

FreeBSD 13.0 Install Guide for BIOS/Legacy Systems

Written by Nils Wegner (TheRealNilz), October 9, 2021

Step 1: Write the memstick image to a flash drive using dd

Step 2: Boot the machine you want to install on with the flash drive

Step 3: Select Live CD (Not Install FreeBSD!)

Step 4: Login as root → No password required

Step 5: Create a new GPT table on the drive you want to install on: **gpart create -s gpt {GEOM}**

Step 6: Create a freebsd-boot partition: **gpart add -a 4K -t freebsd-boot -s 512K {GEOM}**

Step 7 (Optional): Create a freebsd-swap partition: **gpart add -a 4K -t freebsd-swap -s [size of RAM] {GEOM}**

Step 8: Create a freebsd-zfs partition using the left over disk space: **gpart add -a 4K -t freebsd-zfs {GEOM}**

Step 9: Create a new zpool with your freebsd-zfs partition as member: **zpool create -O atime=off -O compression=lz4 -O mountpoint=none [POOLNAME] {PART}**

Step 10: Mount the freshly created zpool and chdir to it: **mount -t zfs [POOLNAME] /mnt && cd /mnt**

Step 11: Un-tar the FreeBSD Base files: **tar xvzf /usr/freebsd-dist/base.txz**

Step 12: Un-tar the FreeBSD Kernel files: **tar xvzf /usr/freebsd-dist/kernel.txz**

Step 13: Enable the zfs Kernel Module: **echo "zfs_load=\\"yes\\" > boot/loader.conf**

Step 14: Set a hostname and keymap for the new system: **echo "hostname=\\"[HOSTNAME]\\" > etc/rc.conf && echo "keymap=\\"[MAP].kbd\\" >> etc/rc.conf**

Step 15: Write Boot&Partcode to your drive: **gpart bootcode -b /boot/pmbr -p /boot/gptzfsboot -i 1 {GEOM}**

Step 16: Reboot and remove the Flash Drive. Your system should now be ready to use.

Note about steps 13&14: You can also edit these files with ee or vi and insert the lines by hand. In that case the “ signs don’t need to be escaped with \.

FreeBSD 13.0 Install Guide for (U)EFI Systems

Written by Nils Wegner (TheRealNilz), October 9, 2021

Step 1: Write the memstick image to a flash drive using dd

Step 2: Boot the machine you want to install on with the flash drive

Step 3: Select Live CD (Not Install FreeBSD!)

Step 4: Login as root → No password required

Step 5: Create a new GPT table on the drive you want to install on: **gpart create -s gpt {GEOM}**

Step 6: Create an EFI partition: **gpart add -a 4K -t efi -s 1M {GEOM}**

Step 7 (Optional): Create a freebsd-swap partition: **gpart add -a 4K -t freebsd-swap -s [size of RAM] {GEOM}**

Step 8: Create a freebsd-zfs partition using the left over disk space: **gpart add -a 4K -t freebsd-zfs {GEOM}**

Step 9: Create a new zpool with your freebsd-zfs partition as member: **zpool create -O atime=off -O compression=lz4 -O mountpoint=none [POOLNAME] {PART}**

Step 10: Mount the freshly created zpool and chdir to it: **mount -t zfs [POOLNAME] /mnt && cd /mnt**

Step 11: Un-tar the FreeBSD Base files: **tar xvzf /usr/freebsd-dist/base.txz**

Step 12: Un-tar the FreeBSD Kernel files: **tar xvzf /usr/freebsd-dist/kernel.txz**

Step 13: Enable the zfs Kernel Module: **echo "zfs_load=\`yes\`" > boot/loader.conf**

Step 14: Set a hostname and keymap for the new system: **echo "hostname=\`[HOSTNAME]\`" > etc/rc.conf && echo "keymap=\`[MAP].kbd\`" >> etc/rc.conf**

Step 15: Format the EFI partition as fat: **newfs_msdos /dev/[PART]**

Step 16: Mount the EFI partition to /media: **mount_msdosfs /dev/[PART] /media**

Step 17: Create an EFI directory tree: **mkdir -p /media/EFI/BOOT**

Step 18: Copy the EFI loader from /boot to your EFI partition: **cp /boot/boot1.efi /media/EFI/BOOT/BOOTx64.EFI**

Step 19: Reboot and remove the flash drive. Your system should now be ready to use.

Note about steps 13&14: You can also edit these files with ee or vi and insert the lines by hand. In that case the “ signs don’t need to be escaped with \.