Open Source Software – Breaking the Commercial Myths

Guest Editorial Article

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Abstract

Open source technologies need no formal introduction. In a technological era where major giants like Microsoft are coming up with new versions of their software in each quarter, there are open source players like Ubuntu, which are gaining popularity at amazingly crazy rates. Global community consisting of thousands of best brains in this world are coming up together to build up robust Open Source technologies which are in no way lesser in features when compared to their commercial counterparts. In fact if we go out and ask Open Source enthusiast, we find that they are far more efficient, reliable, and over all customizable. From IBM to Google, Firefox to Wikipedia – some of today's best software is based on an open-source model [1]. Open Source communities like Ubuntu share the principle of "*Shared efforts. Shared principles. No cost.*", that's why what we get is a world class "free" software.

Where do we find Open Source

Look into any technological field, and we find a reliable Open source available at our disposal. Talk about Web-Servers, and we have a big name of Apache HTTP Server [3] probably outshining [4] its commercial counterpart "Microsoft IIS". For ecommerce, initiating a new branch of the economy, even in small company is nowadays not so hard, all credited to OSS like osCommerece, Magento and OpenCart [5]. We have OSS in internet browsers like Mozilla Firefox [6], VoIP applications like Asterisk (PBX) [7], and office suite of inter-related desktop applications in form of OpenOffice [8]. We keep on counting and the list keeps becoming larger and larger. For a more exhaustive list, watch Appendix A

Research into OSS

According to Lakhani et al. [2], research into open source software development projects has been largely focused on how the major tasks of software development are organized and motivated. But in addition to this, it requires execution of certain "mundane but necessary" tasks as well. Danny Bradbury [10] reported in his article in 2005 that "*Over the last 10 years Open Source has exploded onto the enterprise scene, with support from governments growing each year*". Mockus et al [11] in ACM Transactions on Software Engineering and Methodology said that Open Source Software development has the capacity to compete successfully, and in certain cases even displace, traditional commercial development methods. In order to investigate the efficiency of OSS development process, two major projects were earmarked – "Apache" web server and "Mozilla' browser. Based on email archives, source code change history, problem reports, developer participation, core team size, code ownership, productivity, and problem resolution intervals it was concluded that high-performance open source are attainable at better rate.

Recent Trends in OSS

A recent trend in open source model has shown a very interesting change – "*Firm participation*" [12]. From unpaid volunteers working from home, we now see major corporations coming in for development of OSS in a more planned and disciplined manner. Many organizations are coming out with Open source and proprietary software of each product in same market. Many open source products have seen a great commercial success. That's why we have both Community Edition (open source) and Enterprise Edition (proprietary) for many OSS in market. Some examples of which being Sugar CRM –Community Edition, which can be downloaded for free and used, while Sugar CRM – Enterprise Edition has some added benefits, security and features, for which the user has to shelf out some money. Also many companies are moving towards a mixed source strategy, wherein some of the products (or components of a product) are distributed under proprietary licenses, while others are distributed as open source. This type of model has a key benefit of quick bug-detection-and-fixing since the code is being developed in a public domain.

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Incentives for R&D in OSS

Open Source development leads to a totally different set of incentives for R&D development than the traditional proprietary development. As per Maurer and Scotchmer [13] analysis, developers are roping in for Open Source for various reasons like "Intellectual property", "Own use", "Complementary goods and services", "Signaling", "Social psychology" and more.

In 2010 a massive survey of more than 2,300 companies in 15 countries was conducted out by Lerner and Schankerman [14], which found that more than 25% of all firms surveyed develop both open source and proprietary software programs. This is a clear indication of shifting of scales into the direction of Open Source. That's why many people say "Open Source Software are Here To Stay !!", and I personally believe this.
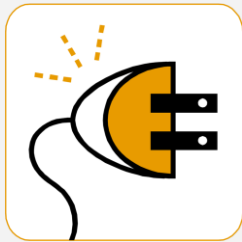
Future of open source

"*What is future of Open Source*?" This might sound to be a real trivial question. But ask any Open Source enthusiast and he will rubbish this question with his statement "*The Future IS Open Source*". You search around any Open Source Community or Discussion Forum, and you find it filled with a whole bunch of passionate and die hard contributors. Contributors, who are eager to help out fellow members with any issues or bugs, since there is a high level of belongingness prevailing in their minds. Gone are the days when people used to doubt Open Source for any enterprise level applications.

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About Author:

Dr. Atul Sharma is one of those passionate Open Source developers who believe that "Future is Open Source". Author is technically-sophisticated, business-savvy management-level professional, software architect and developer with inclination for OSS for last 10 years.

Dr. Atul Sharma has been involved with many Open Source technologies like Linux, Ubuntu, CentOS, OpenVZ, Joomla, WordPress, Drupal, Magento, OpenCart, OJS, phpBB, Asterisk PBX, just to name a few.

Dr. Atul Sharma in his educational basket has a Doctorate degree in Computer Science, two Master's degree in Computers, a Bachelor degree in computer Application / Statistics, along with International Certifications from Cisco & Polycom.

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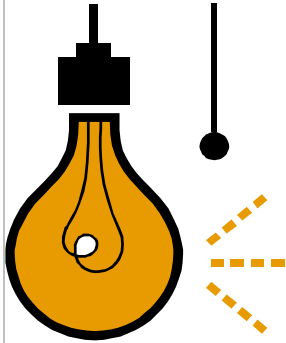
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Appendix A: *List of major OSS bifurcated by their area of application. For detailed list, visit [9]*

Communication-related	Bots - EDI software Asterisk - Telephony and VoIP server Ekiga - Video conferencing application for GNOME and Microsoft Windows FreePBX - Front-end and advanced PBX configuration for Asterisk FreeSWITCH - Open Source telephony platform Jitsi - Java VoIP and Instant Messaging client QuteCom - Free Voice, Video and IM client application sipX - SIP Communications Server Slrn - a newsreader Twinkle - VOIP softphone
Integrated Library System	refbase - Web-based institutional repository and reference management software Evergreen Koha NewGenLib OpenBiblio PMB
Database management systems (including administration)	Eucalyptus - Open source cloud computing software AppScale - Open source cloud computing platform-as-a-service
Remote access and management	FreeNX OpenVPN rdesktop Synergy VNC (RealVNC, TightVNC, UltraVNC)
Web-related	Apache Cocoon - a web application framework Apache - the most popular web server AWStats - a log file parser and analyzer BookmarkSync - a tool for browsers CougarXML - a Javascript framework for parsing and manipulating XML code, based on W3C DOM Level-3 specifications. curl-loader - a powerful HTTP/HTTPS/FTP/FTPS loading and testing open-source tool HTTP File Server - a user friendly file server software with a drag and drop interface Distributed ICDL Crawler - an open source web crawler based on Website Parse Template lighttpd - Resource sparing but also fast and full featured HTTP Server nginx - lightweight, high performance web server/reverse proxy and e-mail (IMAP/POP3) proxy NetKernel - an internet application server Piwik - an open source web analytics system Qcodo - an open source PHP5 framework Squid (software) - web proxy cache Web-Developer Server Suite - a package of web applications including Apache, MySQL, and PHP XAMPP - a package of web applications including Apache and MySQL Zope - a web application server Zentyal

Open Source Software are

here to Stay !!

We're on the Web!
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