

Why BSD?

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Who I Am?

- Author
- Unix since 198(mumble), sysadmin since 1995
- Founding member of SouthEast Michigan BSD User Group, semibug.org
- Blatant BSD demagogue
- Author of many tech books, including *SSH Mastery*, *Cisco Routers for the Desperate*, and the brand-new 3rd edition of *FreeBSD Mastery*
- As Michael Warren Lucas, novels like *git commit murder*
- Martial arts, pet rats, married, blah blah blah

Why BSD?



Primordial FreeBSD (1993)

- 1.0 release notes
 - Lots of bugs fixed between EPSILON and RELEASE
 - In that window, added:
 - A dynamic buffer cache that automatically grows and shrinks
 - Linux sound drivers
 - Mitsumi CDROM support
 - Updated install floppies
 - Advance syscons support for XFree86 2.0

Primordial OpenBSD (1997)

- Based in Canada, so not subject to US export controls
- Put crypto everywhere
- “mostly POSIX compliant,” starting on XPG4
- Fixed 800 /tmp races, buffer overflows, DOS, information leakage, trying to cope with insecure protocols
- Hoping for IPv6 and IPSEC soon
- Intent to blatantly steal code from other BSDs

Primordial Lucas

Hello,

I have a Ne2000 clone Ethernet card that absolutely refuses to work under FreeBSD. (It's an ISA PnP card.)

I've set userconfig to take the IRQ from the card. That didn't work, so I configured the kernel to take the IRQ from the card.

A netstat -a shows that the card is up & configured properly, but I keep getting the ed0 timeout.

Help? Anyone? Pretty please? I've got to get this machine working.

Thanks, Michael Lucas

A Long and Forking Road

- BSD systems are self-hosting and self-building
- Forks are good

Same Problems, Different Approaches

- a.out to ELF
- packaging tools
- ports

Release Engineering

- The release is the product
- OpenBSD, date-based for decades now
- FreeBSD, not so much

Learning Opportunities

- freebsd-announce, 15 July 1996: originally released 2.1.5
 - very popular 3c509 NIC didn't work
 - CD installs didn't work – minor detail, that
 - ports collection overflowed first CD
 - and more!
- solution: 2.1.5.1, aka “2.1.5 The Director's Cut”

Included Software

- every BSD is a complete operating system
- self-hosting
- integrated debugging
- documentation

Failures?

- GPL-free system
- pcc(1)
- libkse
- systrace
- graid(5)

NetBSD Successes

- Lua in the kernel
- rump kernels
- pkgsrc
- blacklistd

OpenBSD Successes

- copious memory/processor protections at low overhead
- OpenSSH
- LibreSSL
- strlcpy(3), strlcat(3), reallocarray(3), many many more
- PF
- many more projects

FreeBSD Successes

- OpenZFS integration
- SMP
- poudriere
- jails
- running straight into the enterprise gap

What We Come From: the BSD License

- Don't claim you wrote this
- Don't sue us if it breaks
- Don't remove the copyright from the source code

Effects of the BSD License

- Defines a minimum acceptable level of code
- We're not here to make everyone use BSD code, we're here to say that code must be at least this good to be used
- Gives people a base to build on

Closing Off Code

- If it could be done, it would have been done
- But what really happens when people try?

Disengaged Life Cycle

- Build a product based on FreeBSD 4.x
- Hardware advances, need to update to 6.x
 - Massive patchset
 - Divergence makes parts inapplicable
- Show up at BSDCan, declare “We’re going to engage!”
- Don’t engage
- Need to update to 8.x
- Repeat
- Get dragged under by technical debt

Successful BSD Engagement

- Hire folks whose patches get committed
- Define your special sauce
- Upstream the rest
- Feeding an upstream CVS or SVN server is no worse than maintaining your private repo
- Have your folks with upstream repo access groom others to achieve same
- Sponsor BSD events

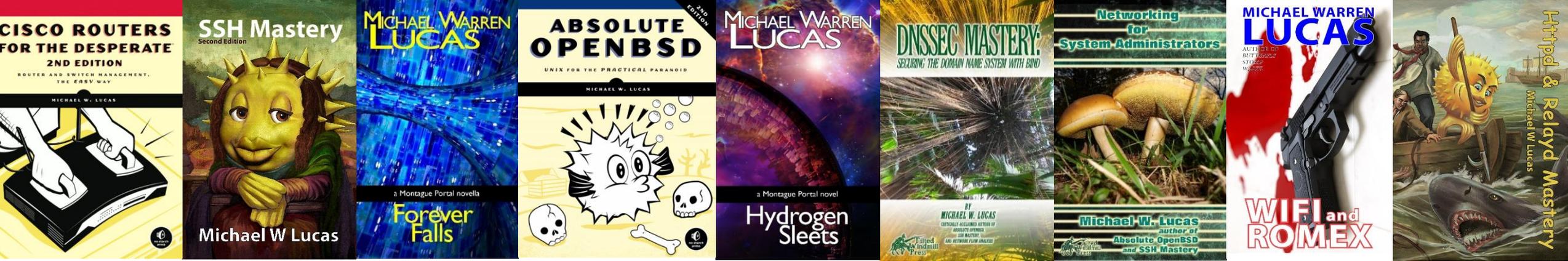
BSD Culture

In the late '90s, some key NetBSD developers had been describing the NetBSD group as "a bunch of alcoholics with a computing problem". This description has also fit OpenBSD very well at times.

-Miod Vallat

Questions?

- But before I answer...



Dear IRS: My Incidental Expenses are Now *Tax-Deductible*



Questions?

- `</commercial>`