white paper

How to Install ESX Server 3.5 and ESXi as a VM on VMware Server 2.0

Title:	How to Install ESX 3.5 and ESXi as a VM on VMware Server 2.0
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Content Overview:

- Step by step install guide for VMware ESX Server 3.5 and ESXi as a VM on VMware Server 2.0

1.0 Introduction

VMware Server is a free hosted virtualization platform that allows multiple virtual guests to be run on a single physical host. The physical host does not have to be server class, it can be a standard Windows desktop machine.

VMware ESX is a bare metal, enterprise class hypervisor. It requires strict hardware to be run. This can make it difficult for people who wish to learn the technology, who do not have access to enterprise class servers.

VMware ESXi is a free, 32MB diskprint version of the bare metal ESX hypervisor. VMware ESXi allows production applications to be run for free on a single form factor with the benefits of a virtualized environment.

This whitepaper discusses how to run VMware ESX 3.5 / ESXi on VMware Server.

Note: This configuration is not supported by VMware. It will however, allow basic functionality for test, demonstration and training.

2.0 Pre-Requisites

- Windows XP \ Vista based PC with Intel VT or AMD-V virtualization extensions enabled in the BIOS, with at least 1GB unused RAM and administrative rights
- Download VMware Server (free) - http://www.vmware.com/products/server
- Download VMware ESXi (free) - http://www.vmware.com/products/esxi

Note: The minimum CPU requirement is a multi-core processor with either Intel-VT or AMD-V extensions. Quote from jmattson (VMware): *"Intel VT-x is supported on all VT-capable EM64T processors (e.g. late model P4, recent Xeons, Core 2 or Core i7). In particular, it is not supported on 32-bit Core processors.*
AMD-V is supported on all AMD64 Family 10H or greater processors (e.g. Phenom or Barcelona). It is not supported on Family 0FH processors.
To run ESX in a Workstation 6.5 VM, you need a supported VT-x or AMD-V processor."

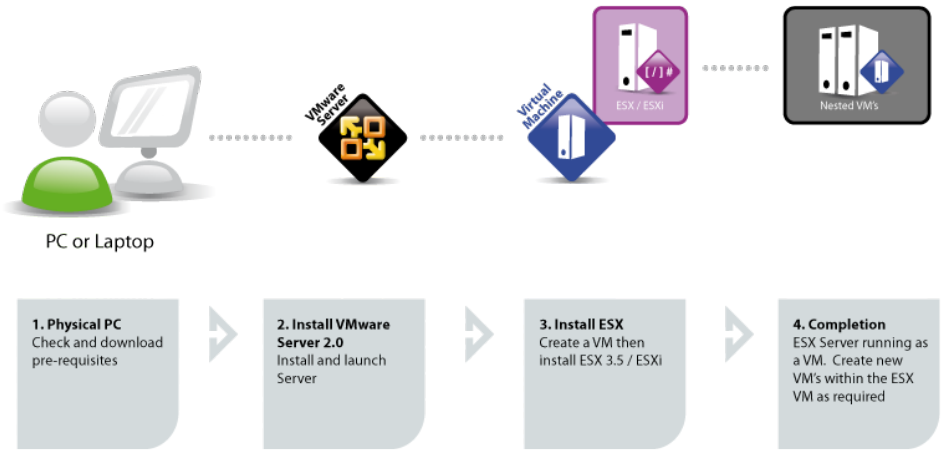

Illustration 1-1: Solution Overview

3.0 Installation

The installation of VMware Server is straightforward and performed using a standard wizard based interface. A reboot is required at the end of the installation process.

Note: VMware Server cannot be installed on a machine that is already running VMware Workstation. An FAQ on VMware Server is available here: http://www.vmware.com/products/server/faqs.html.

3.1 VM Configuration

1. Once VMware Server is installed, launch VMware Server (**Start Menu** -> **Programs** -> **VMware** -> **VMware Server** -> **VMware Server Home Page**).

2. From the management page, select **Virtual Machine** and click **Create Virtual Machine.**

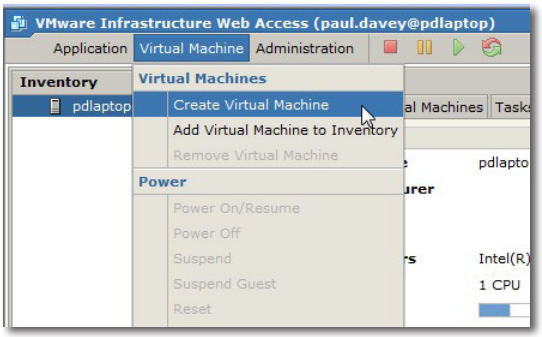

Figure 3-1: Create a new virtual machine

3. Use the following information in the **Create Virtual Machine wizard** to configure the ESXi VM.

Name	Configuration
Name	ESXi / ESX3.5 (alter to suit requirements)
Guest Operating System	Linux Operating System | Other 2.6x Linux (64-bit)
Memory	2048MB (minimum is 1024MB, adjust to suit the physical hardware)
CPU Count	1
Hard Disk	100GB
Network Adaptor (For Service Console/vMotion)	Bridged (adjust to suit needs)
CD\DVD	Use a Physical Driver
Floppy Drive	Dont add a Floppy Drive
USB Controller	Don't add a USB Controller

Note: Before clicking Finish, expand the **More Hardware** section and add the additional hardware as shown in **Figure 3-2**.

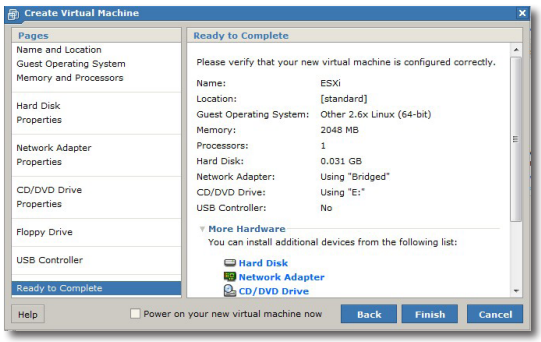

Figure 3-2: Add additional hardware at the end of the wizard

Name	Configuration
Network Adaptor (for VM Network)	Bridged

Note: This second network adaptor can be configured from the VI Client post install.

4. Once the VM is built, select it in the Inventory pane, and click **Configure VM** from the commands section.

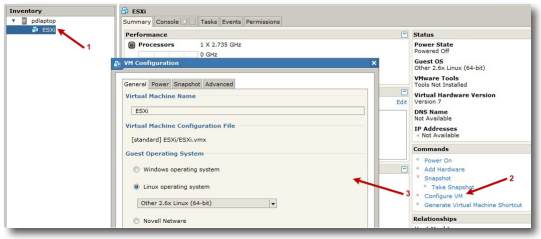

Figure 3-3: Editing VM configuration

5. Select the **Advanced** tab and from within the **Configuration Parameters** section, add a new entry for each of the following Name and Value pairs.

Name	Value
monitor_control.restrict_backdoor	TRUE
monitor_control.vt32	TRUE

Note: For AMD systems, additionally add the following entry

Name	Value
monitor_control.enable_svm	TRUE

6. Select the **Power** tab. Tick the option **Enter Bios setup screen the next time this virtual machine boots**.

3.2 Configuring the BIOS and Install ESX \ ESXi

1. Select the **Console** tab and click the **green power on** icon.

2. When prompted, click the console screen to view the virtual machine.

3. From the **Devices** menu, select the **CD/DVD Drive** and select **Disconnect** on server. Select **CD/DVD Drive** again and select **Connect to Disk Image File (iso)**. Select **Yes** when prompted and connect to the ESX installation ISO.

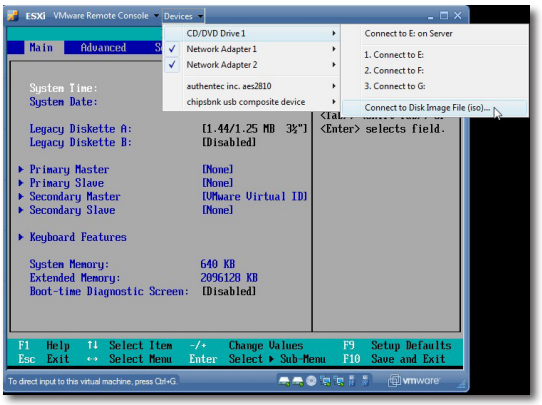

Figure 3-4: Connect the ESX installation ISO

4. Within the **BIOS**, select the **Advanced** tab, then **I/O Device Configuration**. Set **Serial Port A**, **Serial Port B**, **Parallel Port** and **Floppy Disk Controller** to **Disabled**.

5. From the **Advanced** tab, set **Large Disk Access Mode** to **Other**. Press **F10** to exit the BIOS and save changes. Select **Yes** when prompted.

The ESX installation process will now start. Follow any on-screen instructions to continue, inputting information where required.

4.0 Accessing the ESX \ ESXi Host

1. Once the installation is complete and all reboots have taken place, open a **web browser** window.

2. From the **web browser**, navigate to the ESX or ESXi host by entering the **ip address** in the navigation bar.

   http://<ESX_host_ip_address>

   Note: The IP address can be obtained from viewing the ESX / ESXi host screen in the browser.

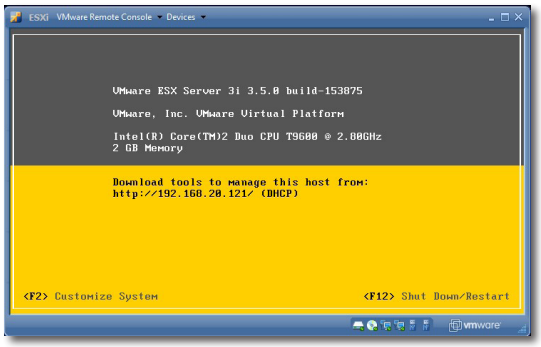

Figure 4-1: Obtaining the ESXi Host IP Address

Figure 4-2: Obtaining the ESX Host IP Address

3. Select the **Download VMware Infrastructure Client** link. Download and install the client on the required machine.

Figure 4-3: Downloading the VMware Infrastructure Client

4. Once installed, launch the client from **Start** -> **Programs** -> **VMware** -> **VMware Infrastructure Client**. Connect to the ESX host.

5.0 Configuring the ESXi Root Password

1. From the ESXi console screen, press **F2**.

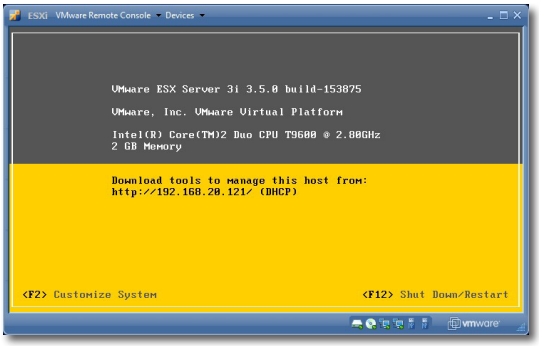

Figure 5-1: Accessing the ESXi customisation screen

2. Select the **Configure Root Password** option (use the cursor keys to navigate around and enter to select). Enter the required Root account password.

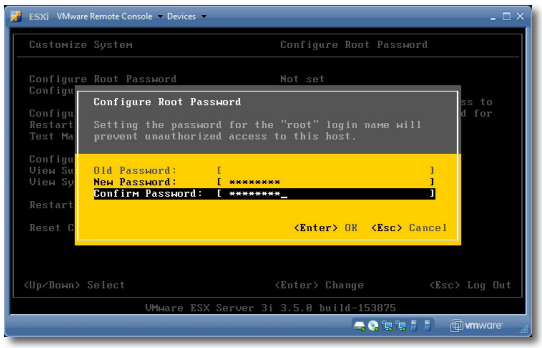

Figure 5-2: Setting the Root account password

3. Press the escape key to log out of ESXi.

This concludes the white paper.

About Xtravirt

Xtravirt is a knowledge-based company that delivers its expertise in virtualization online and in person. We have developed a reputation for astute leadership and expertise through our work with an impressive array of organisations. It is this real-world experience that drives our ability to provide independent, current and free advice online.

We work with organisations whose IT staff are frustrated with how hard it is to find detailed information and skills around virtualisation. We help our clients deliver the true benefits of virtualization, resulting in cost and time savings.

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Awarded to Xtravirt Co-Founder, Gavin Jolliffe, 2009

References

1. Nil

Useful Links

1. VMware Server, http://www.vmware.com/products/server
2. VMware ESXi (free edition), http://www.vmware.com/products/esxi

Tags

ESXi, VMware, Server, Free, ESX in Server, install, guide, console, client