

Table Of Contents

Table Of Contents ..... 1

Using sysinstall - Easy way to add a new hard disk ..... 2

    Using fdisk ..... 3

    Using disklabel ..... 3

    Update /etc/fstab ..... 3

[Home](#) > [Faq](#) > [BASH Shell](#)

## FreeBSD: How To Add A Second Hard Disk

Posted by [Vivek Gite](#) <[vivek@nixcraft.com](mailto:vivek@nixcraft.com)>



**Q.** How do I add a second hard disk to my FreeBSD server? How do I partition, label and mount a new hard disk under FreeBSD for backup or additional data?

**A.** There are two ways to install a new hard disk under FreeBSD system. You can use all command line utilities such as fdisk, bsdlable and newfs to create partitions, label and format it. This method requires complete understanding of BSD partitions and other stuff.

## Using sysinstall - Easy way to add a new hard disk

The sysinstall utility is used for installing and configuring FreeBSD systems including hard disks. sysinstall offers options to partition and label a new disk using its easy to use menus. Login as root user. Run sysinstall and enter the Configure menu. Within the FreeBSD Configuration Menu, scroll down and select the Fdisk option:

```
# sysinstall
```

Alternatively, use sudo (if configured) to run sysinstall:

```
$ sudo sysinstall
```



**WARNING!** These examples may result into data loss or crash your computer if executed without proper

care. This FAQ [assumes that you have](#) <sup>[2]</sup> added a hard disk to the system. Also, replace ad to da (if using SCSI hard disk). Please note that any existing data on 2nd hard disk will get wiped out. Make sure you have backup of all import data and config files.

```
Usage      Quick start - How to use this menu system
Standard  Begin a standard installation (recommended)
Express   Begin a quick installation (for experts)
Custom    Begin a custom installation (for experts)
Configure Do post-install configuration of FreeBSD
Doc       Installation instructions, README, etc.
Keymap    Select keyboard type
Options   View/Set various installation options
Fixit     Repair mode with CDROM/DVD/floppy or sta
Upgrade   Upgrade an existing system
Load Config Load default install configuration
Index     Glossary of functions
```

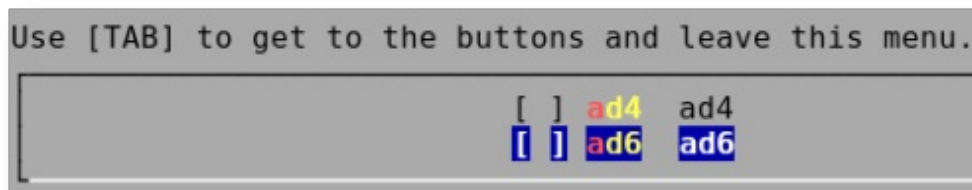
[3]

Fig.01: Scroll down to Configure and press [enter]

```
X Exit      Exit this menu (returning to previous menu)
Distributions Install additional distribution sets
Packages   Install pre-packaged software for FreeBSD
Root Password Set the system manager's password
Fdisk      The disk Slice (PC-style partition)
Label      The disk Label editor
User Management Add user and group information
Console    Customize system console behavior
Time Zone  Set which time zone you're in
```

[4]

Fig.02: Select Fdisk and press [enter]



[5]

Fig.03: Select the appropriate drive and press [enter]

The new drive will probably be the second in the list with a name like ad1 or ad2 and so on. In above example it is ad6.

## Using fdisk

Once inside fdisk, pressing A will use the entire disk for FreeBSD. When asked if you want to "remain cooperative with any future possible operating systems", answer YES. Write the changes to the disk using W. Now exit the FDISK editor by pressing Q. Next you will be asked about the "Master Boot Record". Since you are adding a disk to an already running system, choose None. The next dialog will say that the operation was successful. Press [enter]. Type Q to quit FDISK.

## Using disklabel

Next, you need to exit sysinstall and start it again. Restart sysinstall by typing sysinstall:

```
# sysinstall
```

Select Configure and press [enter]. Select Label and press [enter]. A dialog asking you to select the drive will appear. Select the appropriate drive and press [enter].

This is where you will create the traditional BSD partitions:

1. A disk can have up to eight partitions, labeled a-h.
2. The **a** partition is used for the root partition (/). Thus only your system disk (e.g, the disk you boot from) should have an a partition.
3. The **b** partition is used for swap partitions, and you may have many disks with swap partitions.
4. The **c** partition addresses the entire disk in dedicated mode, or the entire FreeBSD slice in slice mode.
5. The other partitions are for general use.

Now press C to create a partition.

- Set partition size, to use the whole drive, press [enter].
- Next, choose fs and press [enter].
- Type /disk2 as mount point and press [enter] (don't use the name of a directory that already exists because sysinstall will mount the new partition on top of it)
- To finalize the changes, press W, select yes and press [enter].

## Update /etc/fstab

The last step is to edit /etc/fstab to add an entry for your new disk, enter:

```
# vi /etc/fstab
```

Append entry like as follows (make sure you replace partition name with actual values):

```
/dev/ad6s1d    /disk2    ufs    rw    2    2
```

Here is my sample /etc/fstab file:

```
/dev/ad4s1a    520M    393M    85M    82%    /
devfs          1.0k    1.0k    0B     100%   /dev
/dev/ad6s1d    243G    75G     148G    34%   /disk2
/dev/ad4s1d    520M    22M     456M    5%    /tmp
```

/dev/ad4s1f	230G	4.6G	207G	2%	/usr
/dev/ad4s1e	10G	130M	9.4G	1%	/var
devfs	1.0k	1.0k	0B	100%	/var/named/dev
devfs	1.0k	1.0k	0B	100%	/usr/home/jail/www.example.com/dev

Save and close the file. The new drive should mount automatically at /disk2 after reboot. To mount it immediately, enter:

```
# mount -a
# df -H
```

4000+ howtos and counting! Want to read more Linux / UNIX howtos, tips and tricks? Subscribe to our [daily email](#) newsletter or [weekly newsletter](#) to make sure you don't miss a single tip/tricks. Alternatively, subscribe via [RSS/XML](#) feed.

Article printed from Frequently Asked Questions About Linux / UNIX: <http://www.cyberciti.biz/faq/>

URL to article: <http://www.cyberciti.biz/faq/freebsd-adding-second-hard-disk-howto/>

URLs in this post:

[1] Image: <http://www.cyberciti.biz/faq/category/freebsd/>

[2] assumes that you have: <http://www.cyberciti.biz/tips/assumptions>

[3] Image: <http://www.cyberciti.biz/faq/wp-content/uploads/2008/08/freebsd-post-install-disk1.png>

[4] Image: <http://www.cyberciti.biz/faq/wp-content/uploads/2008/08/freebsd-post-install-disk2.png>

[5] Image: <http://www.cyberciti.biz/faq/wp-content/uploads/2008/08/freebsd-post-install-disk3.png>