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# **Document history**

Version	Date	Editor	Remarks
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
0.4	22-aug-2008	R. Lam	Finished the guide and published it
0.5	25-okt-2008	R. Lam	Correct some items

This guide will describe the basic steps to create your own VMware ESX 3i USB key.

I need to say that VMware is not supporting this way of running ESX, so be careful with this on production environments.

When you want to use ESX 3i in production environments without the need of local hard drives, contact your hardware manufacturer; like HP, Dell or IBM. They have supported ways to run ESX on USB or SD cards.

#### **Pre-requirements**

- USB key of 1GB
- IZArc http://www.izarc.org/download.html
- WinImage http://www.winimage.com/download.htm
- VMware ESX 3i (ISO) www.vmware.com/download/vi/

Download the VMware ESXi 3.5 Installable Update 2 ISO file.

#### Step 1 – Extracting files from the ISO achieve

Open the VMware ESX 3i ISO file with IZArc.



File View Actions Tools Options Help	ce\VMware-VMvisoi	r-InstallerCD-3.5.0_Up	date_2-110271.i386.is	•
New Open Add Extract Test	Exit			
X	😥 D:\ESX 3i USB	Guide\ISO source\VMv	ware-VMvisor-Installe	rCD-3.5.0_Update_2-110271.i
🖃 🌆 VMware-VMvisor-InstallerCD-3.5.0_U	File Name	File Type	Modified	Size
	boot.images BINMOD.TGZ BINMOD.TGZ CIM.TGZ CIM.TGZ CIM.TGZ CIM.TGZ CIM.TGZ CIM.UX.BIN CIMUX.CFG CINUX.CFG CINUX.CFG CICNSE.TGZ CIM MB00T.C32 CIM MENU.C32 CIM MEN	Folder IZArc TGZ Archive Security Catalog IZArc TGZ Archive IZArc TGZ Archive IZArc TGZ Archive IZArc BIN Archive CFG File IZArc TGZ Archive C32 File IZArc TGZ Archive IZArc GZ Archive	8/12/2008 8:01:18 8/12/2008 8:01:20 8/12/2008 8:01:18 8/12/2008 8:01:20 8/12/2008 8:01:20 8/12/2008 8:01:20 8/12/2008 8:01:20 8/12/2008 8:01:20 8/12/2008 8:01:20 8/12/2008 8:01:18 8/12/2008 8:01:18	21,835,391 2,048 11,119,594 9,082,464 <b>205,723,591</b> 11,397 244 116 99,000 30,668 137 1,423,958
T	•			<b>F</b>
Type: ISO Files: 1 Packed: 20	5723591	Unpacked: 205723591	Ratio: 0%	

<u>Select</u> and <u>open</u> the file **INSTALL.TGZ.** Note: it could take some time to open the file, it should appear in a new window.

ill IZArc - D:\temp\ARCTmp7259	4\INSTALL.TGZ				
File View Actions Tools Options	Help				
New Open Add Extract Te	est Exit				
2	X 😰 D:\temp\ARCTm	p72594\INSTALL.TGZ			
🖃 🦏 INSTALL.TGZ	File Name		File Type	Modified	
sbin	🚞 sbin		Folder		
±iusr	isr 🚞		Folder		
Type: TAR.GZ  Files: 2  Pac	ked: 0	Unpacked: 0	Ratio: 0%		

Open the following path.



"usr \ lib \ vmware \ installer"

ার IZArc - D:\temp\ARCTmp72594\	INSTALL.TGZ				
File View Actions Tools Options H	telp				
New Open Add Extract Test	E xit				
X	🦻 usr\lib\vmware\	installer\			
🖻 🜆 INSTALL.TGZ	File Name		File Type	Modified	
📄 🛁 sbin	🛅 ThinESX		Folder		
	Core		Folder		
	🛅 ThinESX		Folder		
	Core		Folder		
🖃 🔚 installer	🖬 ThinESX.py		PY File	8/13/2008 2:08:02	
	🖬 ThinESXInstall.py		PY File	8/13/2008 2:08:02	
	Mware-VMvisor-big-	3.5.0_Update_2-110271.i386.dd.bz2	IZArc BZ2 Archive	8/13/2008 5:00:58	205,
	4				J
Type: TAR.GZ Files: 1 Packed	d: 0	Unpacked: 205702534	Ratio: 0%		

<u>Select</u> and <u>open</u> the file "**VMware-VMvisor-big-3.5.0\_Update\_2-11072.i386.dd.bz2**". Note: it could take some time to open the file, it should appear in a new window.

IZA	rc - D:\tem	p\ARCTmp2	21658\u	usr\lib\vmware\installer\VMware-VMvisor-big-	3.5.0_Update_2-1	110271.i38	6.dd.bz2	
File Vi	ew Actions	Tools Op	tions H	lelp				
New	Open Ad	ld Extract	Test	Exit				
			×	D:\temp\ARCTmp21658\usr\lib\vmware	\installer\VMware	e-VMvisor-	big-3.5.0_Update_2-1	10271.i386.
·····i@	VMware-VM	visor-big-3.5.(	)_Updat	File Name WMware-VMvisor-bio-3.5.0 Update 2-110271.i3	File Type		Modified	
					Open		_	
					Extract	Shift+E		
					View	Shift+D Shift+V		
					View with Notepad	on the second se		
					Select All	Ctrl+A		
					Invert Selection Filter	Shift+F		
				-	File Properties		-	
					The Properties		1	
•			F	•				F
Type: BZ	2 Files	: 1	Packed	: 0 Unpacked: 0	Ratio: 0%			

<u>Select</u> and <u>right click</u> on the file "VMware-VMvisor-big-3.5.0\_Update\_2-11072.i386.dd" and <u>click</u> on Extract.

Extract	×
Extract to: D:\ESX 3i USB Guide\Extr	acted\VMware-VMvisor-big-3. 💌 彦
Options:	Extract:
Confirm File Overwites	Selected Files
🔽 Restore Original Folders	O All Files
Restore File Attributes	Date Attributes:
Dpen Folder After Extract	File Date
Extract	Cancel Help

Choose a directory to extract the file to, and <u>click</u> on **Extract**.

Note: this could take some time to complete.

C VMware-VMvisor-big-3.5.0	Upda	te_2-110271.i386.dd			
File Edit View Favorites	Tools	Help			27
🕒 Back 🔹 🕥 - 🏂 🔎	Sea	rch 😥 Folders 🛛 🎹 🗸			
Address 🛅 D:\ESX 3i USB Guide\	Extrac	ted\VMware-VMvisor-big-3.5.0_Update_2-110271.i386.dd			💌 🄁 Go
		Name 🔺	Size	Туре	Date Modified
File and Folder Tasks	×	🖾 VMware-VMvisor-big-3.5.0_Update_2-110271.i386.dd	768,000 KB	DD File	8/22/2008 1:14 AM
Other Places	*				
Details	*				
VMware-VMvisor-big-3.5.0 File Folder Date Modified: Today, August	U				
22, 2008, 1:13 AM					
1 objects			750 MB	🛛 🛃 My	Computer

When the extraction has finished you will see the file "VMware-VMviror-big-3.5.0\_Update\_2-110271.i386.dd".

## Step 2 – Copy the image to the USB key

There are many other programs to restore a virtual hard drive; however I think WinImage is very easy to use, that's why I used it for this guide.

🕞 WinImage (unregistered)			
File Image Disk Options Help			
Use disk C: Use disk D: Use CD-ROM E:		Label :	Modified
Use CD-ROM F: Format disk Edit Master Boot record properties Creating <u>Vi</u> rtual Hard Disk image from physic Restore Virtual Hard Disk image on physical Convert Virtual Hard Disk image	ical drive I drive		
Create CD-ROM ISO image			
Compare disk	Ctrl+R		
<u>W</u> rite disk	Ctrl+₩		
Eormat and write disk	Ctrl+F		
Restore Virtual Hard Disk image on physical drive (profession	al mode only)		11.

Start WinImage click on **Disk** and click on **Restore Virtual Hard Drive image on physical drive...** 

Restore Virtual Hard Disk image on physical drive	×
Select a physical drive in the list:	OK
Disk 1:987,135 KB - Ut163 USB2FlashStorage 0.00	Cancel
1	
Include non removable hard disk(s)	
WARNING: restoring Virtual Hard Disk image on physical drive physical drive content. Only proceed if you know exactly what	will fully erase the t you are doing.

Select the USB key and click on OK.

Open		<u>?</u> ×
Look in:	: 🗀 VMware-VMvisor-big-3.5.0_Update_2-110271 💌 🔇 🤌 📂 📰 🗸	
My Recent Documents	VMware-VMvisor-big-3.5.0_Update_2-110271.i386.dd	
Desktop		
My Documents		
My Computer		
	Ele servez	Den
Places	Files of type:     All files (*.*)	ancel

<u>Browse</u> to the extracted image file and click on "<u>Files of type</u> and select **All files (\*.\*)**", now you should see the image, select this file "**VMware-VMvisor-big-3.5.0\_Update\_2-110271.i386.dd**" and click on **Open**.

Warning				×
?	You will restore i This message is	mage on physical the LAST WARNIN	age on physical drive 1 Ut163 USB2FlashStorage 0.00. e LAST WARNING. Are you sure you want erase disk c	
		Yes	No	

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

Writing disk	$\mathbf{X}$
4)	
d:\update_2-110271.1386.dd	
9 %	
Cancel	

When the screen disappears the restore have been completed successfully.

## Step 3 – Testing the USB key

If you want to test if the USB key is working correctly just insert the USB-key to the pc/server and let it boot form USB storage when you see ESX is booting you can assume that ESX is running fine.

After a few seconds © you would see the console.

Configure the IP Address and try to connect to the ESX host with the VMware VI Client. If this is working okay you can assume that the USB key and the required hardware are working fine.