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How to make an bootable iso(not cd or flash drive) for testing your own boot loader?

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i am trying to write a boot loader(hello world sort). i am using Bochs for simulation (platform Linux-Ubuntu). But i am unable to make an bootable iso for my binary file. Though in tutorial VFD(virtual floppy disk) is used but it is for windows platform. Here is my code for bootloader (just for testing)

```
;*****  
;   Bootl.asm  
;   - A Simple Bootloader for testing if cd is booting or not  
;  
;   Operating Systems Development Tutorial  
;*****  
  
[BITS 16]    ;tell the assembler that its a 16 bit code  
[ORG 0x7C00] ;Origin, tell the assembler that where the code will  
  
Start:  
  
    cli                ; Clear all Interrupts  
    hlt                ; halt the system  
  
times 510 - ($-$$) db 0                ; We have to be 512 bytes. Clear the rest of  
the bytes with 0  
  
dw 0xAA55                ; Boot Signature
```

i tried master ISO on Ubuntu. It is converting the binary file to ISO but not to bootable ISO. Bochs is showing error "cd is not eltorito" which i googled and found to be standard for bootable ISO. What additional things i have to add to it to make it bootable. i have already added boot signature in the end. Can anyone suggest a reliable application to make a bootable ISO on Ubuntu? My work is stuck due to this.... OR i am pretty sure a lot of people must be involved in OS development on Linux platform. How do you people test?

I have made a bootable flash-drive with Unetbootin with the iso of my bootloader program. switched to Virtual-box and twisted a bit to boot from pendrive, but still its showing it to be non-bootable. I think someone said it correctly that u need a lot of patience in OS development.

:phew finally my bootloader program ran...

I used virtual floppy image to boot my program on Virtual box. Here are the steps in case somebody is struggling with it.

1. Create boot.asm which have your bootloader program.
 2. Compile with nasm. `nasm -f bin boot.asm -o boot.bin`.
 3. `sudo mkfs.msdos -C /home/username/floppy.img 1440`
 4. `sudo chown username ./floppy.img`. [link text](#)
 5. Copy with dd. `dd if=./boot.bin of=./floppy.img`.
 6. Run VirtualBox and select floppy.img as booting device in your new virtual machine.
- PS: you can also attach floppy.img to device "loop" and mount it just as a real floppy disk.

operating-system

bootloader

edited Jan 15 '11 at 9:32

asked Jan 14 '11 at 10:58



Terminal

1,083 11 22

2 Answers

a very simple script will do this in linux as below :-

```
rm -f disk_images/myos.iso
mkisofs -quiet -V 'MYOS' -input-charset iso8859-1 -o disk_images/myos.iso -b
myos.flp disk_images/ || exit
```

The floppy drive is made as below :-

```
nasm -f bin -o boot.bin boot.asm  
dd if=boot.bin of=floppy.img count=1 bs=512 //for the bootloader
```

and

```
dd if=boot.bin of=floppy.img skip seek=1 count=1339 //assuming a 1.44Mb floppy
```

and then you have the file system

```
mkdosfs (or whatever system you want ) -C floppy.img 1440
```

If you ned help for windows , let me know :)

edited Jun 26 '12 at 12:20



Anirudh Ramanathan

26.1k 8 52 103

answered Mar 28 '11 at 16:53



richi_18007

106 1 13

how do we do it in windows? Can POWERISO accomplish this? – [ASHUTOSH](#) May 12 '13 at 7:58



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Amongst all the storage locations/methods of retrieval, CD-ROM/El-Torito is the oddball (and don't get me started on Mac CDROM filesystem hybrids)

With Floppy, Harddisk/USB or PXE-TFTP, it suffices to write the object code to the first sector, or in case of tftp, just download-and-execute. It can't get any easier with these.

answered Jan 14 '11 at 21:41

 [user562374](#)
2,372 11 14

This is what i also believe now after trying all sort of s/w for making bootable iso and flashdrive for 3 days .A simple dd command is what happens to be a life-saver....) - [Terminal](#)
Jan 15 '11 at 8:58

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- 1 There is no need to use dd and its awkward syntax when cat > and dd_rescue do. dd is just like eltorito.. - [user562374](#) Jan 16 '11 at 2:05
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