VMware ESX Server 2

Installation Worksheet

This worksheet will help you prepare for the installation of VMware™ ESX Server™. For a more complete set of instructions see the *VMware ESX Server 2 User's Manual.*

Storage

Before installing ESX Server, set up your disk hardware according to your needs. If you have a hardware RAID controller, set up your RAID sets. Make sure you know which disks and RAID sets will be used for the ESX Server software, the virtual machines and any other data.

Install Supplemental Drivers

Occasionally, updated drivers for SCSI or RAID controllers are needed for installation on newer servers. If you have such a driver, have the disk ready during the installation.

Select Driver Disk to use a VMware driver disk, or select Continue.

Install or Upgrade

If you already have a previous version of ESX Server installed on the system and would like to upgrade select upgrade, otherwise select install.

Disk Setup

There are three choices for partitioning the disk — Disk Druid, fdisk and Automatic Partitioning.

Automatic Partitioning

Automatic Partitioning creates a default partition table and allows you to manually edit the table with Disk Druid. A few words of caution are required regarding Automatic Partitioning. It does not follow the recommendations below, so you may want to hand edit some of the partitions. Also, /home is not created at all and neither is an extended partition. This causes difficulties later in the process if you try to use the VMware Management Interface to create /home and a core dump partition.

The best way around this, if you choose to use automatic partitioning, is to create /home manually right after the Automatic Partitioning finishes. Besides creating /home, this will force the creation of an extended partition, which is needed later.

Manually Setting Partition Sizes

You will create several partitions for the server installation. The instructions below will provide some guidance as to the recommended sizes:

Root Partition

The root partition (/) is used to store most of the files for the ESX Server software. The recommended size is 1.8GB.

Root partition size _____ MB

Boot Partition

The boot partition (/boot) stores the kernel files for the console operating system and the VMware kernel. The recommended size is 25MB.

Boot partition size _____ MB

Home Partition

The home partition (/home) is used to store the virtual machine configuration and log files. It is also the default location for suspended state files for the virtual machines. To reserve enough space for all of the virtual machines you plan to suspend to their configuration directories, you should allocate 10MB plus the memory size for each virtual machine. Note that suspended state files for virtual machines with more than 2GB of RAM must be suspended to a VMFS partition.

Home partition size _____ MB

Swap Partition

The swap partition is used by the Console Operating System and is normally 1 to 2 times the size of the memory allocated to the Console Operating System. The Console Operating System memory size can be determined as follows:

- 1–4 virtual machines — 128MB
- 5–8 virtual machines — 192MB
- 9–16 virtual machines — 272MB
- 17–32 virtual machines — 384MB
- More than 32 virtual machines — 512MB

Swap partition size _____ MB

To learn more about best practices for disk allocation within ESX Server, please see the *VMware ESX Server 2 User Manual* or the VMware support knowledge base, Answer ID: 904

Boot Loader

The installation process asks you where you would like to place the boot loader. Choose MBR unless you have a system management partition you want to be able to boot (for example, if you are using the Compaq SmartStart utilities).

- Master boot record (MBR) - Default
- First sector of boot partition

Network Configuration

This is the network configuration for the Console Operating System. While it is possible to use DHCP, using a static IP address is recommended. For more information, see the "Console Operating System" chapter of the *VMware ESX Server 2 User's Manual*.

- Use bootp/dhcp
- Use static IP

IP address: _____

Netmask: _____

Gateway: _____

DNS server (primary): _____

DNS server (secondary): _____

Hostname

Enter a name for the computer

Hostname: _____

Time Zone Selection

Will the hardware clock be set to GMT?

- Yes
- No

Select the time zone for this server. _____

Accounts and Passwords

Root Account

The root account on the console operating system is used to administer the ESX Server computer. The password for this account is a critical part of ESX Server security and should be chosen with care. You should also record the password, as it cannot be recovered if lost.

Root password: _____

User Accounts

It is recommended that you create a non-root user for the purpose of creating and using virtual machines later. You may do this at the Add User screen. Often this user is generic — for example, vmware.

User ID: _____

Password: _____

Full Name: _____

Installation Complete

Once the installation process is complete you will need to reboot the system to continue with the ESX Server configuration.

Reboot

The ESX Server install CD will be automatically ejected during shutdown.

ESX Server Configuration

Once the server has rebooted, you should connect to the server using a Web browser to complete the system configuration. You will be prompted with a Security Alert. Click Yes, to accept the certificate and proceed to the login page; login as the root user.

The VMware ESX Server Configuration Wizard will guide you through configuring the system.

End User License Agreement

Read and accept the end user license agreement (EULA).

You must enter the serial number provided by VMware before you can start any virtual machines.

Serial number: _____-_____-_____-_____

If you are installing VMware Virtual SMP™ for ESX Server you are required to enter a serial number specifically for Virtual SMP.

Serial Number: _____-_____-_____-_____

Startup Profile

ESX Server requires that devices be allocated between the Console operating system and the virtual machines — and occasionally shared.

Creating a startup profile allows you to configure the resources you wish to allocate to the Console Operating System.

System Startup

Reserved memory

The memory allocated exclusively to the console operating system varies based on the number of concurrently running virtual machines. Use this list to determine the correct amount.

- 192MB (up to 8 virtual machines)
- 272MB (up to 16 virtual machines)
- 384MB (up to 32 virtual machines)
- 512MB (more than 32 virtual machines)

Console Operating System memory: _____ MB

Hardware Profile

Device Allocation

Here is a list of your storage controllers (SCSI/RAID/Fibre Channel) and Ethernet adapters. Indicate whether each device should be assigned to the Console Operating System, assigned to the virtual machines or shared.

The bus and device number, if known, may help distinguish identical devices. As a general rule, the first Ethernet adapter is assigned to the console operating system.

Ensure that you reserve that adapter for the Console Operating System or you may lose network connectivity when you reboot.

Note that network cards may not be shared between the Console Operating System and virtual machines.

For more information on device allocation, see the chapter: "Installing, Configuring and Upgrading ESX Server" in the *VMware ESX Server 2 User's Manual*.

After allocating devices, click Next to reboot the computer.

Once the system has rebooted, log back in and continue configuring the system

Storage Configuration

Create and modify virtual machine file system (VMFS) volumes suitable for storing virtual disk files. Virtual disks are created within VMFS partitions.

It is also recommended that you create a VMware core dump partition. This partition will be used for debugging purposes in the event of a VMkernel crash.

For more information on the VMFS file system and its uses, see the chapter: "Installing, Configuring and Upgrading ESX Server" in the *VMware ESX Server 2 User's Manual*.

Swap Configuration

A swap file allows virtual machines to use more memory than is physically available. It is recommended to create a swap file at least the size of installed memory plus any overcommitted allocations of memory.

For example if the system contains 2GB of memory and you have allocated 2.5GB of memory to virtual machines then it is recommended to create a vmswap of 2.5GB.

Network Configuration

Choose the network speed and duplex mode for the network cards assigned to the VMware kernel. The default is 100Mb/full duplex.

- 10/half
- 100/half
- 1000/half
- 10/full
- 100/full
- 1000/full

Security Settings

ESX Server includes four security settings that may be changed while the server is running. Select the choice most appropriate for your environment.

Normal – Do not allow unencrypted management. Enable FTP, Telnet and NFS file sharing services

High – Do not allow unencrypted management. Disable FTP, Telnet and NFS file sharing services.

Low – Allow unencrypted management. Enable FTP, Telnet and NFS file sharing services.

Custom – Specify access encryption and enabled file sharing services

Installation Completed

This completes the installation and configuration of ESX Server.

You are now ready to create virtual machines. See the chapter "Configuring and Running Virtual Machines" in the *VMware ESX Server 2 User's Manual for more information.*

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