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Document history

| Version | Date | Editor | Remarks |
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| 0.1 | 7-jan-2008 | R. Lam | Draft |
| 0.2 | 9-jan-2008 | R. Lam | Finished the guide and published it |
| 0.3 | 19-aug-2008 | R. Lam | Rewrite some parts of guide |
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| 0.5 | 20-may-2009 | R. Lam | Rewrite document for ESX 4i |

VMinfo.nl: Create an ESX 4i USB boot key

With the release of ESX 3i I found a way to extract the image file and put it on a USB key so the ESX host could boot from this USB key.

Now that ESX 4 have been release this week I checked out is it is still possible to extract the base image and put it on a USB key, and yes it's working fine just like the good "old" 3i version.

The steps to extract and put the 4i image on a USB key is basically the same as it was with 3i only some small changes where needed, however I have updated this manual for use with version 4i.

The "old" guide for 3i is still available on my website.

One of the advantages of having ESX pre-installed on a USB key is that you don't need to have an hard drive installed in the system that you want to use ESX on, just use shared storage (SAN/NAS) for running the vm's and you're done.

One other advantage of using ESX on a USB key is that you don't need to install ESX, just plug in the USB key and boot up the system from the USB port and you're ready to use ESX, no installation is required it saves you a lot of deployment time.

I have to say that VMware is not supporting this feature so be careful with using this on production machines. It's working fine however don't expect support from VMware if you are using this way of running ESX.

If you want to use this feature for production environments, you should take a look at solutions from your hardware vendor like Dell, HP and IBM they have solutions that will be supported by both VMware and the hardware vendor itself, those solutions are work more or less the same as this guide describes. It's just ESX 4i on an SD-card or USB key.

Pre-requirements

- A free USB 2.0 port on a Windows machine
- An USB key of at least 1GB

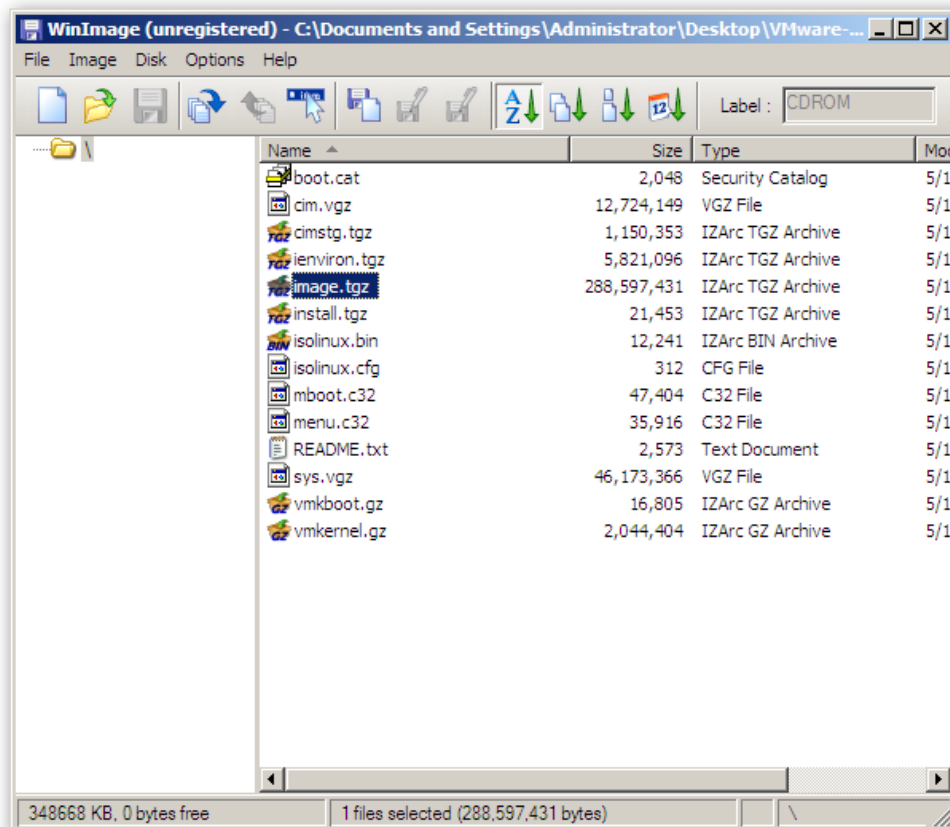
- IZArc – <http://www.izarc.org/download.html>
- WinImage – <http://www.winimage.com/download.htm>
- VMware ESX 4i (ISO) – <http://www.vmware.com/products/esxi/>

Before we start creating a USB key you first need to download and install IZArc and WinImage. I won't describe here how to install those two tools because its just next, next and finish ☺.

After you have installed IZArc and WinImage, go to the VMware website register and download the VMware ESXi 4.0 Installable ISO file. Write down the serial code that you received after register you will need this code later in the installation.

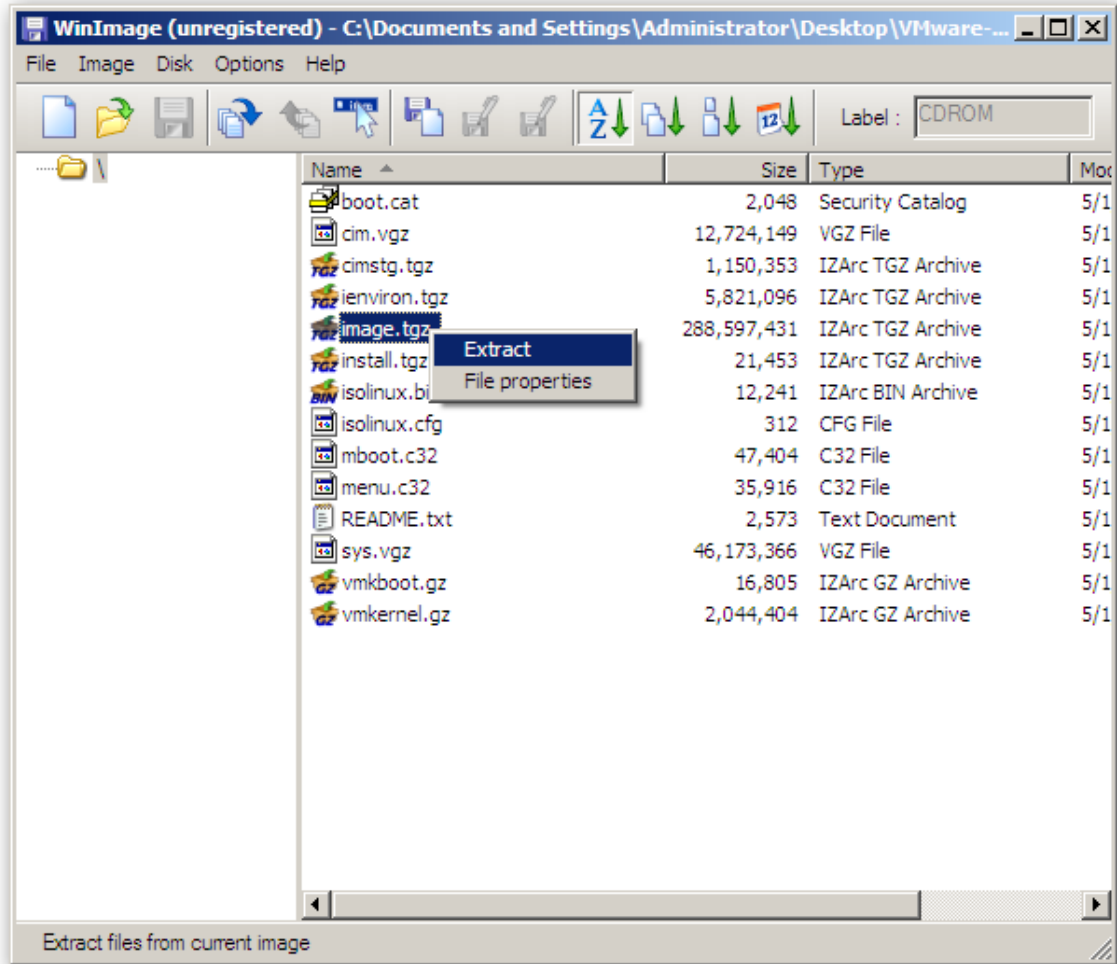
Step 1 – Extracting files from the ISO achieve

Open the VMware ESX 4i ISO with WinImage.

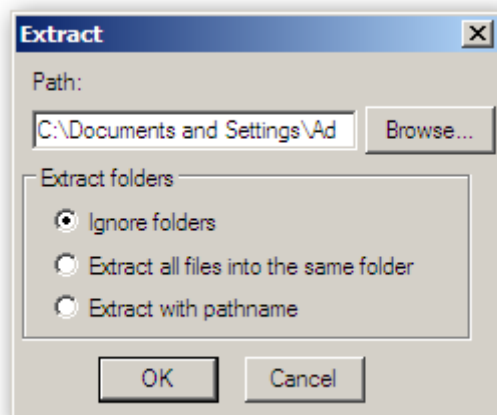


Once opened you should see the files as shown here above.

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Select and right click on **image.tgz** and select **Extract**.

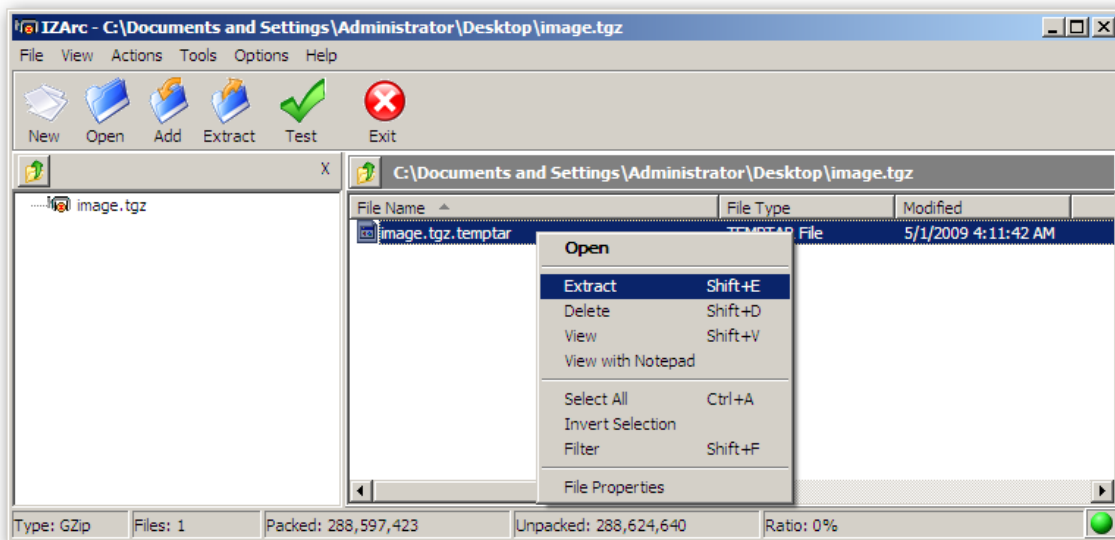


Select a directory to export the file.

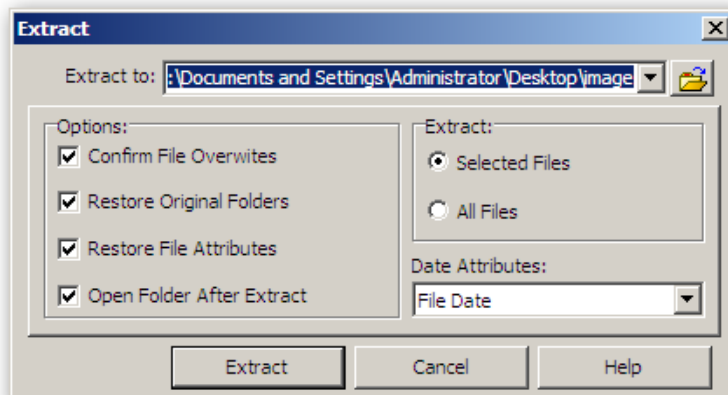
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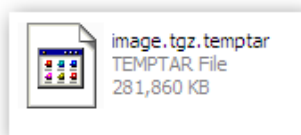
Once extracted, open the **image.tgz** file with IZArc.



Select and right click on the file **image.tgz.temptar** click on **Extract** to export the file.

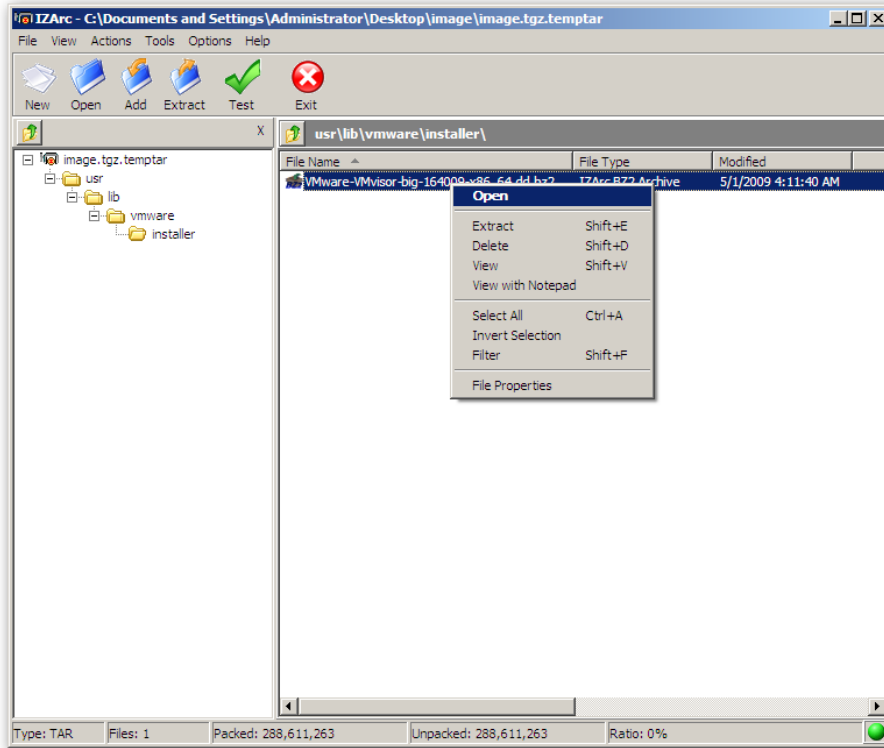


Select an directory to extract the **image.tgz.temptar**.

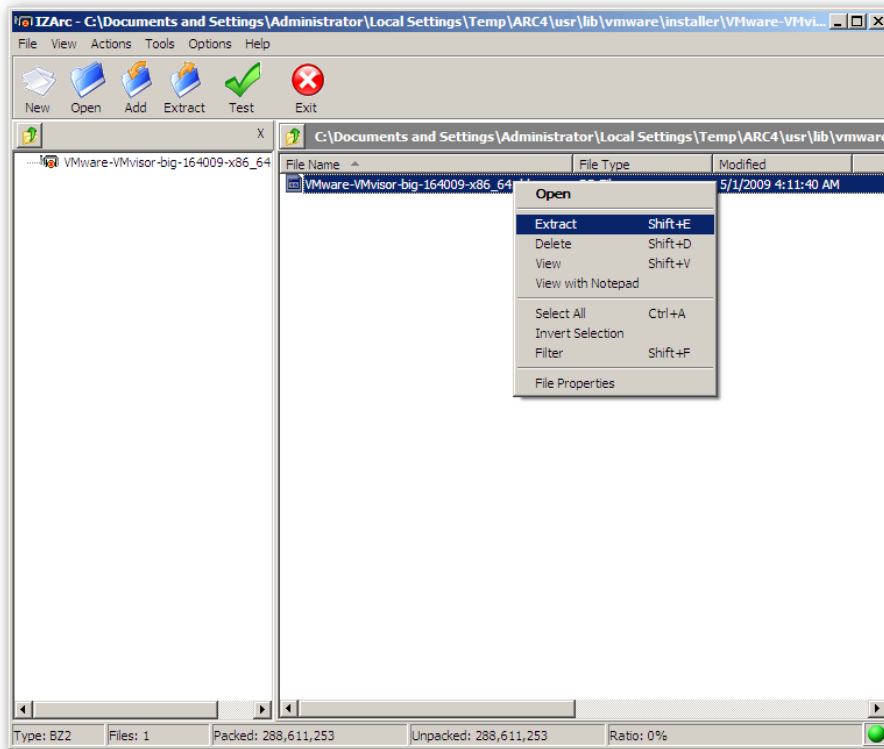


Open the **image.tgz.temptar** with IZArc.

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Browse to `/usr/lib/vmware/installer` and open the file `VMware-VMvisor-big-164009-x86_64.dd.bz2`.

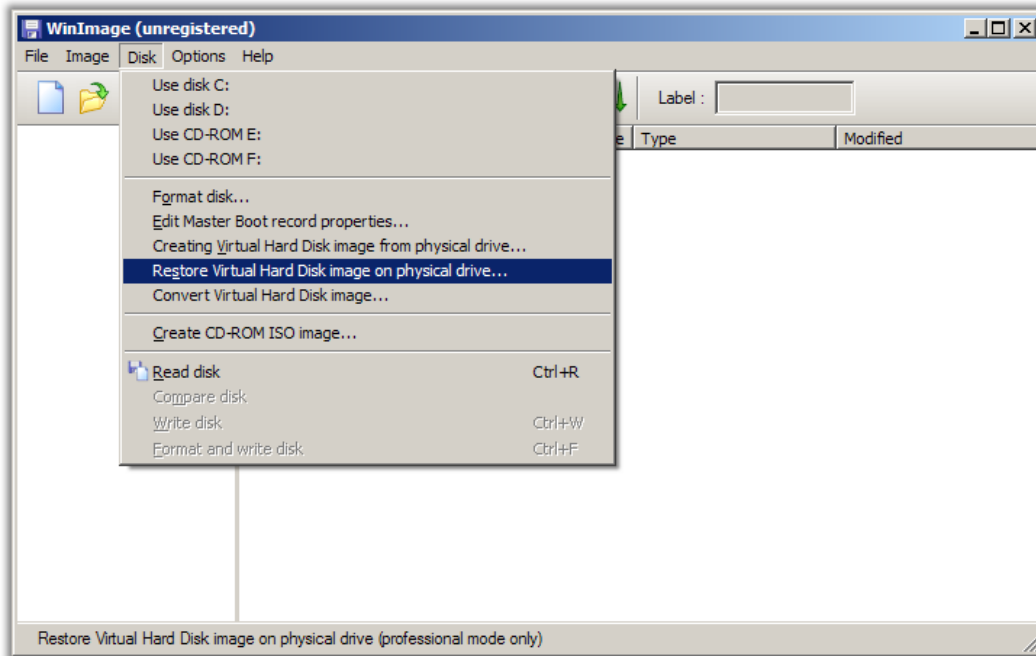


Select and extract the file `VMware-VMvisor-big-164009-x86_64.dd`

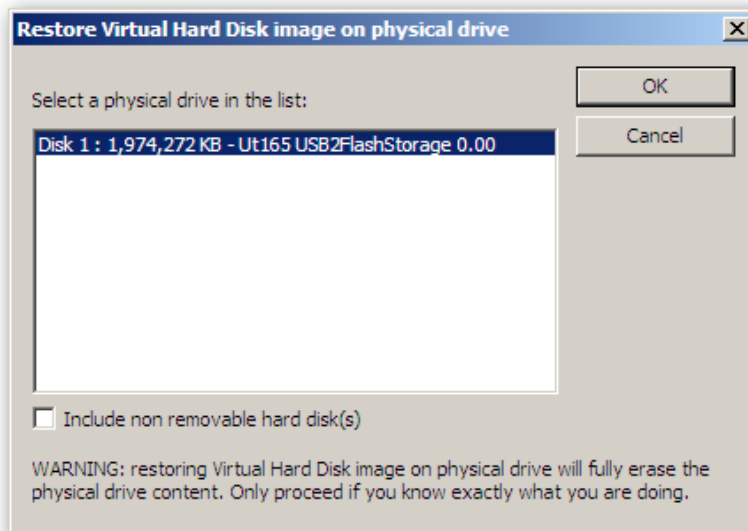
Step 2 – Copy image file to the USB key

To store the image file **VMware-VMvisor-big-164009-x86_64.dd** on USB storage we need WinImage.

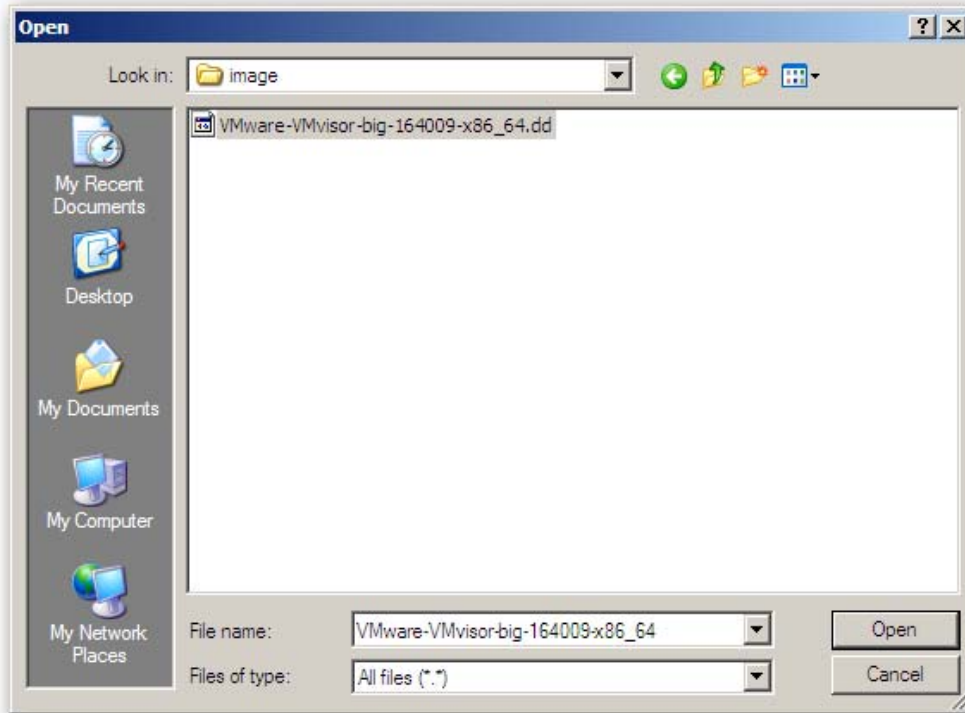
First connect the USB key to your machine, make sure that the USB key is clean and formatted.



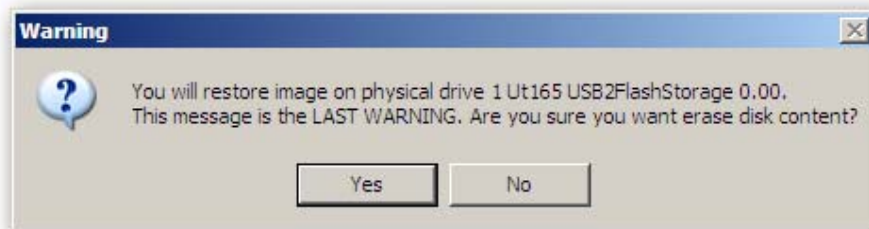
Within WinImage open **Disk** in the menu and click on **Restore Virtual Hard Drive image on physical drive...**



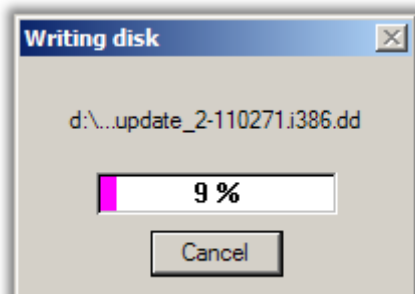
Select the USB key and click on **OK**.



Browse to the extracted image file and select at “Files of type: All files (*.*)” select **VMware-VMvisor-big-164009-x86_64.dd** and click on **Open**.



Click on **Yes** to begin the restore.



This action could take up to a few minutes to complete. When the screen disappears the restore is completed successfully.

Step 3 – Testing the USB key

To test if the USB key is working correctly inserts the key in an available USB port on your ESX host and let the machine boot from the USB port.

If it's working fine you should see that VMware ESX 4i is booting and after a few seconds the console will be displayed, configure the IP settings and try to connect to the ESX host with the VMware vSphere Client.

If you have problems booting ESX 4i from the USB key or if ESX is crashing, than probably there's was something going wrong during the restore of the image file to the USB key. In this case redo step 2.

Note: If you're machine have an internal USB port available it's better to connect the USB key to that port, so the key is better protected from unwanted failures. For example if the USB key is being disconnected from the machine when ESX is running it will crash and so does your vm's running on this host. Most of the new servers today have one or more internal USB ports available so that should not be a problem.

Note: To use all the new functions within ESX 4 you must have compatible hardware, so please check the VMware HCL at; <http://www.vmware.com/resources/compatibility/search.php> or check the Community supported HCL at; <http://communities.vmware.com/community/vmtn/general/cshwsw>.