seconds during the boot process.

If you are installing to the hard drive, proceed to step 8.

6. To enable flash media (USB flash drive or SD card):
 - a. Configure your flash device to boot before the hard drive. By default, flash media is configured to boot before the hard drive.
 - b. Boot the server, and then press **F9** to enter ROM Based Setup Utility (RBSU).
 - c. Scroll down to Standard Boot Order (IPL), and press **Enter**.
 - d. To modify the boot order, select the device you want to move, and press **Enter**. A menu appears to change the device boot order.
 - e. Ensure the flash media is set to boot before the hard drive.
7. Enable CPU virtualization.

For CPU specific virtualization capabilities, you can select **Intel® Virtualization Technology** or **AMD® Virtualization**. You must perform this step for supporting Windows® 64 bit operating systems and all guest 64 bit operating systems such as Linux.

- a. If you are not in RBSU, boot the server, and then press **F9** to enter ROM Based Setup Utility (RBSU).
 - b. Scroll down to Advanced Options, and press **Enter**.
 - c. Scroll down to Processor Options, and press **Enter**.
 - d. Scroll down to the servers supported processor (either Intel® Virtualization Technology or AMD® Virtualization), and press **Enter**.
 - e. At the next screen select **Enable**, and press **Enter**.
 - f. Save configuration changes, and then exit. The server reboots.
8. To configure iLO network parameters, directory settings, global settings, and user accounts, when prompted at POST, press **F8**.
- For more information, see the *HP Integrated Lights-Out 2 User Guide*.
9. To create, view, or delete a logical drive for the Smart Array Controller using local storage, press **F8** when prompted.
- For more information, see *Configuring Arrays on HP Smart Array Controllers Reference Guide*.

Installing HP VMware ESXi

Installing the software image locally

1. Place the installation CD into the CD-ROM drive, and then boot the server.
2. Follow the on-screen instructions to complete the installation.

Installing the software image remotely using iLO 2

1. Verify that the server has the appropriate iLO license to use Virtual Media, open a web browser on your local machine, and then log in to iLO.
HP c-Class servers include a license for Virtual Media. For other servers, the HP iLO2 Advanced Pack license is required and is sold separately.
2. Select the Virtual Media tab, and then select the **Virtual Media Applet**.
3. Choose one of the following options:
 - o Local Media Drive
 - i. Under the Virtual CD/DVD-Rom section, select **Local Media Drive**.
 - ii. From the menu, select the drive letter of the desired physical CD/DVD-ROM drive on your client computer.
 - iii. Click **Connect**. The connected drive icon turns green.
 - o Local Image File
 - i. Under the Virtual CD/DVD-ROM section, select **Local Image File**.
 - ii. Enter the path or file name of the image (ISO file) in the text box or click **Browse** to locate the image file.

- iii. Click **Connect**. The connected drive icon turns green.
4. Follow the prompts generated by the installation CD to complete the installation. If performing restoration or recovery, when installation is complete, restore from backup files.
5. (Optional) To discover and manage this server, configure HP SIM.
For more information about hosting and managing a VMware ESXi virtualization environment on ProLiant servers, see the HP website (<http://www.hp.com/go/VMware>).
For more information about VMware and setting up your virtualized environment, see the VMware website (<http://www.vmware.com/products/vi/esx/>).

Activating stand-alone license

The installation ISO does not include a permanent license serial number. To obtain a permanent license serial number:

1. Register at the VMware website (<https://www.vmware.com/tryvmware/?p=esxi>).
2. Download the serial number.
3. Use the vSphere Client to insert the license serial number.

Enabling enterprise entitlement

If you purchased a license for VMware ESXi or VMware vSphere Enterprise Edition, follow the instructions included in your package to redeem and apply the license.

Updating VMware ESXi

Updates and patches for VMware ESXi are provided and delivered by VMware. These updates and patches include the latest ESXi software from VMware as well as updated CIM providers from HP.

The updates and patches are delivered and installed by VMware Update Manager (VUM). For more information on this process, consult the VUM Administration Guide (http://www.vmware.com/pdf/vi3_vum_10_admin_guide.pdf).

Recovering from a system failure

If you encounter a system failure and need to reinstall the software, see Installing HP VMware ESXi (on page 6).



IMPORTANT: Using the installation CD completely erases all existing data and user configuration. All preconfigured settings, user data and license information is lost. After reinstalling the software you must reapply your licenses.

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