



Guide to Creating Virtual Machines (VM) Using VMware ESX Server 4.1

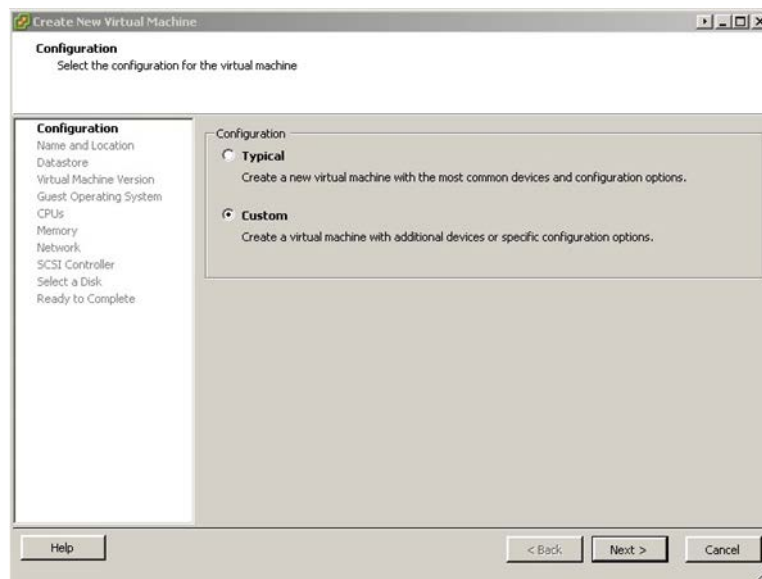
Applies to:	SmartZone Virtual Machines
Objective:	The purpose of this guide is to highlight the steps necessary to create a VM on which to install a SmartZone server. Currently, only VMware ESXi 4.1 and ESX 4.1 are officially supported by virtual environments.
Pre-Requisites:	<ul style="list-style-type: none"> • The person responsible for the creation of the VM has a high degree of technical proficiency for creation of a virtual environment, installation of MS Windows® Server, SmartZone prerequisites, and SmartZone. • The person creating the VM has a licensed copy of MS Windows® Server 200x either on a DVD or .iso file available and loaded in the DVD drive or running via an .iso player during the VM creation process. • The person creating the VM has a pre-existing VMware ESX 4.1 or ESXi 4.1 production installation available with the necessary Minimum System Requirements met for an additional VM to be created (as defined below in Table 1). • The person responsible for creating a new VM has access to the VMware ESX server with the necessary rights to access the Management URL of the VMware server to 1) Download the vSphere Client and 2) Install the vSphere Client application to a Client Machine prior to creation of a new VM.

Description

Creating VMs on both VMware server types should be similar with minor variations. All Minimum System Requirements need to be met for SmartZone to operate when installing SmartZone in a virtual environment. Connectivity to the ESX server as well as creation of virtual machines is completed using a desktop application on a Client Machine called vSphere Client. After a VM is created, access to the VM can also be accomplished via RDP (Remote Desktop Protocol).

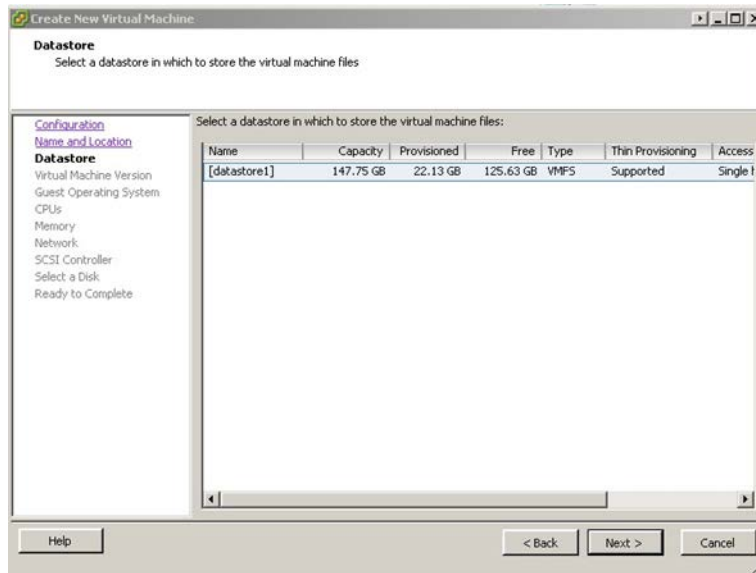
Performing the Procedure

1. To create a new VMware ESX 4.1 VM, the person responsible for VM creation will need access to the existing VMware ESX 4.1 environment via the vSphere Client desktop application. The application, once downloaded and installed via the Management URL of the VMware ESX server, it should be available on a Client Machine by clicking the **MS Windows Start** button, then navigating to **Programs, VMware, VMware vSphere Client**.
2. Once open, click the **File** menu, then select **New**, then **Virtual Machine**.
3. For Configuration, select **Custom** and then click **Next**.

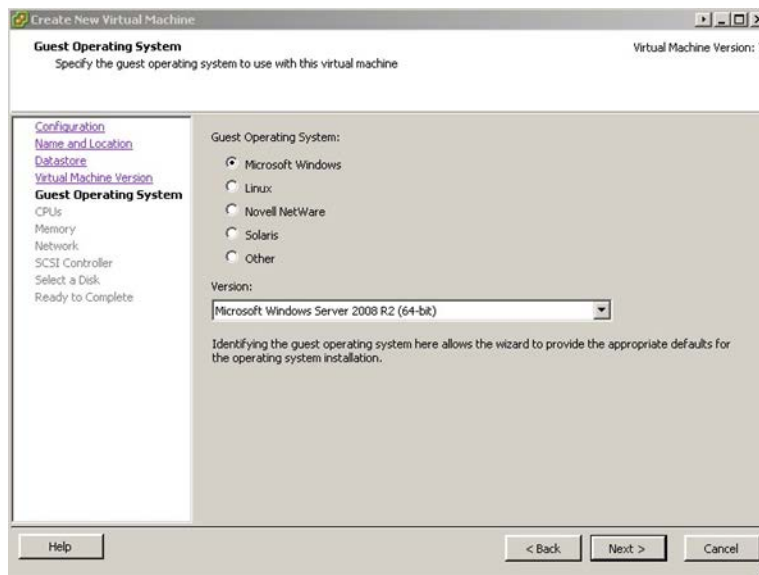


4. Name the VM that would describe the applications on it (such as Windows 2008 SmartZone 7), then click **Next**.

- For the datastore, select the default or choose a secondary location if one is available such as another RAID set, and click **Next**.

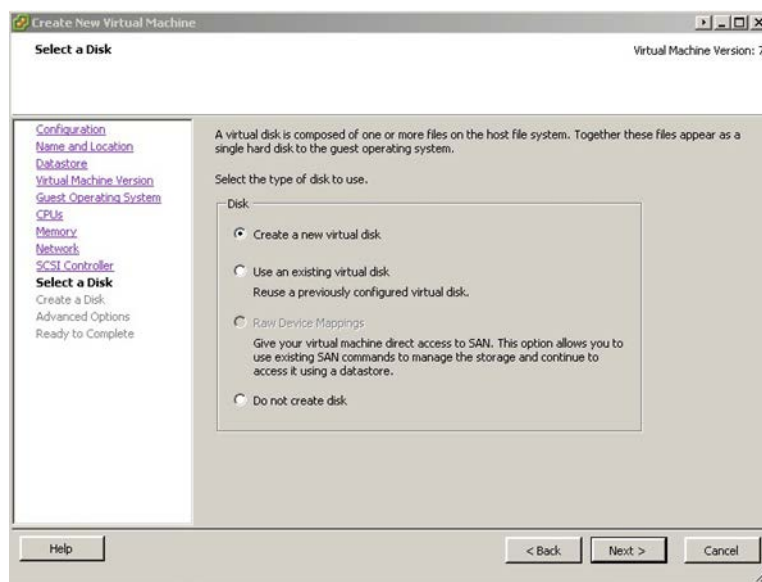


- For Virtual Machine Version, select the option that best fits the installation needs (default is Virtual Machine Version: 7).
- Choose the Guest Operating System as Microsoft Windows, then from the Menu select the option planned for the VM such as Microsoft Windows Server 2008 R2 (64-bit), and click **Next**.

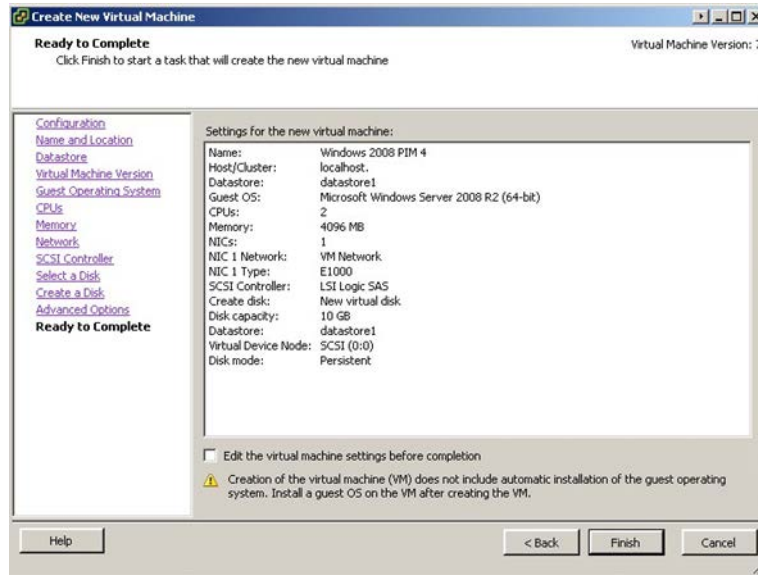


- Select the number of virtual processors based on what is supported by the guest OS, and click **Next**.

9. For Memory Configuration, select the appropriate amount for the VM based on the needs of the Operating System and Minimum System Requirements of SmartZone, and click **Next**.
10. For Network, choose the appropriate network adapter and leave Connect at Power On enabled, and click **Next**.
11. For SCSI controller, use the option that is suited to your server (best to leave at default unless the install calls for something different), and click **Next**.
12. For Virtual Disk, select **Create a new virtual disk**, and click **Next**. For Capacity, allocate the amount of space needed to run both the VM Operating System and application to be hosted on the VM (e.g., at least 20GB). Leave at default and click **Next** unless a secondary datastore was created earlier, and click **Next**.



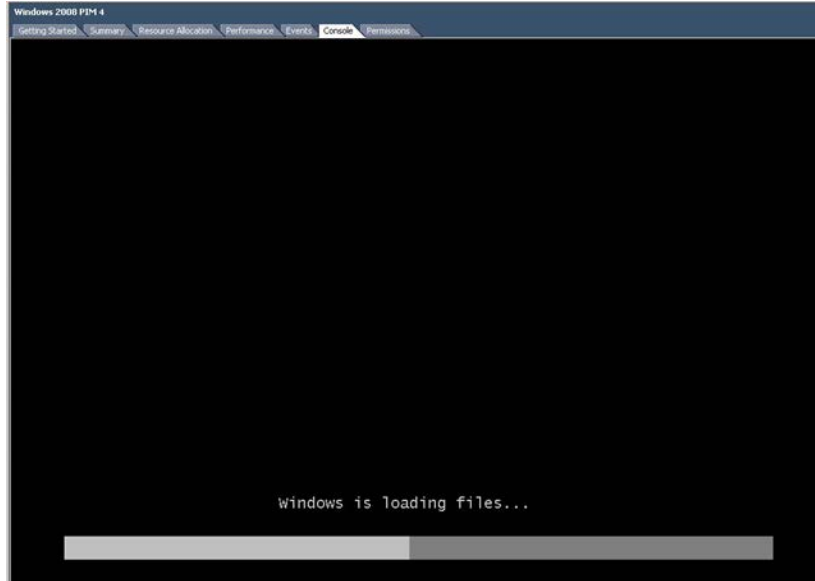
13. For Virtual Device Node, do not change unless the installation calls for it, and click **Next**.
14. At the Settings for the new virtual machine wizard summary screen, review, make changes if need be, and click **Finish** when completed. It will take a moment or two to create the VM.



15. Once the VM is created, under the Inventory window you'll see the name of the VM (e.g., Windows 2008 SmartZone 7). Load the Microsoft Windows Server 200x Installation DVD in the Client Machine's DVD drive.

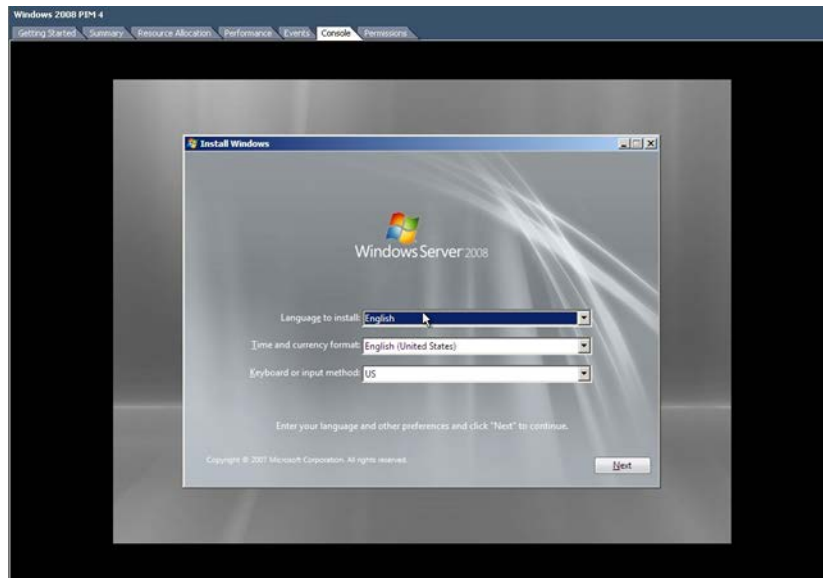
Click the **Console Tab**. Click the green **Start Arrow** on the toolbar above. As the VM is booting, hover the mouse over the last icon on the toolbar and find Connect/Disconnect the CD/DVD devices of the virtual machine and click on it. Connect CD/DVD Drive 1 to the CD/DVD drive of the Client Machine (normally D:\ or E:\).

If the VM still attempts a PXE boot or states Operating System not found, click within the VM window and hit **Enter** on the keyboard. That should now launch the Windows Server installation process.



16. After the **Enter** button on the keyboard is pressed, the VM should boot and find the Windows Server 200x Installation DVD. Follow MS Windows® Server 200x Installation procedures.

Note: *If at any point you need to exit the VM installation window temporarily, click Ctrl + Alt simultaneously to get control of the mouse back.*



17. Once the Windows Server has been installed, install VMware Tools.

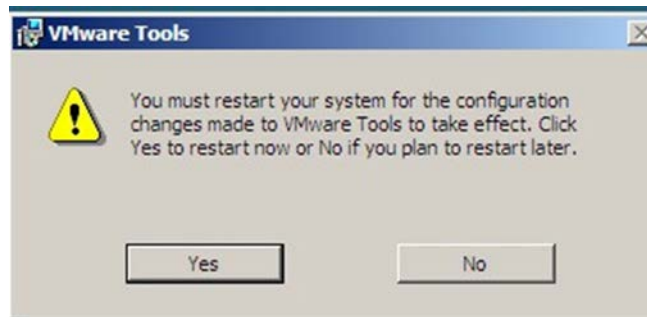
Note: It is important to install VMware Tools as it provides enhanced graphical support, shared folders, and drag & drop between Client Machine and the Guest VM.

18. This is completed by pressing **Ctrl + Alt** to exit out of the VM window and going to the **Inventory, Virtual Machine, Guest** menu and selecting the **Install/Upgrade VMware Tools** option. When a pop-up window for setup.exe displays, click **run setup.exe**. When prompted to Install VMware Tools, select **OK**.

19. Select **Next** when the installation wizard prompts for it. Select **Complete installation**, and then click **Next**. Click **Install** to begin the procedure. After a few moments, VMware Tools will be installed. Click **Finish**. At request to reboot, reboot the VM.

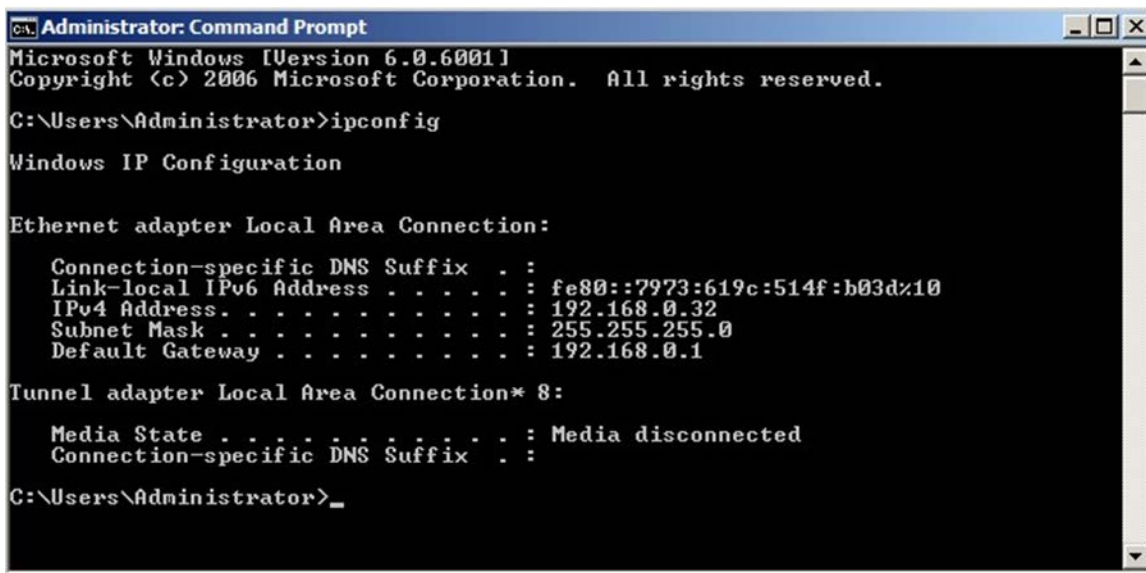
20. Once the VM comes back online, you'll notice you can now drag your mouse in/out of the VM window freely between the Client Machine and VM without having to click **Ctrl + Alt** to release the cursor. To now log in to the console of the VM, select the menu item **Inventory, Virtual Machine, Guest**, then **Send Ctrl Alt Delete**. Notice the Windows Server is now at a log in prompt. Click the VM window and enter the password as supplied at installation in Step 16. Change display preferences as seen fit.





21. To enable Remote Desktop (RDP) to the server, right-click the **Start** button and choose **Explore**. Find **Computer**; right-click and select **Properties**, then select the **Task of Remote Settings**. Under **Remote Desktop** at the bottom select **Allow connections from computers running any version of Remote Desktop**.

Accept the firewall exception and click **OK** twice. Find the IP address of the VM server by going to **Start**., At the Search window, type **cmd** and hit **Enter**. Type **ipconfig** and hit **Enter**.



22. Now that the Windows Server is online and you have the IP address, you may drag/drop files from your Client Machine to the Guest VM. *If Shared Folders are not enabled, you may also at this point Remote Desktop (RDP) into that VM using the IP address that was displayed in the VM in Step 20 above.*

To add the local disk of the host machine to the Remote Desktop session, bring up RDP by going to the Windows Start button, then **Programs, Accessories, Remote Desktop Connection**.

For **Computer**, type in the IP address of the newly created VM (192.168.0.32 in the example above), then click the **Options** button on the bottom left of the screen. The third tab over will

be Local Resources. Select the **More** button under Local devices and resources and click all the local or network drives that will apply from the Client Machine (make sure to select the drive that contains the SmartZone prerequisite files).



Once the SmartZone prerequisite files are copied over to the VM (Java JRE and MySQL), you can begin installation of SmartZone. After that installation process is completed, the procedure to shut down the VM is the same as a normal MS Windows server (Start, Shutdown). After the RDP session is terminated, the vSphere Client window will still be open, shut down that access to the server the same way (Start, Shutdown). After the VM is shut down, you can close the vSphere Client via the File menu and Exit.

Note: By doing this, you are shutting down the SmartZone server and client access to it. You are **not** shutting off the VMware ESX server.

End State

You have created a Virtual Machine within SmartZone.