

Getting Started with ESX

ESX 4.1
vCenter Server 4.1

This document supports the version of each product listed and supports all subsequent versions until the document is replaced by a new edition. To check for more recent editions of this document, see <http://www.vmware.com/support/pubs>.

EN-000309-01

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Updated Information

This *Getting Started with ESX* is updated with each release of the product or when necessary.

This table provides the update history of the *Getting Started with ESX*.

Revision	Description
EN-000309-01	Minor change in "vCenter Server Prerequisites," on page 16.
EN-000309-00	Initial release.

Getting Started with ESX

Get started with ESX quickly with information about installation and initial setup. The procedures show you how to install and set up a basic inventory for a single-host virtualization environment. After your host is set up with a working virtual machine, you can install vCenter Server and explore a multiple-host virtualization environment.

This information is for experienced Windows or Linux system administrators who will be installing VMware ESX to deploy virtualization for the first time. Specifically, it is for users who meet the following requirements:

- Do not yet have the ESX software installed
- Do not yet have the vSphere Client or VMware vCenter Server installed.

Getting Started Tasks

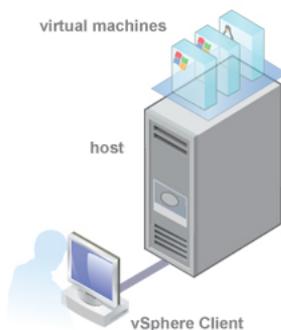
The getting started tasks take you from initial setup of a new virtualization host to a working virtual machine. After you have a host and functional virtual machine, you can setup a managed host environment with vCenter Server.

Getting started with ESX includes the following tasks:

- Installing ESX and adding the host to your network
- Installing the vSphere Client and connecting to the ESX host
- Deploying and running a virtual machine

Completing the getting started tasks sets up the single-host management system for virtualization as shown in [Figure 1](#).

Figure 1. Basic Single-Host Management System



After the initial setup of ESX, you can deploy vSphere with vCenter Server to manage multiple hosts.

ESX Installation

Install ESX to get started with running virtual machines. The machine running ESX virtualization software will act as a host in your virtual infrastructure.

Hosts provide CPU and memory resources, access to storage, and network connectivity for virtual machines that reside on them.

Before you begin the installation procedure, ensure that the host has a supported network adapter

ESX Hardware Requirements

Using ESX requires specific hardware and system resources.

64-Bit Processor

- VMware ESX 4.1 will install and run only on servers with 64-bit x86 CPUs.
- Known 64-bit processors:
 - All AMD Opterons support 64 bit.
 - All Intel Xeon 3000/3200, 3100/3300, 5100/5300, 5200/5400, 7100/7300, and 7200/7400 support 64 bit.
 - All Intel Nehalem (no Xeon brand number assigned yet) support 64 bit.

RAM

2GB RAM minimum

For upgrades, 3GB RAM is required if the ESX host is managed by vCenter Server.

Network Adapters

One or more network adapters. Supported network adapters include:

- Broadcom NetXtreme 570x gigabit controllers
- Intel PRO 1000 adapters

SCSI Adapter, Fibre Channel Adapter, or Internal RAID Controller

One or more of the following controllers (any combination can be used):

- Basic SCSI controllers are Adaptec Ultra-160 and Ultra-320, LSI Logic Fusion-MPT, and most NCR/Symbios SCSI controllers.
- Fibre Channel, see the *Hardware Compatibility Guide* at <http://www.vmware.com/resources/compatibility>.
- RAID adapters supported are HP Smart Array, Dell PERC (Adaptec RAID and LSI MegaRAID), and IBM (Adaptec) ServeRAID controllers.

Installation and Storage

- SCSI disk, Fibre Channel LUN, or RAID LUN with unpartitioned space. In a minimum configuration, this disk or RAID is shared between the service console and the virtual machines.
- For hardware iSCSI, a disk attached to an iSCSI controller, such as the QLogic qla405x. Software iSCSI is not supported for booting or installing ESX.
- Serial attached SCSI (SAS).

- For Serial ATA (SATA), a disk connected through supported SAS controllers or supported on-board SATA controllers. SATA disk drives connected behind supported SAS controllers or supported on-board SATA controllers.
- Supported SAS controllers include:
 - LSI1068E (LSISAS3442E)
 - LSI1068 (SAS 5)
 - IBM ServeRAID 8K SAS controller
 - Smart Array P400/256 controller
 - Dell PERC 5.0.1 controller
- Supported on-board SATA controllers include:
 - Intel ICH9
 - NVIDIA MCP55
 - ServerWorks HT1000

When installing ESX on SATA drives, consider the following:

- Ensure that your SATA drives are connected through supported SAS controllers or supported onboard SATA controllers.
- ESX does not support using local, internal SATA drives on the host server to create VMFS datastores that are shared across multiple ESX hosts.

ATA and IDE disk drives – ESX supports installing and booting on either an ATA drive or ATA RAID, but ensure that your specific drive controller is included in the supported hardware. IDE drives are supported for ESX installation and VMFS creation.

Install ESX Using the Graphical Mode

The graphical mode is the recommended installation method if you are installing ESX for the first time. The graphical mode runs by default if you do not select an alternate installation method.

Prerequisites

Make sure that the system on which you are installing meets the requirements listed in [“ESX Hardware Requirements,”](#) on page 8.

Procedure

- 1 Boot from the DVD using the local DVD-ROM drive.
- 2 Select **Install ESX in graphical mode**.
A series of installation messages scroll past until the Welcome page appears.
- 3 Click **Next** to continue.
- 4 Select **I accept the terms of the license agreement** and click **Next**.
You cannot install this product unless you accept the license agreement.

NOTE If the alignment of the license agreement screen is skewed to the left, you might need to auto-adjust your host monitor.

- 5 Select your keyboard type from the list and click **Next**.

- 6 Select whether to install custom drivers with the ESX installation.

You might need custom drivers if your system is not listed in the *Hardware Compatibility Guide* and has a network or storage device that was not originally compatible with ESX 4.1.

- Select **Yes** and click **Add** to install custom drivers. The installer prompts you to insert the media containing the custom drivers. After you add the custom drivers to the list, the installer prompts you to reinsert the ESX installation DVD and continue with the installation. Click **Next** to continue.
- Select **No** if you do not need to install custom drivers. You can install custom drivers after the ESX installation is complete, using other command-line and GUI tools available to you, such as the vSphere CLI and vCenter Update Manager. Click **Next** to continue.

- 7 Click **Yes** to load the required ESX drivers.

- 8 Configure ESX licensing.

- Select **Enter a serial number now**, enter the vSphere license key, and click **Next**.
- Select **Enter a license key later** and click **Next**. This choice allows you to evaluate ESX (or enter a vSphere license key later using the vSphere Client).

- 9 Select the network adapter for the ESX service console.

Virtual machine network traffic shares this network adapter until you configure a virtual switch for another network adapter. You can configure other network adapters at a later time from the vSphere Client.

- 10 If the adapter is connected to a VLAN, select **This adapter requires a VLAN ID**, enter a VLAN ID number between 0 and 4095, and click **Next**.

- 11 Configure the network settings.

VMware recommends that you use a static IP address to simplify client access. If you want to use static settings but you do not have the required information, you can use DHCP for the installation and configure static settings after you consult with your network administrator.

For the host name, type the complete host name including the domain. This option is available only if you use a static IP address.

- 12 (Optional) Click **Test these settings** to test the network interface.

- 13 Select a setup option.

Option	Description
Standard Setup	The installer configures the default partitions on a single hard drive or LUN where you install ESX. The default partitions are sized based on the capacity of the hard drive or LUN. If you have an existing ESX installation, you are prompted to retain it.
Advanced Setup	Allows you to specify <code>esxconsole.vmdk</code> partition settings, kernel options, and a bootloader location and password. If you leave the Configure boot loader automatically option selected, the installer places the boot loader in the master boot record (MBR). If you have an existing ESX installation, you are prompted to retain it.

- 14 Select a location to install ESX and click **Next**.

Installing ESX on a USB device is not supported.

- 15 Configure the time zone.

- 16 Configure the date and time settings.
 - Select **Automatically** and enter the IP address or host name of an NTP server.
 - Select **Manually** to use the machine date and time detected by the installer or to set the date and time yourself. If you select **Manually** and you do not have a functioning mouse, you can change the calendar month and year by using Ctrl-left-arrow and Ctrl-right-arrow for the month, and Ctrl-up-arrow and Ctrl-down-arrow for the year.
- 17 Enter a root password.
It must contain between 6 and 64 characters.
- 18 Confirm your installation configuration and click **Next**.
- 19 Click **Next** and then click **Finish** to exit the installer and reboot the host.
- 20 During reboot, press the key required to enter your machine's BIOS setup or boot menu
This key is often a function key or Delete.
- 21 Set the first boot device to be the drive on which you installed ESX.

What to do next

After you complete the installation, use the vSphere Client to connect to the ESX host.

Managing the ESX Host

You manage hosts using the vSphere Client.

After you finish initial setup of the host, download and install the vSphere Client. Connect to the host and add a virtual machine by importing a virtual appliance.

vSphere Client Hardware Requirements

Make sure that the vSphere Client hardware meets the minimum requirements.

- CPU – 1 CPU
- Processor – 500MHz or faster Intel or AMD processor (1GHz recommended)
- Memory – 1GB RAM
- Disk Storage – 1.5GB free disk space for a complete installation, which includes the following components:
 - Microsoft .NET 2.0
 - Microsoft .NET 3.0 SP1
 - Microsoft Visual J#
Remove any previously installed versions of Microsoft Visual J# on the system where you are installing the vSphere Client.
 - vSphere Client 4.1

If you do not have any of these components already installed, you must have 400MB free on the drive that has the %temp% directory.

If you have all of the components already installed, 300MB of free space is required on the drive that has the %temp% directory, and 450MB is required for vSphere Client 4.1.

- Networking – Gigabit connection recommended

vSphere Client Software Requirements

Make sure that your operating system supports the vSphere Client.

For a list of supported operating systems, see the *vSphere Compatibility Matrixes* at http://www.vmware.com/pdf/vsphere4/r40/vsp_compatibility_matrix.pdf on the VMware vSphere documentation Web site.

The vSphere Client requires the Microsoft .NET 3.0 SP1 Framework. If your system does not have it installed, the vSphere Client installer installs it. The .NET 3.0 SP1 software might require Internet connectivity to download additional files.

Download the vSphere Client

The vSphere Client is a Windows program that you can use to configure the host and to operate its virtual machines. You can download vSphere Client from any host.

Prerequisites

You must have the URL of the host, which is the IP address or host name.

The system must have an Internet connection.

Procedure

- 1 From a Windows machine, open a Web browser.
- 2 Enter the URL or IP address for the host.
For example, `http://exampleserver.example.com` or `http://xxx.xxx.xxx.xxx`.
- 3 Click **Download the vSphere Client** under Getting Started.
- 4 Click **Save** to download the vSphere Client installer.

The vSphere Client installer is downloaded to the system.

What to do next

Install the vSphere Client.

Install the vSphere Client

The vSphere Client enables you to connect to an ESX host and to a vCenter Server system.

The vSphere Client must be installed on a Windows machine that has network access to the ESX host and Internet access.

When you use the vSphere Client, the vSphere Client appears in the language associated with the locale setting on the machine. You can alter this behavior with a command-line instruction or by changing the locale in the registry of the machine. See the *VMware vSphere Datacenter Administration Guide*.

Prerequisites

- You must download the vSphere Client installer.
- You must be a member of the Administrators group on the system.
- The system must have an Internet connection.

Procedure

- 1 Double-click the `VMware-viclientbuild number.exe` file to run the vSphere Client installer.
- 2 Choose a language for the installer and click **OK**.

- 3 In the Welcome screen, click **Next**.
- 4 Review the End-User Patent Agreement and click **Next**.
- 5 If you agree to the terms of the license agreement, select **I agree to the terms in the license agreement** and click **Next**.
- 6 Type your user name and organization name and click **Next**.
- 7 Select the installation location.
 - Accept the default installation location and click **Next**.
 - Click **Change** to select a different location and click **Next**.
- 8 Click **Install** to begin the installation.
- 9 Click **Finish** to complete the installation.

What to do next

Connect to the host with the vSphere Client.

Start the vSphere Client and Log In to ESX

When you connect to a host with the vSphere Client, you can manage the host as well as all of the virtual machines that the host manages.

Procedure

- 1 To start the vSphere Client, select **Start > Programs > VMware > VMware vSphere Client**.
- 2 Log in to the ESX host as the root user.
 - a Enter the IP address or host name.
 - b Enter the username **root**.
 - c Enter the password you set during installation.

- 3 Click **Login**.

A security warning appears.

- 4 To continue, click **Ignore**.

This security warning message occurs because the vSphere Client detected a certificate that the ESX host signed (default setting). For highly secure environments, VMware recommends certificates that a trusted third party generates. You can set up third-party certificates later.

What to do next

After you connect to the host with the vSphere Client, use the **Getting Started** tabs to import a virtual appliance.

Add a Virtual Machine by Importing a Virtual Appliance

After you connect to the host machine, you can add a virtual machine to the host. You can import or create one or more virtual machines on a single host.

A virtual appliance is a prebuilt virtual machine with an operating system and applications already installed. The vSphere Client **Getting Started** tab provides steps to guide you through both options. If this is your first virtual machine, VMware recommends that you import a virtual appliance.

Procedure

- 1 In the **Getting Started** tab, click **Deploy from VA Marketplace**.

- 2 Select a virtual appliance from the list and click **Download now**.

For the shortest download time, VMware recommends that you chose a small virtual appliance.

- 3 Click **Next** and follow the on-screen instructions to import the virtual appliance.

You have completed setup for a single-host management system in which ESX is used to run virtual machines.

What to do next

After you import the virtual appliance, you can use the **Console** tab in the vSphere Client to power it on and see what is running on it. Using the Console to view the virtual appliance is like having a monitor connected to the virtual appliance. To release the pointer from the Console, press Ctrl+Alt. To view the Console in full screen mode, from the Inventory, right-click the virtual machine and select **Open Console**.

Managing Multiple Hosts with vCenter Server

You can manage multiple hosts at the same time with vCenter Server.

Using vCenter Server to manage multiple hosts allows you to experiment with advanced management options, such as resource sharing, and all of the other options available within a virtual infrastructure.

Deploying vCenter Server provides many advantages over deploying a single, standalone ESX host. [Table 1](#) illustrates some of the advantages and compares multiple-host management with vCenter Server as opposed to single-host management.

Table 1. Comparison of Multiple and Single Host Management

Feature	vCenter Server	ESX
Scale of deployment	Multiple hosts	Single host
Capacity planning	Built in	Available separately
Server consolidation wizard	Built in	Available separately
Instant server provisioning	Available with templates and cloning	Not available
No downtime maintenance	Possible with vMotion	Not available
Load balancing	Possible with VMware DRS	Not available
Failover	Possible with VMware HA	Not available
Power savings	Possible with VMware Distributed Power Management (DPM)	Not available
Centralized access control	Available with Active Directory Integration	Not available

vSphere and vCenter Server

VMware vSphere is a suite of virtualization applications that includes ESX and vCenter Server.

vSphere uses virtualization to do the following tasks:

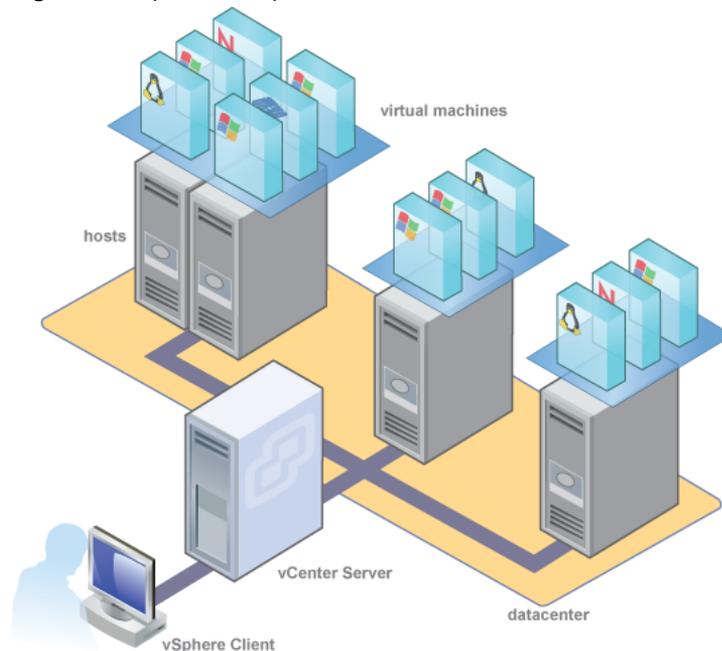
- Run multiple operating systems on a single physical machine simultaneously.
- Reclaim idle resources and balance workloads across multiple physical machines.
- Work around hardware failures and scheduled maintenance.

vSphere includes the following components in addition to the ESX host and vSphere Client you have already setup:

- VMware vCenter Server** vCenter Server unifies resources from individual hosts so that those resources can be shared among virtual machines in the entire datacenter. It accomplishes this by managing the assignment of virtual machines to the hosts and the assignment of resources to the virtual machines within a given host based on the policies that the system administrator sets.
- vCenter Server allows the use of advanced vSphere features such as VMware Distributed Resource Scheduler (DRS), VMware High Availability (HA), and VMware vMotion.
- Datacenter** A datacenter is a structure under which you add hosts and their associated virtual machines to the inventory.
- Virtual Machine** A virtual machine is a software computer that, like a physical computer, runs an operating system and applications. Multiple virtual machines can run on the same host at the same time. Virtual machines that vCenter Server manages can also run on a cluster of hosts.

Figure 2 shows the relationships among the basic components of vSphere and how vCenter Server can be used to manage hosts and run virtual machines.

Figure 2. vSphere Components



vCenter Server Installation

Install vCenter Server to manage multiple hosts.

To get started with vCenter Server quickly and manage the host you set up, you can install vCenter Server on a desktop or laptop. You must install vCenter Server on a Windows machine that has network access to the ESX host. For production use, VMware recommends that you install vCenter Server on a dedicated server system.

Before you install vCenter Server, make sure your system meets the minimum hardware and software requirements. vCenter Server requires a database. vCenter Server uses Microsoft SQL Server 2005 Express for small deployments with up to 5 hosts and 50 virtual machines. For larger deployments, VMware supports several Oracle and Microsoft SQL Server databases. Refer to the vSphere Compatibility Matrixes for the list of supported databases.

vCenter Server and the vSphere Client Hardware Requirements

The vCenter Server system is a physical machine or virtual machine with access to a supported database. The vCenter Server system must meet specific requirements. Also make sure that the vSphere Client machines meet the hardware requirements.

Minimum Requirements for vCenter Server

- CPU – Two 64-bit CPUs or one 64-bit dual-core processor.
- Processor – 2.0GHz or faster Intel or AMD processor. Processor requirements might be higher if the database runs on the same machine.
- Memory – 3GB RAM. Memory requirements might be higher if the database runs on the same machine.
vCenter Server includes a service called VMware VirtualCenter Management Webservices. This service requires 512MB to 4.4GB of additional memory. The maximum Webservices JVM memory can be specified during the installation depending on the inventory size.
- Disk storage – 3GB. Disk requirements might be higher if the database runs on the same machine.
- Microsoft SQL Server 2005 Express disk requirements – Up to 2GB free disk space to decompress the installation archive. Approximately 1.5GB of these files are deleted after the installation is complete.
- Networking – Gigabit connection recommended.

NOTE Installing vCenter Server on a network drive or USB flash drive is not supported.

See your database documentation for the hardware requirements of your database. The database requirements are in addition to the vCenter Server requirements if the database and vCenter Server run on the same machine.

vCenter Server Software Requirements

Make sure that your operating system supports vCenter Server. vCenter Server requires a 64-bit operating system, and the 64-bit system DSN is required for vCenter Server to connect to its database.

For a list of supported operating systems, see the *vSphere Compatibility Matrixes* at http://www.vmware.com/pdf/vsphere4/r40/vsp_compatibility_matrix.pdf on the VMware vSphere documentation Web site.

vCenter Server Prerequisites

Before installing vCenter Server, review the prerequisites.

- You must have the installation DVD or download the installation ISO image.
- Your hardware must meet the vCenter Server hardware requirements.
- If the machine on which you are installing vCenter Server has VirtualCenter installed, you might want to upgrade instead of performing a fresh installation of vCenter Server.

IMPORTANT If you want to keep your existing VirtualCenter configuration, see the *Upgrade Guide*.

- No Network Address Translation (NAT) must exist between the vCenter Server system and the hosts it will manage.

- For small-scale deployments, VMware recommends installing the bundled SQL Server 2005 Express database on one of the supported operating systems. If SQL Native Client is already installed, uninstall SQL Native Client before you begin the vCenter Server installation.
- The system that you use for your vCenter Server installation will belong to a domain rather than a workgroup. If assigned to a workgroup, the vCenter Server system is not able to discover all domains and systems available on the network when using such features as vCenter Guided Consolidation Service. To determine whether the system belongs to a workgroup or a domain, right-click **My Computer** and click **Properties** and the **Computer Name** tab. The **Computer Name** tab displays either a Workgroup label or a Domain label.
- During the installation, the connection between the machine and the domain controller must be working.
- The computer name cannot be more than 15 characters.
- The NETWORK SERVICE account is required on the folder in which vCenter Server is installed and on the HKLM registry.
- The DNS name of the machine must match the actual computer name.
- Make sure the system on which you are installing vCenter Server is not an Active Directory domain controller.
- On each system that is running vCenter Server, make sure that the domain user account has the following permissions:
 - **Member of the Administrators group**
 - **Act as part of the operating system**
 - **Log on as a service**
- Assign a static IP address and host name to the Windows server that will host the vCenter Server system. This IP address must have a valid (internal) domain name system (DNS) registration that resolves properly from all managed hosts.
- If you install vCenter Server on Windows Server 2003 SP1, the disk for the installation directory must have the NTFS format, not the FAT32 format.
- vCenter Server, like any other network server, should be installed on a machine with a fixed IP address and well-known DNS name, so that clients can reliably access the service. If you use DHCP instead of a static IP address for vCenter Server, make sure that the vCenter Server computer name is updated in the domain name service (DNS). One way to test this is by pinging the computer name. For example, if the computer name is `host-1.company.com`, run the following command in the Windows command prompt:


```
ping host-1.company.com
```

If you can ping the computer name, the name is updated in DNS.

Install vCenter Server

vCenter Server allows you to centrally manage hosts from either a physical or virtual Windows machine, and enables the use of advanced features such as VMware Distributed Resource Scheduler (DRS), VMware High Availability (HA), and VMware vMotion.

Prerequisites

See [“vCenter Server Prerequisites,”](#) on page 16.

Procedure

- 1 In the software installer directory, double-click the `autorun.exe` file at `C:\<installer location>\.`
- 2 Click **vCenter Server**.

- 3 Choose a language for the installer and click **OK**.
This selection controls the language for only the installer.
- 4 When the Welcome screen appears, click **Next**.
- 5 Review the End-User Patent Agreement and click **Next**.
- 6 Read the license agreement. If you agree to the terms, select **I agree to the terms in the license agreement** and click **Next**.
- 7 Type your user name, organization, and vCenter Server license key, and click **Next**.
If you omit the license key, vCenter Server will be in evaluation mode, which allows you to use the full feature set. After installation, you can convert vCenter Server to licensed mode by entering the license key using the vSphere Client.
- 8 Click **Install SQL Server 2005 Express instance (for small-scale deployments)**.
This database is suitable for small deployments of up to 5 hosts and 50 virtual machines.
- 9 Select **Use SYSTEM Account** and click **Next**.
- 10 Accept the default destination folders and click **Next**.
- 11 Select **Create a standalone VMware vCenter Server instance** and click **Next**.
- 12 For each component that you install, accept the default port numbers and click **Next**.
If another service is already using the defaults, specify alternative port and proxy information.
- 13 Select the amount of memory to allocate to the vCenter JVM in Tomcat, according to the number of hosts in your environment.
You can adjust this setting after installation if the number of hosts in your environment changes.
- 14 Click **Install**.
Installation might take several minutes. Multiple progress bars appear during the installation of the selected components.
- 15 Click **Finish**.

What to do next

After you complete the installation, use the vSphere Client to connect to vCenter Server.

Start the vSphere Client and Log In to vCenter Server

When you connect to vCenter Server with the vSphere Client, you can manage vCenter Server as well as all of the hosts and virtual machines that it manages.

Procedure

- 1 Select **Start > Programs > VMware > VMware vSphere Client**.
- 2 Log in to vCenter Server as the administrator.
 - a Enter the IP address or vCenter Server name.
 - b Enter your Windows administrator user name.
 - c Enter your Windows administrator password.
- 3 Click **Login**.

You are connected to vCenter Server.

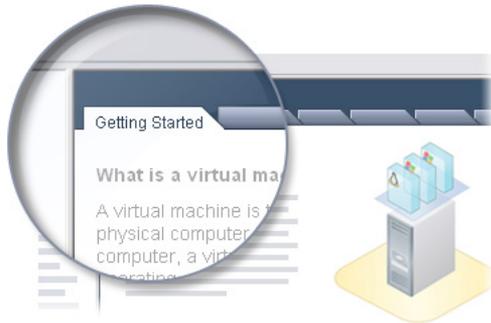
What to do next

Use the **Getting Started** tabs to create a datacenter.

Setting Up a Basic Inventory with the Getting Started Tabs

When you connect to a vCenter Server instance with no objects in the inventory, the **Getting Started** tabs in the vSphere Client provide a wizard to help you set up a basic inventory quickly. There are no objects in the inventory when you connect to vCenter Server for the first time after installation.

Figure 3. vSphere Client Getting Started Tab



Setting up a basic inventory with the **Getting Started** tabs involves the following tasks:

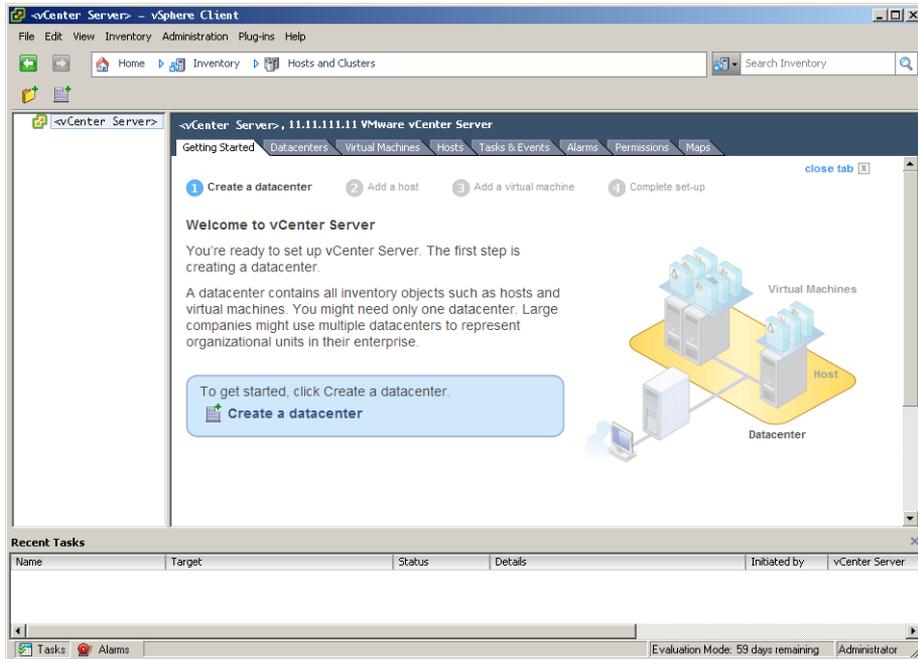
- Creating a datacenter
- Adding the host to the datacenter
- Creating a virtual machine

The **Getting Started** tabs wizard appears only if there are no objects in the inventory. After you have set up the basic inventory, the **Getting Started** tabs continue to provide information about the selected inventory object but no longer provide inventory setup wizard help.

Create a Datacenter

The first step in setting up your vSphere environment is to create a datacenter.

If you are logging in for the first time, you should have no inventory items in the Inventory panel.

Figure 4. vCenter Server with No Inventory Objects and the First Step in the Getting Started Tab Wizard**Procedure**

- 1 On the **Getting Started** tab in the Information panel, follow the on-screen instructions and click **Create a datacenter**.

This creates a datacenter.

- 2 Name the datacenter by selecting it and entering a name.

What to do next

After you create a datacenter, add the ESX host to it.

Add a Host

When you add a host to a datacenter, vCenter Server manages it.

Procedure

- 1 In the Inventory panel, select the datacenter you created if it is not selected.
- 2 On the **Getting Started** tab, follow the on-screen instructions and click **Add a host**.
 - a Type the IP address or name of the ESX host in the **Host** name field.
 - b Enter the Username and Password for a user account that has administrative privileges on the selected managed host.
- 3 Click **Next**.
- 4 To confirm the Host Summary information, click **Next**.
- 5 Assign an existing license key to the host and click **Next**.
- 6 Click **Next**.
- 7 Select a location from the list of inventory objects and click **Next**.

- 8 Click **Finish** to complete adding a host.

The vSphere Client displays a progress bar in the Recent Tasks pane while the host is added. Adding a new host can take a few minutes and the Status percentage might appear to pause at different increments during the process.

When a new host is added, the host might appear as disconnected until vCenter Server completes the task. After the host is added, the status changes to connected, indicating that the host connection is complete.

The host you installed and setup earlier and the virtual appliance you imported are added to the inventory managed by vCenter Server.

What to do next

You already have a virtual machine in the inventory because you added the host with the virtual appliance to vCenter Server. Try to create a new virtual machine.

Create a Virtual Machine

Creating a virtual machine is like building a computer. After you finish creating a virtual machine, you must install a guest operating system, applications, and VMware Tools on it.

Prerequisites

Make sure that you have an ISO image and a license for the operating system to install on the virtual machine.

Procedure

- 1 In the Inventory panel, select the host machine.
- 2 Click **Create a new virtual machine** on the **Getting Started** tab.
- 3 Select **Typical** and click **Next**.
- 4 Type a virtual machine name and click **Next**.
- 5 Select a datastore in which to store the virtual machine files and click **Next**.

The datastore must be large enough to hold the virtual machine and all of its virtual disk files.

- 6 Under **Guest Operating System**, select the operating system family (Microsoft Windows, Linux, Novell NetWare, Solaris, or other) and select the version from the drop-down list.

This is the operating system for your virtual machine. Base your choice on your planned use of the virtual machine.

NOTE The wizard does not install the guest operating system. The New Virtual Machine wizard uses this information to select appropriate default values, such as the amount of memory needed.

- 7 Specify the size of the virtual disk and click **Next**.
Enter the disk size in megabytes (MB) or gigabytes (GB). The virtual disk must be large enough to hold the guest operating system and all of the software that you intend to install, with room for data and growth.
- 8 On the Ready to Complete New Virtual Machine page, review your selections and click **Finish** to create the new virtual machine.

After you create the virtual machine, install a guest operating system and VMware Tools on it. You can find instructions for how to install a guest operating system and VMware Tools in the vSphere Tutorial accessible from the vSphere Client. Select the virtual machine and follow the links on the **Getting Started** tab to learn how to install an operating system.

Where to Go Next

You have set up your vSphere environment. From here, you can do the following:

- Expand your virtual infrastructure capacity by adding more hosts and storage.
- Expand your virtual datacenter by creating and importing new virtual machines.
- Perform a consolidation of your physical servers using the Consolidation wizard.

For more information about how to evaluate the features and benefits of vSphere, go to http://www.vmware.com/go/vi_evalresources.

The vSphere Tutorial

The vSphere tutorial contains information about many of the basic vSphere components and tasks.

You can access the tutorial through the **Explore Further** links on the **Getting Started** tabs in the vSphere Client when you want learn more about the object selected in the inventory.

You can also access the tutorial from the **Help** menu in the vSphere Client.

vSphere Documentation

Refer to the VMware vSphere 4.1 documentation for information on advanced host and vCenter Server configuration, setup for larger deployments for production environments, as well as information on advanced vSphere features.

The vSphere documentation consists of the combined vCenter Server and ESX documentation set. To access the current versions of this manual and other books, go to the vSphere 4.1 Documentation page on the VMware Web site.

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