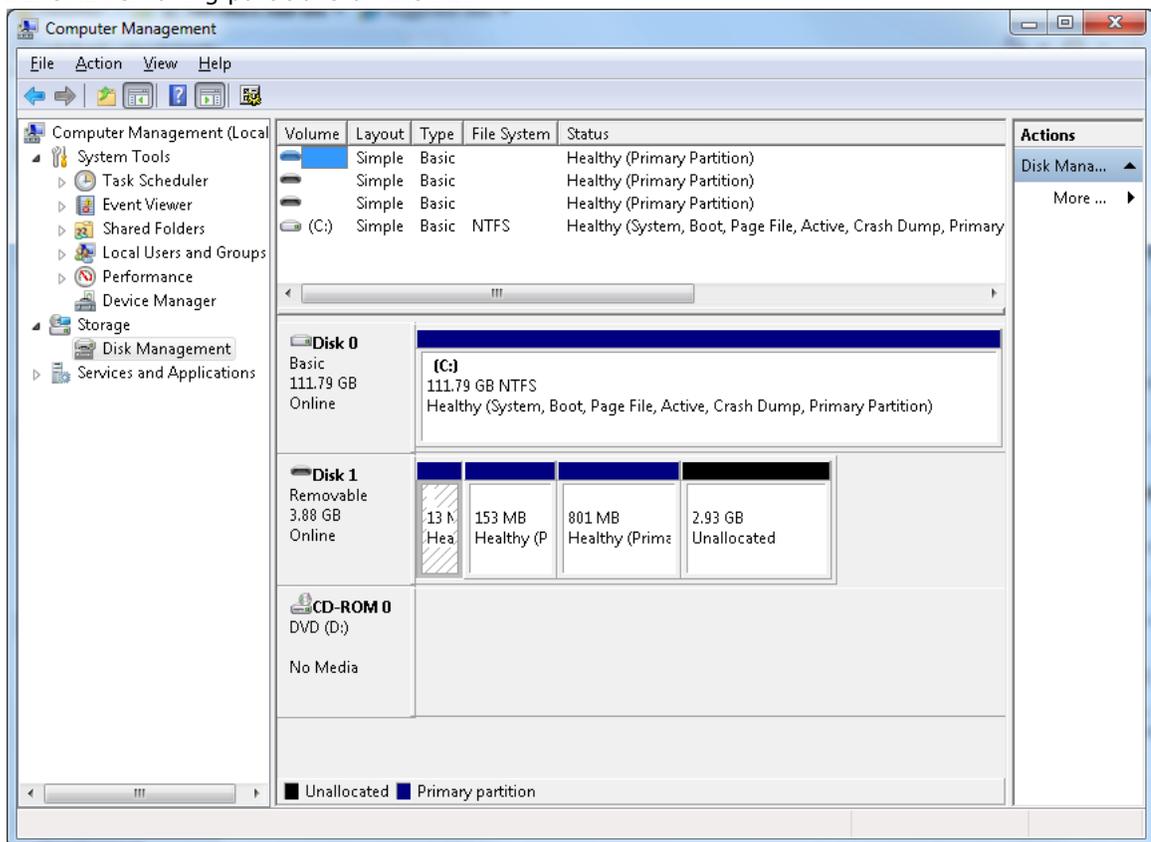# How to Install Zeroshell onto USB Thumb Drive using Windows
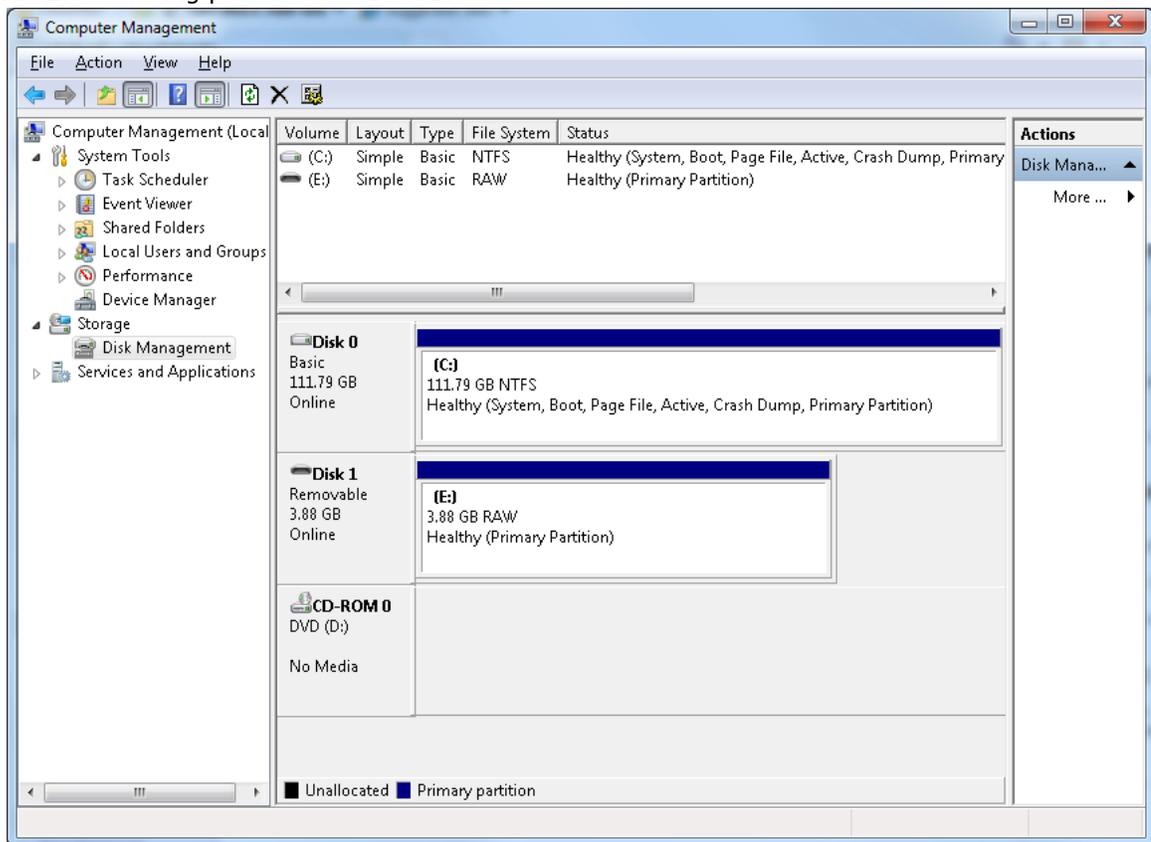
By Eric Long

This guide covers writing a desired CompactFlash/IDE/USB/SATA image to a USB thumb drive. This procedure was performed on Windows 7 Ultimate RC (32 bit).

1. Download and install the latest version of Physdiskwrite (http://m0n0.ch/wall/physdiskwrite.php)
2. Download the desired Zeroshell CompactFlash/IDE/USB/SATA image
3. Using your preferred software, extract the .img image file from the .gz gzip archive
4. Attach the USB thumb drive you want to write the Zeroshell image on to your computer
5. CRUCIAL: Using Computer Management\Disk Management, or a different tool of your choice, **remove any and all partitions** from your USB key. Your USB drive should show RAW afterwards
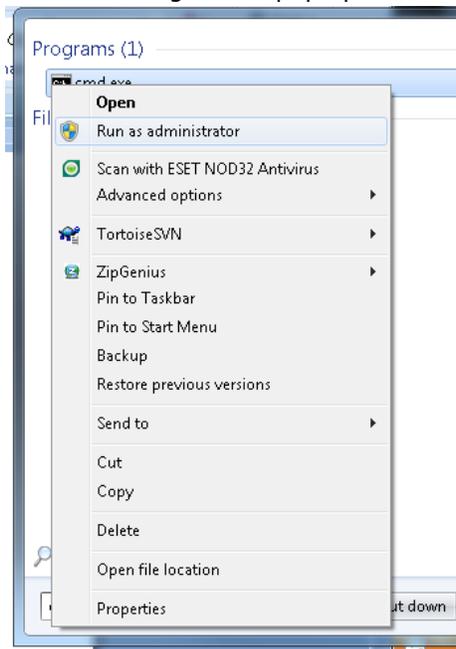   BEFORE removing partitions on Disk 1:

AFTER removing partitions on Disk 1:



6. Open a command prompt (CMD) in Administrative mode.
   a. If you do not see Command Prompt listed when you click the Start button, type "cmd" in the search box, and it will appear
   b. Right click cmd.exe and select "Run as administrator, and confirm any user access control messages that pop up

7. In the command prompt, navigate to the directory you stored physdiskwrite
8. Type the following command into your command prompt, putting the actual file name (and path if it's not in the same directory as physdiskwrite):
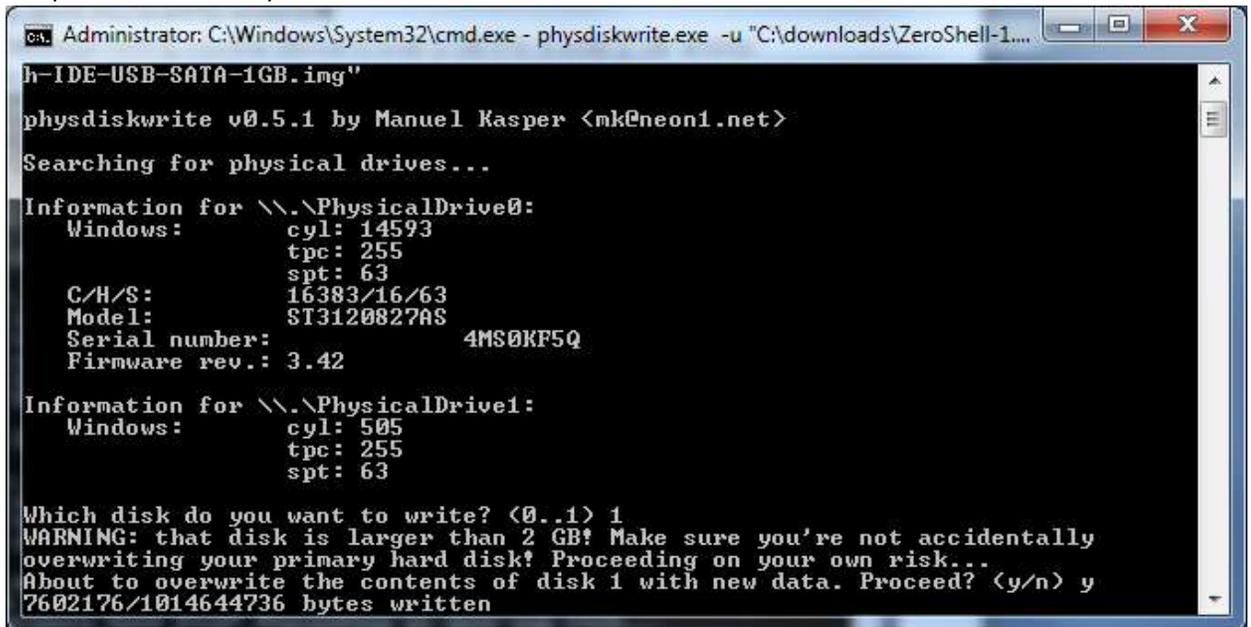
*physdiskwrite -u [name of the .img file]*



You'll see a list of the physical drives in your system (if you don't it's likely you're not running command prompt in administrator mode). In the example above, you can see that PhysicalDrive1 is my USB drive.
9. Input the number of the drive you want to write to
10. You'll get a WARNING message telling you the device is over 2 GB if it is over 2 GB and to confirm. If you are sure, type "y"

11. The .img file will start writing to the USB drive at this point. You'll see a running total of completed and total bytes written to the disk



```
Administrator: C:\Windows\System32\cmd.exe - physdiskwrite.exe  -u "C:\downloads\ZeroShell-1...
h-IDE-USB-SATA-1GB.img"

physdiskwrite v0.5.1 by Manuel Kasper <mk@neon1.net>

Searching for physical drives...

Information for \\.\PhysicalDrive0:
     Windows:         cyl: 14593
                      tpc: 255
                      spt: 63
     C/H/S:           16383/16/63
     Model:           ST3120827AS
     Serial number:              4MS0KF5Q
     Firmware rev.: 3.42

Information for \\.\PhysicalDrive1:
     Windows:         cyl: 505
                      tpc: 255
                      spt: 63

Which disk do you want to write? (0..1) 1
WARNING: that disk is larger than 2 GB! Make sure you're not accidentally
overwriting your primary hard disk! Proceeding on your own risk...
About to overwrite the contents of disk 1 with new data. Proceed? (y/n) y
7602176/1014644736 bytes written
```

12. When the job is complete, the drive is ready to be booted from.

NOTE in my trials, I tried various combinations of Windows based software to write ZeroShell-1.0.beta12-CompactFlash-IDE-USB-SATA-1GB.img file (extracted from the gz file) and ZeroShell-1.0.beta12-CompactFlash-IDE-USB-SATA-1GB.img.gz to two different USB drives (2GB and 4GB).

Here are the tools I used:
- physdiskwrite (winner)
- flashnul (kept crashing)
- dd for Windows (grub errors)
- unetbootin (did not write anything)

Any of these might successfully work, but using my Windows 7 machine I was only able to get physdiskwrite to work.