

Analyzing ROI for a Linux Migration

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A CENTRIC Event

Overview

- What the experts say
- Making the case for Linux ROI
- Valid IT Cost Factors
- The right time to introduce alternatives
- Summary

Linux CAN be cost effective

- But keep in mind that:
 - **There are many cases for as well as against**
 - Contradictory case studies do exist
 - **No one solution fits all IT problems**
 - Avoid soapbox situations
 - **Experts can disagree on details**
 - Your responsibility is to show that you know your environment best
 - **Some costs can not be measured with certainty**
 - You can extrapolate and estimate costs of alternative action
 - It not possible to state alternative costs without assumptions
 - **Many costs will be over-compensated for**
 - For example: viruses and worms

What the experts say

- Forget ROI, Mark Hall, ComputerWorld.Com 2/17/2003

“You know your budget. You know if it's feasible or not. What else do you need? A report card from Dad? I think not. ... Because wisdom can't be reduced to an ROI calculation.”

- Merrill Lynch: Linux saves money, Cnet News.Com, 6/7/2003

“We are just trying to reduce the cost of ownership. ... We've done our numbers, and we are a bank, so we know our numbers. (Mark Snodgrass, Myeryll Lynch)”

Linux Savings Claims

- Verizon (Cnet News.Com, 6/7/2003)
 - **Saved nearly \$6 million in equipment costs by moving its programmers to Linux**
- Amazon.Com (Cnet News.Com, 1/22/2004)
 - **Linux switch began in Q3 2000**
 - **Cut costs by \$17 million in 2001**
 - **Database servers running Oracle on Linux (2003)**
 - **Total distribution system is run off Linux**
 - Sells e-commerce engine to other retailers
 - Toys “R” Us, Target, Borders Group, Nordstrom, The Gap, CDNow, National Basketball Association

Windows Savings Claims

- Sutherland Group, May 2003
(<http://www.microsoft.com/partner/compete>)
Claim that Linux desktop costs 8% more than Windows
- Annual costs per desktop:
 - Windows \$3,051**
 - Linux \$3,316**

	% Savings	
	Windows	Linux
Direct Costs		
- Hardware/Software		45.00%
- IT Operations	32.00%	
- Administration	8.00%	
Indirect Costs		
- User Operations		11.00%
- Downtime	8.00%	

Making the case for Linux ROI

- Have a clear vision of total solution
 - **What will the Linux solution do for the organization?**
 - **Why is Linux the best choice?**
 - **How can the benefits be demonstrated over time?**
- Gain organizational buy-in
- Establish control metrics before starting
 - **Offer accountability for on budget completion**
 - **Provide step-by-step implementation cost / benefit controls**
- Present regular performance audits
 - **Prove that your benefit estimates are being realized**

Simple steps to gaining buy-in

- **Pre-sell decision makers**
 - Use Audio / Visual
 - Show cost analysis spreadsheets
- **Show comprehensive Value**
 - Avoid superficial assumptions
- **Clearly articulate benefits**
 - Most significant first
- **Prove all value claims**
 - Be prepared for early CFO challenges
- Discount benefits carefully
 - Under value by discounting
 - Do NOT omit value points
- Use Internal Rate of Return
 - **Use the CFO's rate**
 - Make the case conservative
- Present careful analysis of risks
 - Account for potential budget over-runs
 - Show contingencies for the unexpected

A Compelling Reason for Linux Migration

- Be honest about cost and savings estimates
- Demonstrate that you know your business
 - **Anticipate the future**
 - How well can the solution be scaled up or contracted?
 - How rapidly can costs be reduced without risk to the business?
 - **Can the solution be out-sourced or off-shored more effectively?**
 - **Account for all legitimate costs**

Valid IT Cost Factors

- Hardware
 - **Acquisition cost**
 - **Maintenance and support costs**
- Operating System
 - **Acquisition cost**
 - **Maintenance costs**
- Network and Desktop Operation
 - **Training**
 - Users & Network staff
 - **Installation Cost**
 - **Maintenance Costs**
 - Administration
 - Staffing costs

More IT Cost Factors

- Software
 - **Acquisition cost**
 - **Maintenance**
 - **Administration**
 - **User support**
 - **Sufficiency to meet organizational needs**
- Risk and Exposure Factors
 - **Hardware obsolescence within projected service period**
 - **Probability of vendor**
 - Acquisition / Failing
 - **Technology Exposure**
 - Intellectual Property licenses
 - Impact of potential market or industry change in requirements

Identifying Downtime Costs

- What is downtime?
 - **Resources consumed by unwanted network activity**
 - SPAM is eating up internet bandwidth
 - **Lost productivity**
 - Viruses are targeting vulnerable MS Windows products
 - Cost of recovery / reinstallation
 - Lost opportunity cost
 - **Potentially productive time spent avoiding downtime**
 - Patching and updating
 - **Expenses paid for anti-virus and anti-worm products**
 - Have limited effectiveness
 - work only after the event (after the AV manufacturer has a fix)
 - **Resources spent on fixing broken patches**
 - Microsoft patches that do not work or that do damage

Microsoft Flaws

- Broken patches
 - http://www.infoworld.com/article/04/05/28/22OPcringely_1.html

“Cringesters who installed Microsoft’s Sasser-thwarting MS04-011 security patch are reporting nasty side effects — including broken help systems and all the blue screens of death they can eat. Microsoft’s knowledge base lists several other bugs — sorry, “known issues” — with the patch.”
- It is over 12 months since Microsoft announced the secure Windows initiative
 - **Virus and worm problem is getting worse**
 - http://www.theregister.co.uk/2004/05/07/windows_worm_tax

“Gartner is advising its customers to budget for extra security spending on Windows desktops in the wake of the raft of problems caused by the Sasser worm this week. ... These additional security measures will drive the total cost of ownership up. Quite how much by Gartner doesn't say but for users evaluating Windows against Linux this is another entry in the debit column against Microsoft, something Redmond can ill afford in face of an increased competitive threat from Linux vendors.”

Credit where it is due

- Microsoft do recognize that there is a problem
 - **They are vulnerable**
 - **But existing users are very happy to accept excuses**
 - After all, they are still using MS Windows
- <http://www.microsoft-watch.com/article2/0,1995,1563033,00.asp>
 - **Microsoft brings security education to the masses**
By Mary Jo Foley

“Nash highlighted the commitment made last fall by CEO Steve Ballmer to "reach, train and educate in security over 500,000 people within the next 12 months Microsoft is on track to reach this goal by the end of calendar 2004. ... Among the various patching enhancements upon which Microsoft is working are a new patch-rollback facility, which will allow customers to remove any and all software updates; and a reduction in patch size (by 30 percent to 80 percent) via new "delta patching" technologies.”

Setting realistic expectations

- Security is a problem for everyone
 - **There are exploits for security weaknesses in Linux**
 - **SPAM is platform agnostic**
 - Affects all email systems
- Worms are the product of a programmer who has a sick mind
 - **Will exploit any weakness**
 - **Windows is more prevalent than Linux so is a preferred target**
- Linux system must be kept up to date also
 - **Use vendors' update facilities**
 - **Do not ignore security vulnerabilities**

Before Implementing Linux

- Test drive Linux
- Evaluate carefully
- Get expert input and help
 - **Can save much frustration**
 - **Get fast results**
- Document evaluation
 - **Get user feedback**
- Give users choice
 - **If possible get users to help to sell the value to management**
 - **Obtain user estimates of how Linux can improve their productivity**

The right time for the Linux alternative to UNIX

- <http://www.forrester.com/ER/Research/Brief/0,1317,17022,FF.html>

Linux Is More Than Ready For The Enterprise, Ted Schadler, VP, Forrester Research Inc., June 34, 2003

“Recent press leads some to believe that Linux is too risky for the enterprise datacenter. Hogwash. Linux is more than ready to go, and waiting means only one thing: cheating your company of the savings that come from moving Unix workloads to Linux on Intel.”

- HP White Paper, “IT Consolidation with Linux”

“Saving of HP Linux ProLiant versus Sun Solaris on Sparc hardware: 56%”, page 9.

The right time for the Linux alternative to MS Windows

- Linux has a strong base in Web Server, File and Print Server, SQL Server deployment
- February 10, 2004: “Immediate ROI: How a Linux-based financial system paid for itself in three months”,
<http://software.itmanagersjournal.com>

Is an example of using IBM DB2 plus AccPac accounting software

Linux on the desktop

- Novell has acquired SuSE Linux
 - **Committed to complete migration off MS Windows desktops to SuSE Linux**
- Novell has acquired Ximian
 - **Evolution is like MS Outlook Exchange Client**
 - **Project MONO is MS .Net implementation for Linux**
- Mozilla browser is like MS Internet Explorer
- OpenOffice is bundled with SuSE Linux
 - **Alternative to MS Office**
 - **Runs on Linux, MacIntosh, Windows**
- No virus problems with Linux
- Rapid adoption of Linux on the desktop is expected

Summary

- Linux is ready for large scale deployment
- ROI is positive in many cases
 - **Build your ROI case carefully**
 - **Get full buy-in before deploying Linux**
 - Makes justification of your action much easier
 - Secures your role in IT
- Consider all factors and aspects of the solution
 - **Be open to the fact that Linux may not fit the need**
- Choose your time and the specifics of your ROI case carefully
 - **You may not get a second chance**

**End
Q&A**