TOP 7 IT TRENDS FOR '11

1) CLOUD COMPUTING AND VIRTUALIZATION TECHNOLOGIES

The Cloud – it's everywhere! So why is it so popular? Virtual environments and Cloud computing allow companies to do more, while spending less. In a report released by infoTECH Spotlight, CIOs are going to spend more on Cloud and automation technologies in 2011.[1] In fact, analysts expect that by 2012, 9% of IT budgets ($42 billion) will be dedicated to Cloud services, a 5% increase from 2008.

What makes Cloud computing so attractive is its efficiency. Cloud computing drastically reduces the amount of time, money, and maintenance needed to operate a traditional data management system. With traditional systems a company has to buy equipment, dedicate space within the office, and provide specific power and cooling needs to house the hardware. Not to mention having to hire administrators to install, secure, and maintain the system.

Cloud computing is "computing as a utility". Much like with water or electricity, you only pay for what you use. As companies are still dealing with smaller IT budgets in 2011, they need to maximize the use of the funds they have. Dan Ransdell, general manager of IBM Global Financing North America, says that "Companies will continue to be prudent in spending, but also those staying competitive will continue to look at ways to use automation and technology." [2]

What to Expect: An increase in Cloud storage and applications in the Cloud. More organizations will begin to implement virtualized internal environments as Private Clouds gain popularity this year.

2) THE IPV4 – IPV6 TRANSITION

A trend that isn't getting nearly enough buzz as it should is the IPv4 to IPv6 transition, or rather lack thereof. Right now, the Internet is configured under the Internet Protocol Addressing Scheme Version 4 (IPv4). Within this particular set up – IPv4 only provides slightly more than four billion IP addresses because it is based on a 32-bit format. These addresses are usually represented with decimal points separating the address into four parts (i.e. 192.0.1.1).

Now four billion IP addresses seems like a lot, but if you factor in how many different companies there are globally in addition to mammoth Internet Service Providers that have blocks of IP addresses (that are then distributed to their customers), there actually aren't that many left. In fact analysts expect us to run out of IPv4 addresses between 2011 and 2012[3].

A newer version known as IPv6 allows for a zillion more IP addresses (3.40282367×1038 more to be exact); to accommodate the growing number of Internet enabled devices. The problem

is that the major players (Internet Service Providers and Big Businesses) are dragging their feet to make the switch.

The major overhaul will have to happen with the internet backbone - the strategically interconnected networks and core routers of the Internet. This is a responsibility for ISPs and large enterprises.

What to Expect: At the business level, IT professionals will need to start replacing servers, routers, and network switches with IPv6 compatible ones. Workstations will also need either Windows® XP or 7 that have IPv6 capability, and server software will also need to be updated to handle IPv6. This isn't going to be a fast or easy transition, expect it to last for quite a few years.

3) MOBILE COMPUTING

It's no secret, mobile computing exploded this year. A plethora of new smartphones and other data enabled mobile devices hit the market this year. The iPhone® alone sold 14.1 million units as of October 2010, an increase of 91 % in comparison to 2009. [4]

Advances in wireless technology including the analog to digital television transition, have opened airways for faster and stronger wireless data networks across the U.S. As a result, the cost for these services have dropped significantly (Unlimited 3G Wireless Internet is available from Virgin Mobile® for $40 a month).

The launch of the iPad™ has spurred numerous competitors[5] and tablet devices are becoming more mainstream at the enterprise level, as netbooks are starting to lose popularity.

The whole mobile computing revolution presents some challenges and plenty of opportunities. IT firms will have to work to make sure tablets and smartphones are encrypted for enterprise use in addition to providing support for these new devices.

In retrospect, mobile applications are a whole new opportunity for developers as users will want to be able to seamlessly transfer their productivity from the office to their mobile gadgets.

What to Expect: A slight shift from the industry standard BlackBerry® to Android™ and/ or the iPhone as well as an industry wide implementation of tablet computers such as the iPad and BlackBerry® Playbook™. Also expect a surge in demand for mobile applications and mobile compatible websites.

4) HTML5

HTML5 is essentially the next generation of Internet language. The unique selling point of HTML5 is that it allows web designers/developers to write media-rich content directly in HTML code, without having to deal with third party applications like Flash®, Silverlight™, or QuickTime®.

The upside – HTML5 offers a better web experience overall. In an InfoWorld article[6], Neil McAllister states that "Modern web pages increasingly incorporate scalable graphics, animation, and multimedia, but so far these capabilities have required proprietary plug-ins." McAllister also notes that third-party plug-ins introduce security threats and are not conducive to a universal audience.

The article also mentions that the World Wide Web Consortium (W3C), the organization of web-standards, does not expect HTML5 to become standardized until 2011, meaning the upcoming year will mark the beginning of the transition. Although this will be a gradual process as HTML5 isn't going to become fully implemented until around 2022.

What to Expect: A slow introduction of HTML5 as it hasn't become fully standardized yet. That combined with the fact that older browsers (such as IE6) don't support HTML5, it will not be a quick switch over during 2011, but rather a gradual transition.

5) OUTSOURCING IT

Gartner, the world's leading information technology research organization, released a report[7] this year highlighting an increase in spending with external service providers (ESPs) in the IT services market. Allie Young, vice president and distinguished analyst at Gartner, said that "The majority of organizations will increasingly turn to ESPs to support IT strategies execution with the economic recovery."

As economic indicators are looking up, IT service providers can expect an overall increase of organizations outsourcing their IT needs.

Why are businesses outsourcing their IT?

Expertise and Resources

Having a bank of knowledge at your disposal is imperative as new technologies are constantly emerging and new rules and regulations are implemented that affect how you utilize technology in the workplace. For most small businesses who only require one main IT Professional, it is highly improbable that one individual will have expert knowledge on every aspect of Information Technology.

Cost Efficiency

By outsourcing, you are essentially gaining a CTO level of support without paying a CTO level salary – a fact that many organizations are considering due to constrained budgets. Combined with the knowledge bank and staffing resources of the IT firm, outsourcing provides an unparalleled value at a drastically reduced cost.

Flexibility

Outsourcing your IT provides a support group tailored to fit your needs and schedule. A technician can be scheduled onsite as little as once a week or as often as Monday through Friday - depending on your budget and the size of your IT infrastructure.

These are just a few reasons why businesses outsource their Information Technology.

What to Expect: Increased spending or budget reallocations for outsourced IT resources.

6) THE CHANGING LANDSCAPE OF SOFTWARE

Software companies are starting to shift from the traditional boxed version software on CD-Rom (now that's an archaic term) to subscription based or downloadable applications.

As more users have adopted broadband over dial-up (I mean who even uses THAT anymore), software companies have been able to offer complete suites of applications as instant downloads with faster program updates and system enhancements.

On the other end, same vendors have capitalized on the cost-efficient subscription based model of Software-As-A-Service (SaaS), where users pay a monthly fee for programs. Take for instance the cost savings comparison of Google Docs™ versus Microsoft® Office. At the enterprise level, Google Apps™ costs $50 per user, per year. A single license for Microsoft Office is upwards of $ 400 and requires a deployment on each individual workstation.

Web-based applications, such as Google Docs have an advantage as there is no deployment and minimal system resources are required. All you need is a web browser and high-speed internet connection. Money is saved over the long run as subscription based services update seamlessly. Microsoft Office has a turnover rate of about four years, meaning every four years your company has to spend $400 per user to upgrade. Whereas with a SaaS like Google Apps, $50 multiplied by four years is only $200 – a $200 savings.

What to Expect: An increase in SaaS vendors as well as traditional workstation based applications implementing collaboration and/or Cloud extensions.

7) WINDOWS 7

Finally in 7 Trends for '11, I leave you with the biggest seven of them all, Windows®7 (pun intended).

This past July, Microsoft announced that Windows 7 customers (those who purchased the Professional or Enterprise versions) have the option to buy Windows XP downgrade licenses until January 2020. Why? I'm not entirely sure.

Many businesses were reluctant to upgrade from Windows® XP to Vista (understandably so). However, Windows 7 has been on the market since October, and yet almost 75% of Microsoft's business customers still use XP.

Daniel Ruby, a research director at Chitika Inc. stated in an article[8] from CNN that most corporations will migrate to Windows 7 within the next two years. Even though XP licenses will be available until 2020, support for the operating system (Service Pack 3) is scheduled to end in April 2014. Technical support for XP Service Pack 2 has already been discontinued.

Organizations are slowly starting to make the switch to Windows 7. Even though technical support for Windows XP is still available until 2014, the licenses are available for six years after that. Waiting until 2020 would mean using an operating system that will have had no technical support from its parent company after 2014.

There are numerous benefits of upgrading to Windows 7. According to InformationWeek[9], switching to Windows 7 reduces support costs by 65%. Deployment costs for the OS are reduced by 45% (roughly $40 per user). The operating system also has more enterprise friendly features such as increased system security and easier file recovery.

What to Expect: A slow roll out of Windows 7 over the next few years as technical support for Windows XP is slated to end in 2014 and IT budgets increase to accommodate company-wide deployments.

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