A Quick Introduction to BSD

Network Administration

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BSD

- In this paper we will use BSD Unix for some of our work.
- Most of you are familiar with Linux. BSD is very similar.
- Despite its similarity to Linux, there is some value in introducing you to another system.
- BSD has some properties that are very desirable for network infrastructure services.

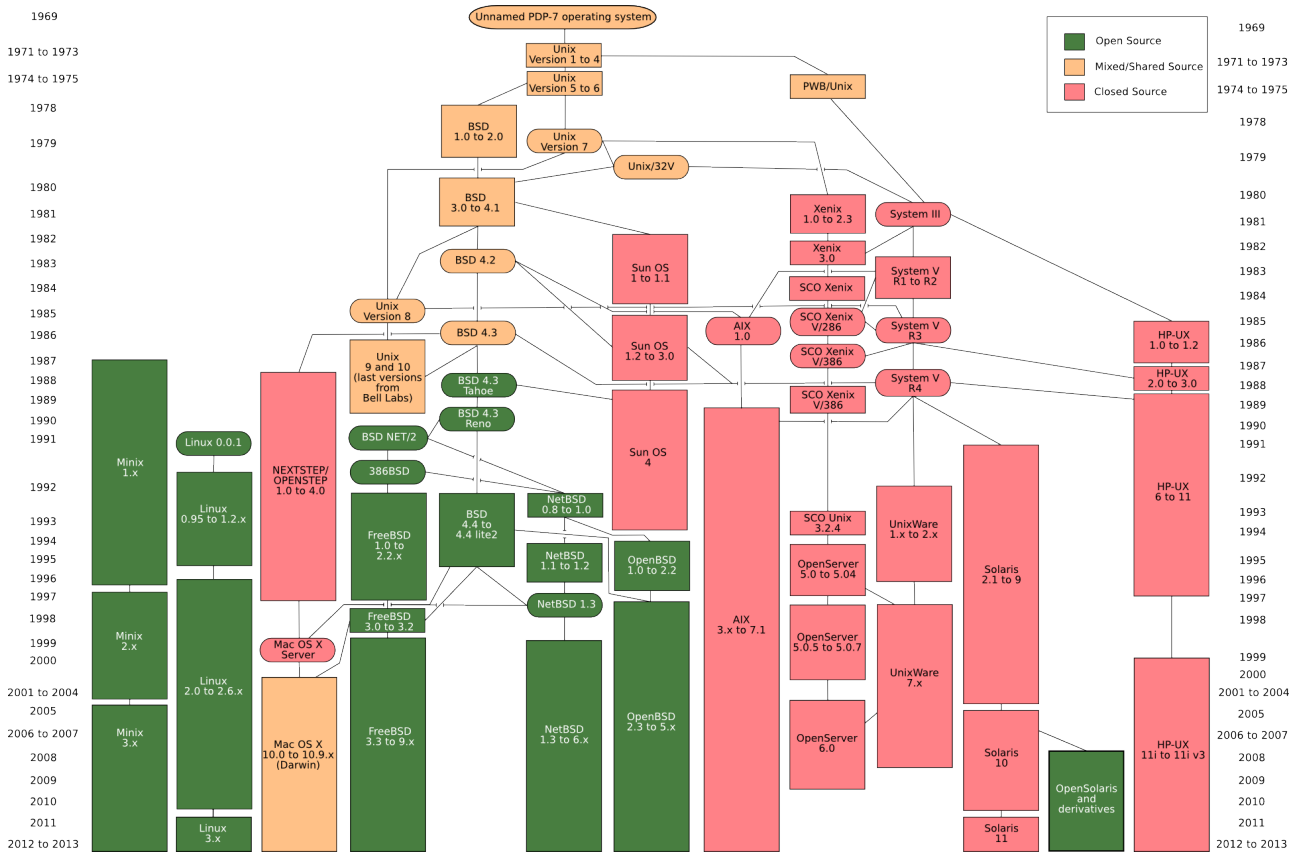

Figure: “Unix history-simple” by Eraserhead1, Infinity0, Sav_vas - Levenez Unix History Diagram, Information on the history of IBM’s AIX on ibm.com. Licensed under Creative Commons Attribution-Share Alike 3.0 via Wikimedia Commons

A little history

- Unix was originally developed at Bell Labs (AT&T).
- In the 1970s it was distributed as source code. It was not uncommon for users to modify the source to produce custom versions.
- Some of the popular customisations were distributed as patches.
- BSD got its start as a collection of patches.

A little history

- In the early 1990s BSD was involved in copyright troubles with AT&T for distributing its code along with BSD.
- Eventually the dispute was resolved in 1994. AT&T code was replaced by unencumbered versions.
- But in the meantime, Linus Torvalds had released early versions of Linux.

BSD vs. Linux

- Today Linux is the dominant Unix-like[1] operating system.
- BSD systems are still widely used, however.
- In comparison to Linux, BSD is a little more "old school". While it lags behind Linux in terms of some features, it is widely regarded as more stable and easy to maintain.

[1] Linux is extremely similar to Unix, but it is not technically Unix.

Types of BSD

Like Linux, there are many varieties of BSD the three most notable are

- FreeBSD, a widely used general purpose version
- NetBSD, a version focused on portability
- OpenBSD, a version focused on security

All of these are Free/Open Source.

Configuration differences

- The process for configuring BSD systems is very similar to the one for Linux.
- Config files are generally under /etc.
- The config file formats for 3rd party software is generally the same.
- Some config files, like those for starting/stopping services, are a bit different.

BSD Networking

- One of the strengths of BSD is its network stack, including routing and firewalling.
- Key config files:
  - `/etc/hostname.<ifname>`
  - `/etc/myname`
  - `/etc/mygate`
  - `/etc/resolv.conf`
- See `http://www.openbsd.org/faq/faq6.html`

Package management

- BSD systems use two parallel package management systems: Packages and Ports.
- Packages are prebuilt binaries.
- Ports are distributed as source code which is compiled on your system at install time.

In conclusion

When the most important properties in a server are reliability and security, then on of the BSD versions is a good choice. You won't have some of the shiny new tools that are available on a system like Linux, but for network infrastructure this is not a bad thing.