

# Installing FreeBSD

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# What is FreeBSD

- A Free, Open Source Unix for PC (386) and Alpha architectures.
- Widely used for network application servers
- Less widely used for client desktops.

# Comparison to Other OS's

- vs Windows\*
- vs Linux
- vs Unix

# FreeBSD History

- ATT Unix (1970)
- UC Berkeley buys source license ( 1972)
- BSD 2.x, BSD 4.x ( 1980)
- Lawsuit!
- 386BSD
- NetBSD, OpenBSD, FreeBSD

# Installation Overview

1. Identify Hardware
2. choose boot and install media
  - floppys+cdrom
  - floppys+network
  - cdrom

### 3. layout hard drives

- space for other OS (32 MB .. )
- space for FreeBSD (1 GB ..)
- partitions, slices, logical drives, oh my!
  - can be installed in a single “partition”
  - which can be broken up into 8 slices, a..h
  - one slice represents the whole disk
  - one slice is usually reserved for swap
  - ide examples: ad0s3[a-h], ad0s1, ad0s5
  - scsi examples: da5s0a
- backup

#### 4. boot manager(s)

- cooperation with other OS
- BTX
  - the native BSD boot manager
  - does not require a disk partition
- LILO, the Linux boot manager
- none
- Windows/NT, et al

## 5. assign file systems to FreeBSD partition

filesystem	description	typical range	nominal
/	root partition	32 MB – 128 MB	64 MB
<i>swap</i>	virtual memory	2 – 4x memory	256MB
/var	temporary space	64 MB – 512 MBB	256MB
/usr, /usr/local	system files	800 MB – 2 GB	1.2 GB
/export/home, ..	user/application files	as needed	

## 6. choose distributions

- Kern
- X-Windows
- Developer
- User

## 7. Packages

- similar to RPM's
- precompiled applications ready to be installed.

## 8. Ports

- not yet compiled
- /usr/ports

## 9. Pick installation media

- May require network configuration

## 10. Go!

- The Status Screen (ALT-F1)
- The installation output (ALT-F2)
- The Emergency Holographic Shell (ALT-F4)

## 11. Final Installation Issues

- device configuration (mouse, networking)
- super user (root) password
- packages (no)
- X configuration (no)

## 12. Reboot (remove cd-rom)!

## 13. First Boot Activities, /stand/sysinstall

- (a) add important packages
  - emacs
  - bash
- (b) configure networking if necessary
- (c) add users
- (d) configure X-Windows

## 14. Kernel Reconfiguration

- /sys/i386/conf/KERNELNAME, config
- customize parameters like buffer sizes
- remove non-essential devices and services
- add devices in services which are not in the generic kernel
  - PNPBIOS, sound device
  - “wired-down” SCSI

# Important Links

- <http://www.freebsd.org>
  - Announcements
  - Handbook
- <http://www.freebsdmail.com>
- <http://www.bsdmall.com>