

Membuat Bootable ISO OpenBSD 4.3

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This book I dedicated for:

Dedicated for:

My wonderful girlfriend Devita "Bunda" Denavia... Yang udah menjadi sumber inspirasi buat aku, she has supported me more than I ever can support her to any degree.

Dirimu adalah hal terbaik yang pernah terjadi sama aku. You're so special girl to me. I hope I love you all my life.

Makasih Tuhan, udah menghadirkan dirinya dalam hidupku. I wish I could make you just as happy as you make me. I MiSs U Bunda ^_^

OpenBSD 4.3 (<http://openbsd.org/43.html>) telah *direlease* pada tanggal 01 Mei 2008. Sejak versi 4.2, OpenBSD telah menyediakan file instalasi .iso secara official. Akan tetapi jika kita ingin mendownload dan membuat ISO versi sendiri, maka yang perlu dilakukan adalah mendownload file-file yang dibutuhkan. Disini kita akan menggunakan OpenBSD untuk platform i386. URL yang digunakan untuk mendownload file-file ini bisa dilihat pada <http://openbsd.org/ftp.html>, masuk kedalam direktori pub/OpenBSD/4.3/ dari mirror yang anda inginkan seperti <ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/>, selanjutnya masuk kedalam direktori i386 jika ingin menggunakan platform i386. Gunakan download manager atau program seperti wget untuk mendownloadnya. Sebelum melakukan download, siapkan terlebih

dahulu direktori tempat file-file ini, struktur direktori yang digunakan adalah

```
~/OpenBSD
|----- 4.3
|--- i386
```

Dimana ~ merupakan simbol dari home direktori pada *NIX, jadi jika username yang digunakan adalah urangkayo, maka path lengkapnya menjadi

```
/home/urangkayo/OpenBSD
|-----4.3
|--- i386
```

Selanjutnya menggunakan wget anda bisa mendownload isi dari <ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/>, file-file yang penulis download adalah:

```
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/base43.tgz
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/bsd
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/bsd.mp
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/bsd.rd
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/cd43.iso
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/cdboot
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/cdbr
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/cdemu43.iso
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/comp43.tgz
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/etc43.tgz
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/floppy43.fs
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/floppyB43.fs
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/floppyC43.fs
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/game43.tgz
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/index.txt
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/INSTALL.i386
```

```
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/INSTALL.linux
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/man43.tgz
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/MD5
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/misc43.tgz
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/pxeboot
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/xbase43.tgz
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/xetc43.tgz
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/xfont43.tgz
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/xserv43.tgz
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/xshare43.tgz
```

kita bisa menyimpan file diatas kedalam sebuah file dengan nama **i386.txt** kemudian pindah kedalam direktori **i386**

```
$ cd ~/OpenBSD/4.3/i386
```

```
$ wget -c -i i386.txt
```

```
--2008-07-03 08:08:35-- ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/i386/base43.tgz
=> `base43.tgz'
Resolving ftp.openbsd.or.id... 202.162.207.107
Connecting to ftp.openbsd.or.id|202.162.207.107|:21... connected.
Logging in as anonymous ... Logged in!
==> SYST ... done. ==> PWD ... done.
==> TYPE I ... done. ==> CWD /pub/OpenBSD/4.3/i386 ... done.
==> SIZE base43.tgz ... 43882873
==> PASV ... done. ==> RETR base43.tgz ... done.
Length: 43882873 (42M)
```

```
2% [ ] 1,093,240 33.7K/s eta 17m 5s
```

Tunggu sampai semua file yang ada dalam text **i386.txt** selesai didownload. Selain menggunakan **wget** anda bisa menggunakan **rsync**, dengan syarat mirror OpenBSD tersebut support **rsync**, seperti **rsync://ftp.jaist.ac.jp/pub/OpenBSD/**, untuk itu jalankan perintah berikut:

```
$ rsync -avrt \
```

```
rsync://ftp.jaist.ac.jp/pub/OpenBSD/4.3/packages/i386/ \
```

```
/home/urangkayo/OpenBSD/4.3/i386
```

penulis juga mendownload file-file yang ada pada `ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3:`

```
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/ports.tar.gz
```

```
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/src.tar.gz
```

```
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/sys.tar.gz
```

```
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/xenocara.tar.gz
```

```
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/ANNOUNCEMENT
```

```
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/HARDWARE
```

```
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/PACKAGES
```

```
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/PORTS
```

```
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/README
```

```
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/SIZES
```

```
ftp://ftp.openbsd.or.id/pub/OpenBSD/4.3/ftplist
```

file ini disimpan pada `/home/urangkayo/OpenBSD/4.3` . Setelah semua selesai didownload, maka struktur file yang telah didownload akan terlihat seperti ini jika dilihat dengan perintah `tree`

```
[urangkayo@FC9-Desktop ~]$ cd ~/OpenBSD
```

```
[urangkayo@FC9-Desktop OpenBSD]$ tree
```

```
`-- 4.3
   |-- ANNOUNCEMENT
   |-- HARDWARE
   |-- PACKAGES
   |-- PORTS
   |-- README
   |-- SIZES
   |-- ftplist
   |-- i386
   |   |-- INSTALL.i386
   |   |-- INSTALL.linux
   |   |-- MD5
```

```
| |-- base43.tgz
| |-- bsd
| |-- bsd.mp
| |-- bsd.rd
| |-- cd43.iso
| |-- cdboot
| |-- cdbx
| |-- cdemu43.iso
| |-- comp43.tgz
| |-- etc43.tgz
| |-- floppy43.fs
| |-- floppyB43.fs
| |-- floppyC43.fs
| |-- game43.tgz
| |-- index.txt
| |-- man43.tgz
| |-- misc43.tgz
| |-- pxeboot
| |-- xbase43.tgz
| |-- xetc43.tgz
| |-- xfont43.tgz
| |-- xserv43.tgz
| |-- xshare43.tgz
|-- ports.tar.gz
|-- root.mail
|-- src.tar.gz
|-- sys.tar.gz
`-- xenocara.tar.gz
2 directories, 38 files
```

Untuk memastikan bahwa file-file yang didownload tidak rusak, pindah ke direktori

```
$ cd ~/OpenBSD/4.3/i386
```

```
[urangkayo@FC9-Desktop i386]$ md5sum base43.tgz
```

```
9f4d915b3c3508d821b3bce07a1d3c18 base43.tgz
```

bandingkan nilai ini dengan file MD5 yang terdapat pada i386/MD5, 16 digit yang muncul harus sama dengan yang ada pada MD5 file, dimana nilai md5sum untuk base43.tgz pada file i386/MD5 adalah:

```
MD5 (base43.tgz) = 9f4d915b3c3508d821b3bce07a1d3c18
```

Seperti yang terlihat, nilainya sama sehingga bisa dipastikan bahwa file base43.tgz yang kita download tidak rusak, lakukan hal yang sama untuk file-file yang lain yang telah didownload.

Sekarang kita akan membuat bootable ISO dari file-file yang telah kita download. Buat script berikut dan simpan dengan nama obsd.sh pada home direktori

```
#!/bin/bash
```

```
echo "Make OpenBSD ISO Image..."
```

```
echo "Change working directory..."
```

```
cd /home/urangkayo/OpenBSD/
```

```
mkisofs \
```

```
-v \
```

```
-r \
```

```
-l \
```

```
-L \
```

```
-T \
```

```
-J \
```

```
-V "OpenBSD-4.3" \
```

```
-A "OpenBSD v4.3-Release, Custom ISO, 02-06-2008." \
```

```
-b 4.3/i386/floppy43.fs \  
-c boot.catalog \  
-o OpenBSD-i386-4.3.iso \  
/home/urangkayo/OpenBSD/
```

```
echo "Done..."
```

Untuk mengetahui fungsi dari options yang digunakan pada mkisofs dari script ini bisa melihat nya pada manual dari mkisofs dengan perintah **man mkisofs**.

Selanjutnya Rubah hak akses file ini menjadi executable dengan perintah

```
$ chmod 755 obsd.sh
```

kemudian eksekusi script ini

```
[urangkayo@FC9-Desktop ~]$ ./obsd.sh  
Make OpenBSD ISO Image...  
Change working directory...  
Warning: creating filesystem that does not conform to ISO-9660.  
I: -input-charset not specified, using utf-8 (detected in locale settings)  
genisoimage 1.1.6 (Linux)  
Scanning /home/urangkayo/OpenBSD/  
Scanning /home/urangkayo/OpenBSD/4.3  
Scanning /home/urangkayo/OpenBSD/4.3/i386  
Writing:   Initial Padblock                Start Block 0  
Done with: Initial Padblock                Block(s)   16  
Writing:   Primary Volume Descriptor       Start Block 16  
Done with: Primary Volume Descriptor       Block(s)   1  
Writing:   Eltorito Volume Descriptor      Start Block 17  
Size of boot image is 2880 sectors -> Emulating a 1440 kB floppy  
Done with: Eltorito Volume Descriptor      Block(s)   1  
Writing:   Joliet Volume Descriptor        Start Block 18
```

Done with: Joliet Volume Descriptor	Block(s)	1
Writing: End Volume Descriptor	Start Block	19
Done with: End Volume Descriptor	Block(s)	1
Writing: Version block	Start Block	20
Done with: Version block	Block(s)	1
Writing: Path table	Start Block	21
Done with: Path table	Block(s)	4
Writing: Joliet path table	Start Block	25
Done with: Joliet path table	Block(s)	4
Writing: Directory tree	Start Block	29
Done with: Directory tree	Block(s)	4
Writing: Joliet directory tree	Start Block	33
Done with: Joliet directory tree	Block(s)	3
Writing: Directory tree cleanup	Start Block	36
Done with: Directory tree cleanup	Block(s)	0
Writing: Extension record	Start Block	36
Done with: Extension record	Block(s)	1
Writing: The File(s)	Start Block	37
1.50% done, estimate finish Wed Jul 2 10:08:24 2008		
3.00% done, estimate finish Wed Jul 2 10:08:57 2008		
4.50% done, estimate finish Wed Jul 2 10:08:46 2008		
6.00% done, estimate finish Wed Jul 2 10:08:57 2008		
7.50% done, estimate finish Wed Jul 2 10:08:37 2008		
9.00% done, estimate finish Wed Jul 2 10:08:35 2008		
10.50% done, estimate finish Wed Jul 2 10:08:24 2008		
12.00% done, estimate finish Wed Jul 2 10:08:15 2008		
13.50% done, estimate finish Wed Jul 2 10:08:09 2008		
15.00% done, estimate finish Wed Jul 2 10:08:17 2008		
16.50% done, estimate finish Wed Jul 2 10:08:18 2008		
18.00% done, estimate finish Wed Jul 2 10:08:18 2008		
19.51% done, estimate finish Wed Jul 2 10:08:24 2008		
21.00% done, estimate finish Wed Jul 2 10:08:19 2008		
22.50% done, estimate finish Wed Jul 2 10:08:15 2008		

24.00%	done, estimate finish	Wed Jul 2 10:08:15 2008
25.51%	done, estimate finish	Wed Jul 2 10:08:16 2008
27.00%	done, estimate finish	Wed Jul 2 10:08:13 2008
28.51%	done, estimate finish	Wed Jul 2 10:08:13 2008
30.00%	done, estimate finish	Wed Jul 2 10:08:07 2008
31.51%	done, estimate finish	Wed Jul 2 10:08:08 2008
33.00%	done, estimate finish	Wed Jul 2 10:08:06 2008
34.51%	done, estimate finish	Wed Jul 2 10:08:09 2008
36.00%	done, estimate finish	Wed Jul 2 10:08:29 2008
37.50%	done, estimate finish	Wed Jul 2 10:08:32 2008
39.01%	done, estimate finish	Wed Jul 2 10:08:39 2008
40.50%	done, estimate finish	Wed Jul 2 10:08:39 2008
42.01%	done, estimate finish	Wed Jul 2 10:08:36 2008
43.50%	done, estimate finish	Wed Jul 2 10:08:38 2008
45.01%	done, estimate finish	Wed Jul 2 10:08:35 2008
46.51%	done, estimate finish	Wed Jul 2 10:08:37 2008
48.01%	done, estimate finish	Wed Jul 2 10:08:36 2008
49.51%	done, estimate finish	Wed Jul 2 10:08:34 2008
51.01%	done, estimate finish	Wed Jul 2 10:08:32 2008
52.51%	done, estimate finish	Wed Jul 2 10:08:31 2008
54.01%	done, estimate finish	Wed Jul 2 10:08:29 2008
55.51%	done, estimate finish	Wed Jul 2 10:08:29 2008
57.01%	done, estimate finish	Wed Jul 2 10:08:29 2008
58.51%	done, estimate finish	Wed Jul 2 10:08:27 2008
60.00%	done, estimate finish	Wed Jul 2 10:08:25 2008
61.51%	done, estimate finish	Wed Jul 2 10:08:25 2008
63.01%	done, estimate finish	Wed Jul 2 10:08:25 2008
64.51%	done, estimate finish	Wed Jul 2 10:08:24 2008
66.01%	done, estimate finish	Wed Jul 2 10:08:22 2008
67.51%	done, estimate finish	Wed Jul 2 10:08:19 2008
69.01%	done, estimate finish	Wed Jul 2 10:08:19 2008
70.51%	done, estimate finish	Wed Jul 2 10:08:17 2008
72.01%	done, estimate finish	Wed Jul 2 10:08:17 2008

```
73.51% done, estimate finish Wed Jul 2 10:08:16 2008
75.01% done, estimate finish Wed Jul 2 10:08:16 2008
76.51% done, estimate finish Wed Jul 2 10:08:15 2008
78.01% done, estimate finish Wed Jul 2 10:08:16 2008
79.51% done, estimate finish Wed Jul 2 10:08:15 2008
81.01% done, estimate finish Wed Jul 2 10:08:15 2008
82.51% done, estimate finish Wed Jul 2 10:08:13 2008
84.01% done, estimate finish Wed Jul 2 10:08:13 2008
85.51% done, estimate finish Wed Jul 2 10:08:13 2008
87.01% done, estimate finish Wed Jul 2 10:08:11 2008
88.51% done, estimate finish Wed Jul 2 10:08:10 2008
90.01% done, estimate finish Wed Jul 2 10:08:09 2008
91.51% done, estimate finish Wed Jul 2 10:08:11 2008
93.01% done, estimate finish Wed Jul 2 10:08:11 2008
94.51% done, estimate finish Wed Jul 2 10:08:10 2008
96.01% done, estimate finish Wed Jul 2 10:08:11 2008
97.51% done, estimate finish Wed Jul 2 10:08:09 2008
99.01% done, estimate finish Wed Jul 2 10:08:11 2008
Total translation table size: 11548
Total rockridge attributes bytes: 4160
Total directory bytes: 6752
Path table size(bytes): 34
Done with: The File(s)                               Block(s)   333119
Writing:   Ending Padblock                           Start Block 333156
Done with: Ending Padblock                           Block(s)   150
Max brk space used 0
333306 extents written (650 MB)
Done...
```

Jika tidak muncul error sewaktu menjalankan script diatas, maka proses pembuatan ISO dari OpenBSD berjalan dengan baik, dimana file OpenBSD/OpenBSD-i386-4.3.iso akan terdapat pada ~/OpenBSD direktori. Untuk itu kita bisa mencoba melakukan mount pada ISO ini

```
[urangkayo@FC9-Desktop ~]$ sudo mount -o loop \  
~/OpenBSD/OpenBSD-i386-4.3.iso /mnt
```

```
[urangkayo@FC9-Desktop ~]$ ls -l /mnt/
```

```
total 5  
dr-xr-xr-x 3 root root 2048 2008-07-02 08:51 4.3  
-r--r--r-- 1 root root 2048 2008-07-02 10:06 boot.catalog  
-r--r--r-- 1 root root 439 2008-07-02 10:06 TRANS.TBL
```

```
[urangkayo@FC9-Desktop ~]$ ls -l /mnt/4.3/
```

```
total 238969  
-r--r--r-- 1 root root 28868 2008-07-02 08:15 ANNOUNCEMENT  
-r--r--r-- 1 root root 8638 2008-07-02 08:15 ftplist  
-r--r--r-- 1 root root 2318 2008-07-02 08:15 HARDWARE  
dr-xr-xr-x 2 root root 4096 2008-07-02 08:15 i386  
-r--r--r-- 1 root root 3488 2008-07-02 08:15 PACKAGES  
-r--r--r-- 1 root root 2375 2008-07-02 08:15 PORTS  
-r--r--r-- 1 root root 13666645 2008-07-02 08:15 ports.tar.gz  
-r--r--r-- 1 root root 8344 2008-07-02 08:15 README  
-r--r--r-- 1 root root 4856 2008-07-02 08:15 root.mail  
-r--r--r-- 1 root root 1523 2008-07-02 08:15 SIZES  
-r--r--r-- 1 root root 108517905 2008-07-02 08:15 src.tar.gz  
-r--r--r-- 1 root root 18497882 2008-07-02 08:15 sys.tar.gz  
-r--r--r-- 1 root root 2867 2008-07-02 10:06 TRANS.TBL  
-r--r--r-- 1 root root 103951738 2008-07-02 08:15 xenocara.tar.gz
```

Jika anda ingin mencoba file ISO ini sebelum diburn kedalam media CD bisa menggunakan program seperti Vmware, Qemu untuk mencoba melakukan instalasi OpenBSD 4.3. Selanjutnya kita akan mencoba mengupas bagaimana cara menginstall OpenBSD 4.3



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- OpenBSD user & OpenBSD mailing list Indonesia id-openbsd@yahoogroups.com.
- **ndaru** yang udah ngenalin sama OpenBSD (thanks buat kiriman OpenBSD 3.9 nya :))

Links & Resources:

- <http://www.openbsd.org>
- [OpenBSD FAQ](#)
- <http://www.openbsd.or.id>
- <http://undeadly.org/>
- <http://www.openbsd101.com/>
- https://calomel.org/bootable_openbsd_cd.html
- <http://www.pantz.org/software/openbsd/makinganopenbsdbootcd.html>
- <http://www.benjaminheckmann.de/howto/>
- <http://www.bgnett.no/~peter/pf/en/long-firewall.html>
- [http://en.wikipedia.org/wiki/PF_\(firewall\)](http://en.wikipedia.org/wiki/PF_(firewall))

-
- <http://en.wikipedia.org/wiki/OpenBSD>
 - <http://daemonforums.org/>
 - <http://www.openbsdsupport.org/>

OpenBSD Mailing list

- Openbsd mailing list bisa dilihat di:
<http://openbsd.org/mail.html>
- id-openbsd@yahogroups.com

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