

# freebsd raid 1 konfigurieren

## freebsd RAID 1 configuration how to

*server*adminz

### How to configure RAID 1 on FreeBSD?

This is an article on " How we can Configure RAID 1 on FreeBSD"

I have done the OS installation ( with RAID 1 ) on FreeBSD 11.04 consisting of 2 disks ( 250 GB SSD )

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First of all we need

[expand title="mehr lesen..."]

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First of all we need to familiarize how the disks are named in the OS.

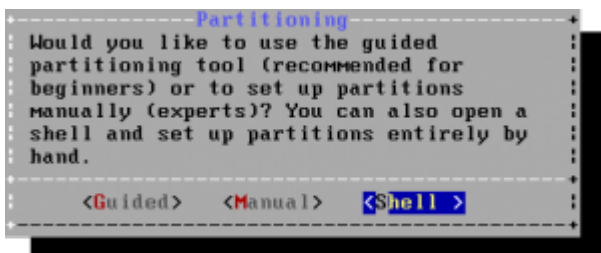
Normally in FreeBSD, each disk will be named as “ada0” and “ada1” respectively.

Because, on other Linux OS's like CentOS, Ubuntu, Debian the disk will be named as “sda” and “sdb”

## Step 1 :

Mount the ISO, then reboot the server and Start the FreeBSD install as we normally do.

Choose “Shell” option once you are prompted to the window as below



## Step 2 : Setting up the partitions on the disks

Make sure that both the disks are clean and there are no other partitions on the disk.

If you have any doubt, we can destroy the existing partitions.

Use this commands to destroy the partition

- gpart destroy ada0
- gpart destroy ada1

Once you are on the shell prompt, we now need to manually partition both the disks.

Here we are using the below mentioned partition layout:

```
/boot : 128k
swap : 4G
/ : rest of the space
```

### **##Setup 1st disk**

```
gpart create -s gpt ada0
gpart add -s 128k -t freebsd-boot -l boot0 ada0
gpart add -a 1m -s 4G -t freebsd-swap -l swap0 ada0
gpart add -a 1m -t freebsd-ufs -l root0 ada0
```

### **##Install boot code to first disk**

```
gpart bootcode -b /boot/pmbr -p /boot/gptboot -i 1 ada0
```

### **##Setup 2nd disk**

```
gpart create -s gpt ada1
gpart add -s 128k -t freebsd-boot -l boot1 ada1
gpart add -a 1m -s 4G -t freebsd-swap -l swap1 ada1
gpart add -a 1m -t freebsd-ufs -l root1 ada1
```

### **##Install boot code to 2nd disk**

```
gpart bootcode -b /boot/pmbr -p /boot/gptboot -i 1 ada1
```

## **Step 3: Setup The Gmirror**

```
true > /dev/ada0
true > /dev/ada1
```

Once done, we can check whether the partitions configured are assigned correctly by using this command

- `ls -l /dev/gpt/`

You will be displayed a result as like

```
ls -l /dev/gpt/

# Output should look similar to this:
crw-r----- 1 root operator  0, 100 /dev/gpt/boot0
crw-r----- 1 root operator  0, 108 /dev/gpt/boot1
crw-r----- 1 root operator  0, 102 /dev/gpt/root0
crw-r----- 1 root operator  0, 110 /dev/gpt/root1
crw-r----- 1 root operator  0, 104 /dev/gpt/swap0
crw-r----- 1 root operator  0, 112 /dev/gpt/swap1
```

Now we need to build mirrors for each partition we configured. For this we use “gmirrors”

```
gmirror label -h boot /dev/gpt/boot0 /dev/gpt/boot1
gmirror label -h swap /dev/gpt/swap0 /dev/gpt/swap1
gmirror label -h root /dev/gpt/root0 /dev/gpt/root1
```

Now load the `geo_mirror` KLD

```
#kldload geom_mirror
```

Then we can check the status of the `gmirror`. If it is okay, the Status will be "Complete" and all the Components will be "Active".

#### **Step 4 : Mount the Root(/) file system**

Here we are using SSD. For this we need to use the option "-t" to the `newfs`.

This will help to enable the TRIM Support.

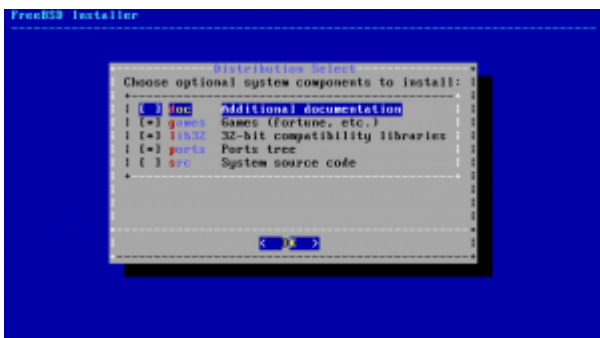
```
#newfs -t -U -L root /dev/mirror/root
```

Now mount the new file system to `"/mnt"`

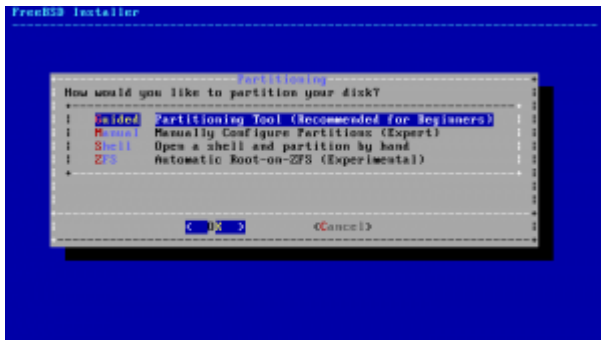
```
#mount /dev/mirror/root /mnt
```

**Step 5: Exit out from the shell prompt by using "exit" to continue with the Installation process.**

**Step 6: You will be now prompted to a choose system components to install**



**Step 7: Next will be partitioning. Choose again Shell from the next window**



Once you are again prompted to shell, we now need to create the partitions to fstab file to complete the process.

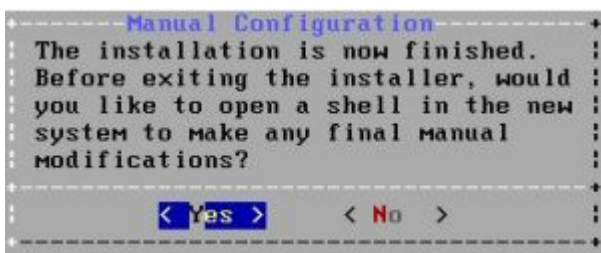
```
#vi /tmp/bsdinstall_etc/fstab
```

Edit the file as updated below :

| Device                | Mountpoint | FStype | Options |
|-----------------------|------------|--------|---------|
| Dump Pass#            |            |        |         |
| /dev/mirror/swap none |            | swap   | sw      |
| 0 0                   |            |        |         |
| /dev/mirror/root /    |            |        | ufs     |
| rw 1                  | 1          |        |         |

## Step 8: Exit

Once the installation is completed, you will be prompted to a window like



choose "Yes". You will be again booted to Shell prompt.

If we are not doing these steps, there is a chance for getting "mount root" error.

Proceed with the below steps:

Edit `"/boot/loader.conf"` with the entry **geom\_mirror\_load="YES"**

Reboot the server, once the Installation completed.

You will be now booted into the OS.

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