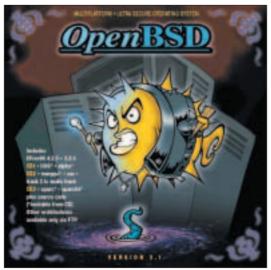## The monthly BSD column

FREE WORLD

Version 3.1 of OpenBSD has been released, much to the excitement of its fans and devotees here and around the world. Richard Ibbotson takes a closer look to find out why so many think of it as an operating system of beauty and reliability

The new release of OpenBSD has many more new features and updates than we can mention here. In addition to this, the first time user might like to know that there are many features of the OpenBSD operating system, which were originally only available with OpenBSD. Later on they were ported over to GNU/Linux and other BSD software. The OpenBSD developers have a reputation for being there first and getting it right. Open SSH is a fine example of this and the updated version is packaged into the OpenBSD 3.1 software.

What's new?

A complete list of OpenBSD 3.1's new features can be found on the OpenBSD Web pages but here's a brief summary of what it has to offer:

- OpenSSH, which supports both the SSH1 and SSH2 protocols, is now at version 3.2.
- Secure file transfers are encouraged using the greatly enhanced SFTP subsystem which comes with both an SFTP server and client.
- Improvements to the documentation, the manpages and the Web FAQ are made with every release.
- A larger part of the Web site is now to be seen in several languages. There are over 1,000 pre-built and tested packages – when someone tells you that an OpenBSD package has been tested you had better believe it.
- There is greatly improved hardware support in the OpenBSD/sparc64 port, and the addition of X11 support. There have also been many performance improvements to the OpenBSD/macppc port, as well as accelerated X11 servers for some models.
- A lot of enhancements have been made to the new packet filter, pf(4) including performance improvements, as well as the ability to filter other protocols than the usual TCP, UDP and ICMP, such as ESP. There also exists a utility to achieve per-user pf rules changes – typically intended for gateways – which is *authpf*.
- Wavelan bridging is now possible on Prism-II based cards.

The software also includes the following major components from outside vendors:

- XFree86 4.2.0 (and i386 contains 3.3.X servers also, thus providing support for all chipsets)
- gcc 2.95.3 (plus patches)
- perl 5.6.1 (plus patches)
- Apache 1.3.24, mod_ssl 2.8.8, OpenSSL 0.9.6b (plus patches), DSO support
- groff 1.15
- sendmail 8.12.2
- lynx 2.8.2rel.1 with HTTPS support added
- sudo 1.6.5p2
- ncurses 5.2
- Latest KAME IPv6
- KTH Kerberos 1.0.8
- Heimdal 0.4e (plus patches)
- OpenSSH 3.2

If you are planning on dual booting OpenBSD with another OS, you will need to read the included INSTALL i386 document if you are using i386 hardware. You can also install OpenBSD into:

- alpha – DEC Alpha-based machines.
- amiga – Amiga m68k-based models (MMU required).
- hp300 – Hewlett-Packard HP300/HP400 machines.
- i386 – Intel-based PCs.
- mac68k – Most MC680x0-based Apple Macintosh models.
- mvme68k – Motorola MVME147/16x/17x 68K VME cards.
- macppc – Support for Apple-based PowerPC systems.
- sparc – SPARC Platform by Sun Microsystems.

- sun3 – Sun's 68020-based Sun3 models.
- vax – DEC's VAX computers.

Installing OpenBSD can be achieved from an internal network or across the Internet by FTP. The OpenBSD developers like to boast that there hasn't been a security hole in a remote install for four years. The more normal approach is from the OpenBSD CD-ROMS, which are easy to get hold of from the OpenBSD Web site.

If you're using i386 hardware, you should set your BIOS to boot from CD-ROM and then boot from the first CD. The rather nice artwork that comes with the CDs also contains some useful instructions on how to install the software. You should read this carefully before you start the installation and whilst you are configuring the partitions. You can also download the recently upgraded FAQ from the OpenBSD site. This can provide a great deal of help if you run it on another monitor whilst you are installing your OpenBSD 3.1 system.

During the installation process you will be asked about your network cards and your ISP's name servers. When it comes to installing the sets (compressed software archives) you will also be asked whether or not you want to install Xwindows. This means that you can have an up-to-date KDE or GNOME desktop, if you like, or any other desktop that you might find in GNU/Linux such as XFCE or Windowmaker.

After the installation it's best to have a look at the afterboot manual for first time user information. To do that at the command line type in *man afterboot* and a large selection of useful information will be displayed on screen. Things to notice here are the references to other manpages and also *man whereis*, *man whatis*, *man mount* and *man mount_desc*, if you haven't mounted CDs or floppies in BSD systems before. Have a look at the bottom of all of the manpages for further references to helpful info. Just after you have rebooted your new OpenBSD computer you might want to mount a floppy disk or a CD in the CD-ROM drive. This can be done via:

```
mount –t msdos /dev/fd0a /mnt/floppy
mount –t cd9660 –r /dev/cd0a /mnt/cdrom
```

To have a look at the boot messages, type *dmesg*, and if you can't read anything then do *dmesg* ll *more* which will allow you to use the space bar to scroll down the *dmesg* one console space at a time. Part of the *dmesg* that was created by the software that was installed for the test can be seen below.

At this point you will probably want to get some help from somewhere. Have a look at the OpenBSD site and look for the mailing lists. Choose the one that looks to be the most useful and ask questions on that list. Kernel compiling may be required for some

Info

OpenBSD *http://www.openbsd.org*
CD-ROMs or T-shirts
http://www.openbsd.org/orders.html
CD-ROMS with minimal postage
http://www.kd85.com/
Supported hardware
http://www.openbsd.org/plat.html
How to install
http://www.openbsd.org/faq/faq4.html

ftp://ftp.openbsd.org/pub/OpenBSD/3.0/i386/INSTALL.i386
Documentation
http://www.openbsd.org/docum.html
http://www.openbsd.org/cgi-bin/man.cgi
Security issues
http://www.openbsd.org/security.html
http://www.openbsd.org/crypto.html
Firewalls *http://www.obfuscation.org/ipf/ipf-howto.txt*
Goals of the project
http://www.openbsd.org/goals.html
Professional support
http://www.openbsd.org/support.html

configurations. This is fairly easy to do. You can find plenty of info in the manpages and on the OpenBSD site. If you do want to use OpenBSD as your desktop of choice you can configure Xwindows with xf86config or xf86cfg. This is a lot like configuring a Debian GNU/Linux system. If you can do that you shouldn't have any problems with OpenBSD as your desktop. Before you do anything you should have a look at */usr/X11R6/README* to make sure that you understand what it is that you have to do.

Conclusion

To sum up. OpenBSD is the software to use if you need that secure firewall to secure a Net-facing connection, or if you just want internal security between your company's different departments with an internal firewall. You can also use OpenBSD for many other things. We hope that this short introduction to the new release of OpenBSD 3.1 software has been of some help to you and that you will want to install and use the software as a result of reading it.

The author

Richard is the Chairman for Sheffield Linux User's Group. You can view its Web site at *http://www.sheflug.co.uk/*

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