FreeBSD at EurOpen.SE

`http://www.freebsd.org/`

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Performance – A Case Study

`wcarchive.cdrom.com`

100Mbps Ethernet to Core Router

1200 concurrent FTP sessions

Data Transfer limited by the Internet

Performance: Hardware

```
One 150MHz P6 CPU ("Pentium Pro")
512MB main memory (8-64MB SIMMs, 60ns)
2 AHA-2940  PCI SCSI
1 AHA-3940U PCI dual-channel SCSI
72 GB of standard SCSI-II drives
```

FreeBSD Provides

- A Complete Un*x System
- Based upon 4.4BSD-Lite
- Full Sources
- Most under BSD Copyright

FreeBSD: Installation

- Only a single floppy required
- Boot-time hardware configuration
- Menu driven installation
- Choice of Media: NFS, CD-ROM, FTP, Tape, Floppy, DOS files

FreeBSD: Applications

- Ports Mechanism == Instant Application
- Download and `"make install"`
- Over 550 Applications (Only 2 MB of disk)

Integrated Security

- Kernel IP filtering and logging
- IP packet `"divert(4)"` capability
- Built-in Kerberos and S/Key
- Dedicated Security Officer

Commercial Users

- Yahoo: Web Servers
- US West, BEST Internet: ISP's
- Whistle Communications: Security
- Walnut Creek CD-ROM
- StaDab Norrköping

Who are We?

- Core Team
- Contributors
- Active Users
- General Users

Documentation

- 4.4BSD manuals from Usenix and O'Reilly
- Online Handbook and Tutorials
- Man pages and The Source

Distributions

- 2.1.5 RELEASE (July 14, 1996)
- 2.1.6 RELEASE (November 1996)
- 2.2 Current snapshots (October 15, 1996)
- 2.2 RELEASE (December 1996)

Project Administration

- CVS: source code revision control
- GNATS: problem report database
- SUP, CTM, Cvsup: source tree distribution
- Majordomo: mailing lists

Binary Compatibility

- SCO: WordPerfect and Informix
- Linux: ApplixWare and Doom
- BSDI: Netscape and MS FrontPage
- Macintosh: using Executor for Linux

Goodies

- T/TCP: canonical implementation
- CCD: Concatenated Disk Driver
- Huge Filesystems (1 TB)
- CD WORM Drives

Project Philosophy

- Respond to user community
- Encourage user participation
- Easy access to source and binaries
- Provide support through the Internet

Symmetric MultiProcessing

- 2 processors: 84% Speedup
- Up to 15 processors
- Dedicated mailing list and source tree

FreeBSD: The Future

- Kernel Threads
- Fine Grain Locking
- Dynamic Configuration for Everything
- Filesystems (`unionfs, devfs, logfs`)