FreeBSD Technical Information

FreeBSD

In November 1993 Jordan Hubbard started the FreeBSD project, in which he took source code from the 386BSD. At present, FreeBSD is developed by about 200 developers which pass modifications on the source code to a central team which in line are responsible for the next release. FreeBSD bases on 4.4 BSD Lite release for x86 computers of March 1994 and has his strengths in the network area. FreeBSD has proved itself in use everywhere where large amounts of data are transfered. The text based installation program makes the individual customization for the planned use possible. FreeBSD is developed in three branches: CURRENT contains latest features in the development, STABLE contains tested source code and RELEASE is the published version which only is updated for bug fixes. According to Netcraft were 2.5 million servers installations counted with FreeBSD in 2004.

The name of devices like fixed storage disks in the "/dev" directory following a scheme of its own. So e.g. the first partition is described as ad0s1 on the first IDE fixed disk, ad0s2 is the second partition. Installation of ported system software and packages or update of installed programs can made easily over a software list. In every port descriptions are the latest updates includet which can be installed by an freely eligible installation medium like CVS (Concurrent Versions System). If the user prefer already compiled programs, he can use the binaries. About 8,000 programs are available for FreeBSD by now. FreeBSD stands under the BSD license, is free usably and freely copyable as long as the copyright notes remains with the BSD licence.

For FreeBSD are security extensions under the project name TrustedBSD available which correspond to the B1 security level. Access Control Lists (ACL) and Mandatory Access Control (MAC) are only few of those.

Field of Application
Database server
Internet, intranet and file server
Internet client

Structure Information
proven TCP/IP stack
preemptive multitasking
monolithic kernel

System Environment
X-Windows
multi-user ability
max. 4 CPUs
File system: ufs
32-bit Intel, 64-bit UltraSPARC, alpha (experimental)

Read/Write: FAT, ISO9660, NTFS

Strenghts
runs transparently and stable
Portability
binary compatible: DOS, SCO UNIX, BSDI, NetBSD, Linux and 386BSD
NFS performance

Later, Cloud