

HowTo install vboot

Posted by tomknocke - 2010/11/15 09:38

Hello,

i like to install vboot and install new XP in a new VHD.

The download don't contain any short intruction and i also was not able to find something in the Forum.
Is there a short installation howto available?

=====

Re: HowTo install vboot

Posted by admin - 2010/11/15 09:50

Although some kind of obfuscated, the original post of download did contain some instructions. Here it is again:

This is XP/2003 32-bit only. A full release will be available next few days. If you can wait, please wait for the full version, which will support all Windows versions, XP and later, 32- and 64- bit.

After download, do the following:

(1) unzip, copy vboot folder to your boot partiion. It must be inside vboot folder

(2) if you haven't use VBoot Linux before, you need to add the vboot loader to Windows boot loader.
please refer to section 4.2 of www.vmlite.com/appliances/ubuntu-1004-readme.html

(3) on your host disk, create a vhd file using this command to create 40 G dynamic VHD, for example:

```
c:vboottoolsx86vbootctl.exe createhd c:winxp.vhd /size 40
```

(4) a sample grub.cfg file is provided, you need to follow those 3 steps to install Windows XP/2003 to the VHD, then boot from it.

first step:

```
menuentry "xp install step1" {  
vboot harddisk="(hd0,1)/winxp.vhd" floppy=(hd0,1)/vboot/vboot.img cdrom=(hd0,1)/winxp-sp2.iso  
boot=cdrom  
}
```

After you boot to this entry, you will see the normal Windows XP setup screens. At one step, you need to select a disk to install XP, make sure you select the virtual disk, labelled as VBOOTDSK

After first reboot, you select this boot entry:

```
menuentry "xp install step2" {  
vboot harddisk="(hd0,1)/winxp.vhd" cdrom=(hd0,1)/winxp-sp2.iso boot=harddisk  
}
```

After another reboot, your VHD is ready to go, and finally, you can boot to XP VHD using this entry:

```
menuentry "xp sp2" {  
vboot harddisk="(hd0,1)/winxp.vhd"  
}
```

section 4.2 of the readme.html:

<http://www.vmlite.com/appliances/ubuntu-1004-readme.html>

4.2 Manual Setup

If somehow the automatic setup doesn't work, then you can perform the following manual steps:

4.2.1 Copy VBoot Loader Files

The VBoot loader is based on GNU GRUB2, and its files are located in vboot sub directory.

vbootldr.mbr and vbootldr are the two critical boot loader files that must be copied to the root directory of a drive, typical C:.

The fonts directory contains font files to be used by our boot loader.

The grub directory contains grub2 modules, and the very import grub.cfg configuration file.

For example, if you want to copy the files to C:, you need to copy the vboot directory to c:, so you will have c:vboot directory. Then you must copy vbootldr.mbr and vbootldr to c:.

The following commands can be used to copy the files. Make sure to run from the extracted dir.

```
md c:vboot  
xcopy /s vboot c:vboot  
copy vbootvbootldr c:  
copy vbootvbootldr.mbr c:
```

4.2.2 Configure grub.cfg

A sample grub.cfg file is placed in c:vbootgrub directory (or d:vbootgrub depending on where you have copied the files). This is the GRUB2 configuratrion file to load operating systems. Inside this file, the vhd file path is hard coded, and thus you have to modify it.

grub.cfg is a text file that you can use notepad to open and modify. The relevant portion is shown below:

```
menuentry "VHD Ubuntu, Linux 2.6.32-21-generic" {  
insmod vhd  
vhd vhd0 (hd0,1)/ubuntu-1004/ubuntu-1004-desktop-i386.vhd --partitions  
linux (vhd0,1)/boot/vmlinuz-2.6.32-21-generic root=/dev/sda1  
vloop=/ubuntu-1004/ubuntu-1004-desktop-i386.vhd quiet splash  
initrd (vhd0,1)/boot/initrd.img-2.6.32-21-generic  
}
```

menuentry groups a specific operating system. The first line insmod vhd inserts our vhd.mod module to the boot loader. vhd.mod is a GRUB2 module that treats a vhd file as hard disk, and allows GRUB2 to read files from the vhd. For example, the Linux kernel and initrd are loaded from the vhd file, as configured above.

There are three paths (as shown in red) related to the vhd file that you need to change depending on the directory to which the vhd file is extracted.

The vhd path (hd0,1)/ubuntu-1004/ubuntu-1004-desktop-i386.vhd is in GRUB2 format where (hd0,1) indicates hard disk 0 and partition 1, with the rest is the absolute path in UNIX format. For example, if your vhd file is inside a folder called 123 on an external USB disk, then you need to change this path to something like (hd1,1)/123/ubuntu-1004-desktop-i386.vhd. The path immediately after vloop= should be the same absolute path without the disk number and partition number.

The root path is the Linux device name for the disk where the vhd file resides. The number is the partition number, and the letter 'a', 'b', 'c', etc, represents which disk. For (hd0,1), the name would be /dev/sda1; For (hd1,1), it would be /dev/sdb1; For (hd2,4), it would be /dev/sdc4, etc.

44.2.3 Configure Windows Boot Loader

Once VBoot Loader and the vhd file are ready, you need to configure Windows boot manager, so you can boot to the Linux VHD. You need to append the vbootldr.mbr entry to the section. The following is sample boot.ini file with VBoot entry added at the very last. Shown in red is what you need to add to boot.ini. Change C: to whatever drive you have copied VBoot Loader files.

```
timeout=30
default=multi(0)disk(0)rdisk(0)partition(1)WINDOWS

multi(0)disk(0)rdisk(0)partition(1)WINDOWS="Microsoft Windows XP Professional" /noexecute=optin
/fastdetect
C:vbootldr.mbr="VBoot - Ubuntu VHD Boot"
```

4.2.3.2 Windows Vista/2008/7

Windows Vista and above use a different mechanism other than boot.init to boot, and you need to run bcdedit.exe to make changes to the boot manager. The following are the commands to run if you have copied VBoot Loader to drive C:. You must run these commands as Administrator. Go to Windows Start menu > All Programs > Accessories, then right click on "Command Prompt", then select "Run As Administrator". Once command prompt window is open, you can enter these commands.

```
bcdedit /create {D3DCE997-7447-41FC-9740-A8D20EE3BF55} /d "Ubuntu VHD Boot" /application
BOOTSECTOR
bcdedit /set {D3DCE997-7447-41FC-9740-A8D20EE3BF55} device partition=C:
bcdedit /set {D3DCE997-7447-41FC-9740-A8D20EE3BF55} path vbootldr.mbr
bcdedit /displayorder {D3DCE997-7447-41FC-9740-A8D20EE3BF55} /addlast
bcdedit /timeout 30
```

=====