

Java and Open Source Software: The Enterprise Platform Dynamic Duo

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Some Comments from History...

“UNIX® will never become a business-critical Operating System because it was devised by bearded research gurus and sandal-wearing University-types”

...What Transpired.

“UNIX® has been the dominant server and mission-critical backend of modern enterprise for over 15 years”

More Comments from History...

“The Internet will never become a business-critical communication medium because it was devised by bearded research gurus and sandal-wearing University-types”

...What Transpired.

“The Internet has surpassed all expectations of its scalability and ubiquity, to become the dominant medium of data communications for modern enterprise and an epoch-making disruptive technology that is changing human interaction more than anything in recorded history.”

Even More Comments...

“Java® will have trouble displacing the status-quo development platform for business-critical systems, partly because it was devised by bearded research gurus and popularised by sandal-wearing University-types”

...What Transpired.

“Java® is now the dominant application development platform for building bespoke enterprise apps.”

And Finally...

“Linux® will never become a business-critical system platform because it was developed and nurtured by essentially the same people who helped make UNIX®, The Internet and Java® the immense successes that they are...”

The Reality:

“Nothing will stop Linux and Free/Open Source Software from becoming the dominant platform, (desktop/server/appliance/handheld/cellphone) over the coming 5 to 10 years. Get used to it. Learn how you can benefit from it and use it to your advantage”

The Butler Group:

“Linux the dominant operating system by 2009”

(Source:

<http://australianit.news.com.au/articles/0,7204,5465838%5E15344%5E%5Enbv%5E15306-15321,00.html>)

IBM:

“Linux development pace skyrockets”

(Source:

<http://www.computerworld.com.au/IDG2.NSF/a/00081DDA?OpenDocument&n=e&c=CP>)

IDG:

"Linux and Open Source technology has been making serious inroads into financial services because of its reliability and cost-effectiveness,"
Rob Scheschareg, vice president.

(Source:

http://www.businesswire.com/cgi-bin/f_headline.cgi?bw.111902/223232105&ticker=IDGTS)

India's government Department of Information Technology has announced a sweeping initiative (the Linux India Initiative) to move the entire country to Linux as its "platform of choice"

(Source: <http://inquirerinside.com/?article=5767>)

In 2005, IBM plans to deliver a second supercomputer to the US Department of Energy, dubbed Blue Gene/L, which will run 130,000 processors at a theoretical top speed of 360 teraflops -- more than triple the speed of ASCI Purple, and 10 times faster than the current world record holder.

Blue Gene/L will run on Linux.

(Source:

<http://www.cnn.com/2002/TECH/biztech/11/19/ibm.supercomputerr.ap/index.html>)

Goldman Sachs: Linux will emerge as the dominant operating system in corporate data centers.

"This shift will limit Windows' market opportunity in the data center for both its OS and its applications that run on that platform,"

(Source: NewsFactor Network 15 Jan 2003
<http://www.newsfactor.com/perl/story/20471.html>)

Question: Software Money Pit.

Over the years, millions of dollars have been spent on software that just doesn't do the job

Answer:

Yes: 79%

No: 21%

(Source: Computerworld Australia, November 04)

Question: Linux will play a *central* role in my organisation's IT infrastructure:

Answer:

Yes: 76%

No: 24%

(Source: Computerworld Australia, November 11)

What is Open Source Software?

- Open Source Software also called Free(dom) Software and Software *Libre*.
- Free/Open Source Software (FOSS) assigns certain freedoms to the source code.
- Free/Open Source Software (FOSS) assigns certain freedoms to users.
- The Free Software Foundation (FSF/GNU) launched in 1984 (Richard Stallman.)
- Not new. Open Source has been around for over 30 years.
- Linux was launched in 1991.
- Open Source appeared on the industry radar in about 1998.
- Linux is packaged as a *distribution* by several hundred vendors and groups globally.
- There are perhaps 50,000 FOSS applications and projects.

Why Open Source Software?

Free/Open Source Software :

- is free for you to *use* in whatever way you desire,
- has certain restrictions only if you plan to *redistribute* code,
- has ZERO licence costs,
- has demonstrated *long* term expense reduction,
- vests control back with your organisation, rather than any vendor,
- need never be obsolescent (i.e there is no sunset date or evolutionary dead-end)
- provides choice of software suppliers,
- is the best way to ensure Open Protocols and Open Document Formats,
- removes licencing risks and liabilities for your firm.

Support in Australia

Sources of enterprise-class support and products in Australia.

Sun, IBM, Hewlett-Packard, SGI, Dell, Intel, Oracle, Borland, AMD, BMC Software, Compaq, Computer Associates, Compuware, Informix, Lexmark, Mitel, Motorola, Concurrent Computer Corporation, Novell, Quantum, Sybase, Symantec, Red Hat, BEA, Lotus, Samsung, VERITAS Software, AccPac International, Candle Corporation, Cyclades Corporation, Digi International, LEGATO Systems, NEC, SCO, Software AG, StorageTek, Groupe Bull, Hummingbird, Network Appliance, Acucorp, Fujitsu, Citrix, Trend Micro, Tivoli.

Linux and Java

Linux is a natural platform for developing and deploying Java apps on commodity (i.e x86) systems.

To give a (simplistic yet) indicative measurement:

- searching for *java linux* returns 2,840,000 web page references on Google
- whereas *java microsoft windows* returns 1,680,000 references

Due to the various struggles between Microsoft and Sun over Java, Windows is no longer a prime platform for building & deploying Java apps.

Sun is also *very* bullish on Linux desktops.

Open Source Java Tools

- JBOSS (J2EE)
- Jakarta (jakarta.apache.org) peak Java Servlet and JSP foundry
- Jakarta Struts – OSS application framework.
- Tomcat – Servlet container
- Eclipse (Excellent IDE for Java)
- Open for Business (Application Framework)
- MySQL, PostgreSQL, SAP DB, Firebird (formerly Interbase SQL)
- In fact, *freshmeat.net* lists over 1993 Open Source projects related to Java

Legal Issues

Differences and similarities between Open Source and proprietary licensing:

- Several FOSS licences exist. The two main ones are BSD (and variants) and GPL.
- FOSS licences do *not* limit patterns of use. You can use the software *as you like*.
- Even under the GPL, there is *no* need to release your mods, if software is not redistributed.
- If you do redistribute GPL-based software, then you must make available your patches.
- You *can* use any FOSS for your in-house projects, or projects for your clients.
- You can safely *link* to Lesser/Library GPL code (LGPL) from within proprietary apps.
- Both Open Source and proprietary licences remove almost all recourse you have for legal relief from the vendor/supplier.
- Both Open Source and proprietary licences are very explicit in limiting almost all warranties.
- Have your legal people look at both the FOSS and proprietary licences before you build

Call to Action:

Use FOSS Code In Your Next Java Project!

- All FOSS solutions can be customised.
- All source code is available for modification/fixing.
- All the software construction environments are available.
- Your organisation can assign the task to internal developers.
- Your organisation can outsource the task to 3rd party service providers.
- You are not required to release the source code if you don't redistribute.
- Major FOSS projects have support contracts available (JBoss, Apache.)
- The original FOSS development team is generally available for help.
- The FOSS collaborative development process delivers easier modifiability.
- Judiciously select FOSS projects based on maturity, community and quality.
- Reduce your risks by doing your homework and join the community.
- Contribute your changes back (Best Practice!)

Questions?

Thanks for your time.