

Free and Open Source Software (FOSS)

and

You

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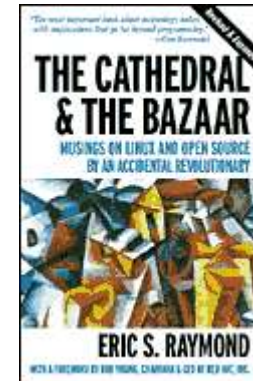
Agenda

- Why Free and Open Source Software
- Myths and Assumptions
- Open Sourced Defined
- Personal Review
 - Individual
 - Developers
 - Administrators
 - Business

Why Do People Do It?

Why do people create then give it away great software such as FireFox, OpenOffice, Linux, Apache, OpenOffice?

Some key ideas from The Cathedral and the Bazaar (Eric Raymond)



Cost Sharing

- Buy
 - Will vendor be competent, respond to your needs, allow modifications?
- Build your own
 - May be expensive buy you'll get exactly what you need but you must maintain it
- Participate
 - Use appropriate FOSS and contribute modifications, patches back
 - Get new releases, patches from community

Competence/Security

- Microsoft announced a total of eight security bulletins on Wednesday, April 13, with five of the vulnerabilities listed as "critical." The latter group encompasses Windows, Exchange Server, MSN Messenger, Word, and, yes IE. All of them could theoretically let a attacker take control of individual systems, the company reported. Patches have been written and are available at the Microsoft site.

Legacy

- UUCPnet and Usenet were used for email
- Email, the first killer app of the Internet
- Usenet was used for software distribution and collaborative tech support
- The early Unix hardware market was fragmented. With hundreds of competing computer architectures, the only way to distribute software was as source
- Much of what drove the early Internet was Usenet (NCSA's web server and Mosaic)

Risk Spreading

- If you build s/w for your own needs and other people can use it, then by making it Open Source, you spread the risks
 - e.g. key people leaving your firm
- Widget Frosting
 - If your s/w is needed to drive your hardware, there is less risk in using your product if that driver is Open Sources. For your customer, the risk of you going away is mitigated

Loss-Leader/Market Positioner

- Some firms offer or support a free Open Source version of their product
- Revenue can be derived from
 - Support
 - Enhanced versions of s/w
- Examples
 - OpenOffice/ StarOffice
 - MySQL
 - Zend

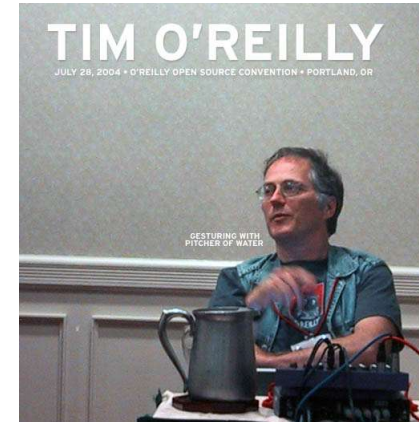
Give Away the Recipe, Open a Restaurant

- Give away the s/w, sell service
 - Redhat and other Linux distributors
 - Cygnus Solutions
 - Java
 - StarOffice



Accessorizing

- O'Reilly
 - Books
 - Web Site
 - Conferences
 - T-Shirts
- There are 10 kinds of people in the world
 - those who understand Open Source and those who don't



Myths and Assumptions

Question the Myths and Assumptions in the marketplace about FOSS

"I think you have to rate competitors that threaten your core higher than you rate competitors where you're trying to take from them. So in some senses (that) puts the Linux phenomenon and the Unix phenomenon at the top of the list."


"That really is Job 1 for us, because that's the threat to the Windows business. That's the threat through that to the Office business. So I'd put the Linux phenomenon really as threat No. 1." -Microsoft CEO Steve Ballmer



FUD

- Open source is not beneficial to consumers
- Lack of support, security through obscurity
- Intellectual property disputes
- Windows more reliable
- Windows less expensive
- migration costs of moving to Linux
- quality of the toolset available on Linux

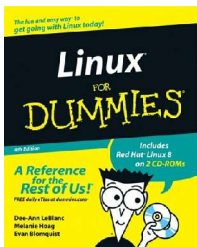
Anti-FUD

- Many proprietary software product licenses include clauses that forbid public criticism of the product without the vendor's permission.
- Vendor-sponsored studies are often rigged (no matter who the vendor is)
 -  Forrester Research announced that it will no longer accept projects that involve paid-for, publicized product comparisons

Anti-Fud



- "There is no support, no training"
 - Commercial (e.g. RedHat, Sun, HP, IBM)
 - Community (e.g. comp.os.linux.*)
- "There is no documentation"
 - From "Linux for dummies" to linuxdoc.org
- "A free or nearly free product is a toy"
 - See the Internet Infrastrure
 - Apache, FireFox, BIND, Sendmail, Linux



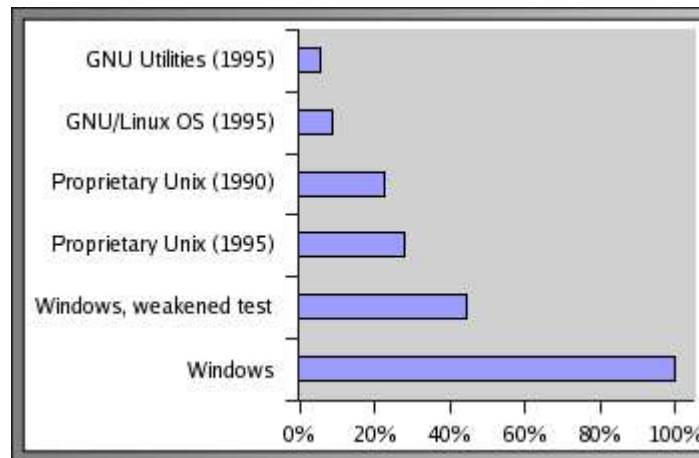
•Anti-Fud

- "Free Software is not adequate for heavy tasks"
 - Less true as Kernels mature
 - Less true as software evolves into a service (e.g. Google)
- "What appeal do I have in case of problem with the software ?"
 - There is no appeal, because software licences deny all responsibilities for the writers, in case of problem. But, in reality developers are always ready to help in case of problem and try to correct as soon as possible the bugs encountered

- Anti-Fud

- “Windows is more reliable”

- Equivalent OSS/FS applications are more reliable, according to the Fuzz study. The paper “Fuzz Revisited” paper measured reliability by feeding programs random characters and determining which ones resisted crashing and freeze-ups.



•Anti-Fud

• Forrester questions Linux security

- conclusions didn't give an accurate idea of relative security, as they failed to distinguish between patch times for critical updates and routine, obscure problems
- only 13 Red Hat vulnerabilities were critical during the one-year time period, and they took an average of just over a day to fix
- Only the Windows boxes get the worms.

• Migration to Linux costs

- Migration only costs money once; higher Windows TCO is forever.

•Anti-Fud

Viruses, Trojans and other malware make it onto Windows desktops for a number of reasons familiar to Windows and foreign to UNIX/Linux:

- Windows has only recently evolved from a single-user design to a multi-user model
- Windows is monolithic, not modular, by design
- Windows depends too heavily on an RPC model
- Windows focuses on its familiar graphical desktop interface

•Anti-Fud

- Viruses, Trojans and other malware rarely, if ever, manage to infect Linux systems, in part because:
- Linux is based on a long history of well fleshed-out multi-user design
- Linux is mostly modular by design
- Linux does not depend upon RPC to function, and services are usually configured not to use RPC by default
- Linux servers are ideal for headless non-local administration

OSS has marketshare

- Many people think that a product is only a winner if it has significant market share
- Some writers argue against OSS/FS or GNU/Linux as “not being mainstream”

FOSS has mindshare

- 81% of respondents Worldwide said they were at least 'somewhat' familiar with OSS; 77% of respondents Worldwide said they were at least 'somewhat' familiar with Linux. Worldwide 78% of OSS familiar respondents said they had a favorable impression of OSS; Linux favorability among the Linux familiar was 86%.
- A plurality (40%) of all respondents felt that a low TCO was the best reason to support OSS. One-third of all respondents cited 'an alternative to Microsoft' as one of the best reasons to support OSS
 - Microsoft internal Linux Strategic Review held at the Microsoft offices in Berlin during Sept. 2002

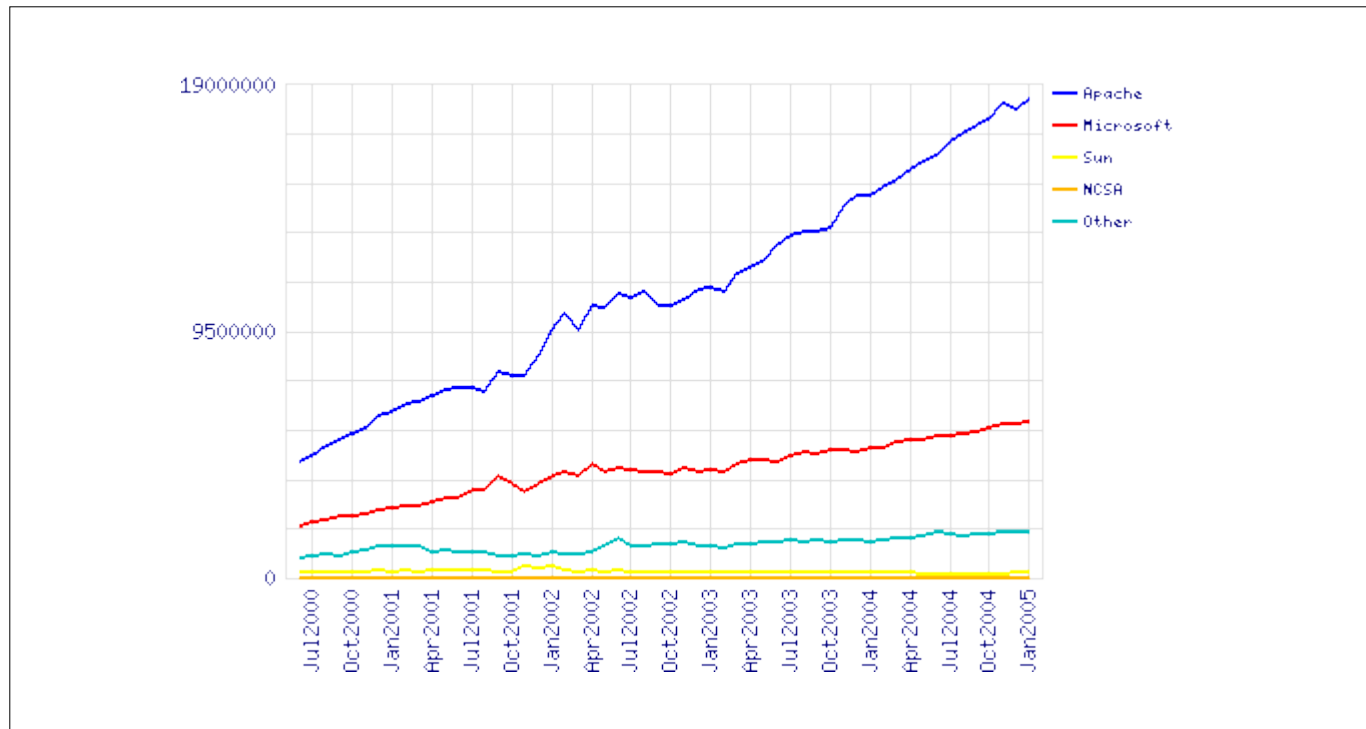
Web Server



- Apache

- The most popular web server has always been OSS/FS since such data have been collected. For example, Apache is the #1 web server with over three times the market share of its next-ranked (proprietary) competitor. Netcraft's statistics on web servers have consistently shown Apache (an OSS/FS web server) dominating the public Internet web server market

Market Share for Active Web Servers, June 2000 - January 2005



Internet Infrastructure

- A survey in May 2004 found that over 75% of all DNS domains are serviced by an OSS/FS program.
- The use of Firefox rose to 6.17% from 5.59% in January (IE dropped to 89.04% market share, from 90.31% in December)



Will they use it?

- A 2004 InformationWeek survey found that 67% of companies use OSS/FS products, with another 16% expecting to use it in 2005; only 17% have no near-term plans to support OSS/FS products
- An Evans Data survey made public in February 2004 found that 1.1 million developers in North America were working on OSS/FS projects



Sendmail

- Sendmail, an OSS/FS program, is the leading email server. (42%)
 - Windows Microsoft Exchange (18%), Unix qmail (17%), Windows Ipswitch IMail (6%), Unix smap (2%), UNIX Postfix (formerly VMailer, 2%) and Unix Exim (1%)



PHP

- PHP is the web's #1 Server-side Scripting Language
 - PHP recently surpassed Microsoft's ASP to become the most popular server-side Web scripting technology on the Internet, and was used by over 24% of the sites on the Internet. Of the 37.6 million web sites surveyed worldwide, PHP is running on over 9 million sites, and over the past two years PHP has averaged a 6.5% monthly growth rate.



OpenSSH



- OpenSSH is the Internet's #1 implementation of the SSH security protocol.
 - Used to securely connect to computers and control them remotely (using either a text or X-Windows graphical interface). On April 2002, a survey of 2.4 million Internet addresses found that OpenSSH, an OSS/FS implementation of SSH, was the #1 implementation, with 66.8% of the market

MySQL



- MySQL's market share is growing faster than Windows'
 - An Evans Data survey (Jan '04) found MySQL grew 30% over the year, vs. 6% for Microsoft's SQL Server and Access databases, according to a survey of 550 developers. Microsoft still has a far greater total market share in the database development market, but Evans Data reported that OSS/FS's "price and its ability to integrate with other software mesh well with the priorities of application developers"

The Open Source Definition

www.opensource.org



- ♦ Free Redistribution
 - ♦ Any party can give away or sell s/w
 - ♦ No royalties
- ♦ Source Code
 - ♦ Must be available
 - ♦ Program can be distributed source or binary
 - ♦ Code should not be obfuscated

The Open Source Definition

- ♦ Derived Works
 - ♦ License allow modifications and derived works
 - ♦ Such works to be distributed under same terms
- ♦ Integrity of The Author's Source Code
 - ♦ License may restrict distribution in modified form only if patches allowed

The Open Source Definition

- ♦ No Discrimination Against Persons or Groups
 - ♦ Some Countries may add own restrictions
- ♦ No Discrimination Against Fields of Endeavor
 - ♦ e.g. genetics

The Open Source Definition

- ♦ Distribution of License
 - ♦ The rights attached to the program must apply to all to whom the program is redistributed without the need for execution of an additional license by those parties
- ♦ License Must Not Be Specific to a Product
 - ♦ Product can be separated from a bundle

The Open Source Definition

- ♦ License Must Not Restrict Other Software
 - ♦ e.g. May not insist that all other programs distributed on the same medium must be open-source software.
- ♦ License Must Be Technology-Neutral
 - ♦ s/w can be distributed on Web mirrors, cds, collections

SourceForge.net

- Registered Projects:
 - 99,323
- Registered Users:
 - 1,059,005

•Personal Review: Individual

- OpenOffice - full-featured office suite
- FireFox – web browser
- Thunderbird – mail client
- GnuCash* - accounting software
- ImageMagick – image manipulation
- Bash - “bourne-again” shell

Personal Review: Developers

- Gcc – compiler suite
- Perl – extract this
- Php – web programming language
- Ghostscript – Postscript processing
- Nedit – nice gui editor
- Vim - “vi” evolved
- Swish - for indexing Web pages/files

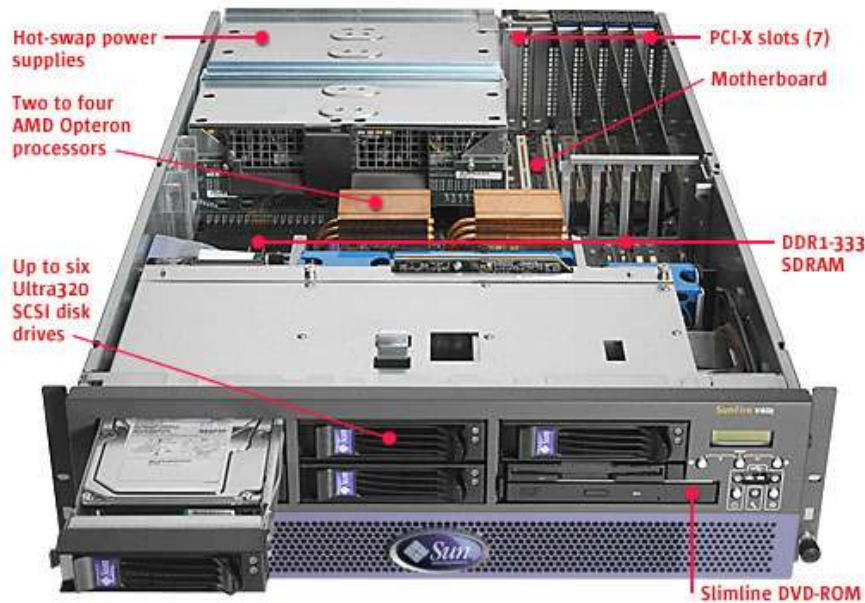
•Personal Review: Administrators

- Linux - O/S
- MySQL - database
- Apache – Web server
- Postfix – mail transfer agent
- Qmail - MTA
- OpenSSH – secure shell (server/client)
- Rsync – synchronize files

•Personal Review: Business

- Twiki – simple, collaborative intranet
- Nagios – monitor many systems
- EGroupWare * - groupware
- VNC – access remote systems with a GUI
- Metadot * - Portal

System Companies and FOSS



- Companies like Sun can make money with Linux (hardware, support, training, services, etc.)
- Sell Systems with Linux, Solaris or Windows
- Open own offerings – OpenSolaris
- The Sun Fire V40z server:
 - 4 dual-core Opterons
 - 32Gb of DDR1 Memory
 - 1.8 Tb of internal disk
 - 7 PCI-X slots
 - 12 per rack (3U)

