BUSINESS

Closing the Gap on the Digital Divide in Uganda

Belgium-based Close the Gap (www.close-the-gap.org), a nonprofit organization that aims to reduce the digital divide in developing countries, is considering expanding its programs into Uganda. As part of its vetting process, the nonprofit will start to identify Ugandan nonprofit organizations with which it might partner to distribute computers to Ugandan schoolchildren. These local partnerships would distribute the donated PCs, which Close the Gap provides after collecting them (and repairing and reconfiguring, if necessary). Before a project is approved, prospective partners must have the basic infrastructure in place and the necessary government approvals, as well as meet several other conditions, such as the ability to handle e-waste. According to its Web site, Close the Gap operates in 27 countries, including Cuba, Iraq, Sudan, South Africa, Namibia, and Burkina Faso. The nonprofit has enlisted strategic partners, including Cisco, the Nielsen Company, and KLM, to achieve its goals.

Self-Service Clouds Using Virtualization Software

Austin-based Surgient released an update to its virtual computing software. The product, now called Virtual Automation Platform 6.0, has a new user interface as well as feature support for Microsoft’s Hyper-V hypervisor. The enterprise software lets users set up their own virtual computing environments for demonstrations, training, and application development and test. The platform lets users configure their environments via a Web-based interface while letting IT departments retain control over access to the virtual area. According to Theresa Lanowitz, an application development analyst, Surgient’s software offers an advantage over industry leader VMware by supporting all of the major virtual machines. The software also integrates with Hewlett-Packard products and will work with IBM’s Rational Quality Manager software.

Working with Wikis

With their collaboration and documentation abilities, wikis seem a perfect fit for project management, but several pitfalls await organizations that hastily jump on the wiki wagon.

For one, wikis can quickly become tangled messes because they let users enter data that often remains after it becomes irrelevant. Additionally, wikis don’t offer very good security. Sensitive corporate documentation shouldn’t be on a wiki because registration is usually open to anyone, unless it’s on a secured in-house wiki. From the users’ viewpoint, wikis can be tough to learn and require some training at the outset, which might turn off users and leave projects at a standstill.

There are benefits, however. Because edits to wikis are visible, they hold project members accountable for their changes and offer built-in version control. Storing documents on the network reduces the risk of losing them and ensures access to files when project members are out of the office. Wikis offer instant updating, which can speed up collaboration and approval processes and cut down on the long email threads that often plague inboxes. Wiki options are plentiful, too. Microsoft’s SharePoint wiki portal requires the Microsoft SQL database and an administrator, but several open source options exist that don’t require admins and are scalable across an organization’s infrastructure.
Gas the report on global IT spending expects IT spending in 2008 to reach US$3.4 trillion, up 8 percent from 2007. Moreover, software spending will hit $408 billion, a 10 percent increase. The report warns that Software as a Service, cloud computing, and open source software could cut into spending and impact market growth in the future. However, this year’s software jump will see an increase in needed IT services, resulting in a growth rate of 9.4 percent ($819 billion).

Why Doesn’t Johnny Unionize?

Long hours with no overtime, on call 24/7, and the possibility of losing job to outsourcing at any time—you’d think these conditions would be enough for IT workers to band together and stick up for their rights by forming a union. Not so, according to Dan Tynan in an article for InfoWorld (www.infoworld.com/article/08/09/04/36NF-union-for-tech-workers_1.html). Tynan examines the possibility of forming an IT workers’ union and the factors that keep this from happening.

Two IT unions already exist: Microsoft contract employees formed the Washington Alliance of Tech Workers (WashTech; www.washtech.org) in 1998 in an effort to gain better medical benefits, which they got. Alliance@IBM (www.allianceibm.org/) comprises IBM employees and has affiliated itself with the Communications Workers of America (www.cwa-union.org), a 700,000-plus union for employees in information-based fields. However, factors working against IT unionization include the diversity within the industry and the sometimes conflicting concerns that various segments of the IT space bring to the table—software engineers’ concerns might conflict with those of help-desk employees, for example. Tynan points out that IT workers’ work styles play a role, too. Tech workers are traditionally paid well and have in-demand skills that make it easy for them to hop from job to job, so a less formal alternative might be more attractive to them.
TECHNOLOGY

F# Brings the Functional Programming

In a community technology preview (CTP) released in August, Microsoft is showcasing the F# language’s improved integration, libraries, and scripting. F# is a functional programming language for the .NET platform that also supports object-oriented programming. Functional programming languages emphasize the application of functions rather than changes in state as in imperative programming. The CTP includes better integration with Visual Studio and allows for improved large-scale software development. Additionally, a new feature called Units of Measure extends F#’s inference and strong typing to floating-point data. Along with the CTP, Microsoft has launched the F# Developer Center (http://msdn.com/fsharp/) to provide developers with resources and user communities. The CTP is available for download from www.microsoft.com.

Algorithm Breathes New Life into Old Browsers

Researchers at the University of California, San Diego, have developed Approximate Link State (XL), a new algorithm that makes routers more efficient by automatically sending network updates only to the routers that need them.

In a typical corporate environment, routers flood the network with updates that every router receives. For older routers, the vast amounts of updates they receive can bring them to a halt and slow down the network while they process the updates and recalculate their path tables.

To combat the problem, IT staff can manually isolate router groups and configure them to receive and process only those network updates within their group. The XL algorithm eliminates the need for manual configuration by withholding or forwarding updates it determines are necessary to a specific group. The trade-off is that routers don’t have precise information on the actual state of the network. The XL algorithm works with Intermediate System-to-Intermediate System and Open Shortest Path First link-state routing, allowing for interoperability with existing router protocols. For use, router manufacturers will have to integrate the algorithm into their software. The researchers presented their findings at SIGCOMM 2008 in August; the paper is available at http://ccr.sigcomm.org/online/files/p15-levchenko.pdf.

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SECURITY

Roam if You Want to—IEEE 802.11r Is Standardized

The IEEE has published the 802.11r standard for wireless voice over IP (VoIP). IEEE 802.11r, known as Fast Basic Service Set Transition, will improve VoIP performance on enterprise LANs by speeding up the time it takes to disassociate and reassociate devices between access points. The standard lets networks establish security for devices before they roam between access points, cutting the time from 100 ms to roughly 50 ms. Prior to the standard, vendors have had to rely on lower-level Wi-Fi VoIP security options (Wired Equivalent Privacy, for example) or put VoIP traffic on separate virtual LANs to protect the rest of their networks.

Solid-State Drives Offer Faster Data Access but Raise Security Concerns

Because they offer low access times and latency, solid-state drives (SSDs) are becoming more popular, especially with laptop users. However, SSDs present their own security concerns, including physical hacks. Some SSDs use NAND flash chips, which don’t have security hooks to keep the chips from being removed from their enclosures. Attackers could remove the chips, read the data with a flash chip programmer, and reassemble the data with data-recovery software. To slow down hackers, drive makers could integrate encryption keys inside SSD controller devices. Although attackers can hack encryption keys, SSDs add a barrier and can at least slow down the attack.

Not Quite the Exit Strategy We’re Talking About

Cyber-Ark Software (www.cyber-ark.com), an information security company based in Massachusetts, surveyed 300 IT security professionals at Infosecurity Europe 2008 on trust, security, and passwords. The results revealed that 88 percent of IT administrators surveyed said they would take sensitive corporate information with them if they were laid off unexpectedly. Included in the information is passwords, financial and human resources reports, customer databases, and the enterprise’s privileged password list.

And how do the IT administrators surveyed handle those privileged passwords? A third of them admitted to writing down passwords on Post-it notes. On top of that, one-third said they snooped: reading others’ personal emails, board meeting minutes, and human resources information using their privileged access.