



Silversands

## RESULTS

- Higher quality, faster application rollouts
- Support and helpdesk calls reduced
- Issues identified before becoming a problem
- More effective and efficient testing process
- Increased flexibility of IT infrastructure

## VMware and Silversands Bring Aid to Plan

### VMware ESX Server and VirtualCenter Create Ideal Testing Environment

#### Application Rollout & Infrastructure Challenges Plague Plan

Plan is one of the world's largest development organizations, with representatives working in 60 countries, including more than 45 developing countries. Child sponsorship—helping children and their families—is the foundation of the organization, which has over one million sponsors in 15 donor countries. In 2003-2004 the not-for-profit organization raised US \$426.3 million and invested in projects focused on health, education, livelihood, housing, water and sanitation projects, and cross-cultural learning.

Infrastructure manager Mark Luckins and his team at Plan's international headquarters in Woking, UK are responsible for IT infrastructure, support and application delivery to nearly 6,000 users worldwide. Part of the group's role includes the development of custom applications to improve the collection and management of data throughout the organization.

Infrastructure issues and impending application development projects led Luckins and his team to analyze their IT infrastructure with the help of specialist IT services provider, Silversands. Some of the issues identified were:

- High levels of end-user support and help desk calls
- Infrastructure changes and patch installation often caused conflicts

- Applications that worked well in UK data center operated poorly in developing countries
- Fault finding was complicated and time consuming

#### VMware® ESX Server Provides Bedrock for Critical Test and Development

As a charitable organization, Plan's requirements do not neatly match the commercial applications currently available on the market. Therefore an essential part of the IT department's role is to design and deliver custom applications that will assist charitable workers in performing their jobs. Developers within the IT department have high skill levels in developing applications using Microsoft.Net, however, they were restricted by an inability to test these effectively and fault-find before deployment.

Experienced consultants from Silversands helped Plan identify the need for improved testing and have provided strategic direction to centralize IT control and standardize procedures across Plan's three IT hubs in Europe, Asia and the US. A key part of this strategy has been the creation of a replica

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*Mark Luckins  
Infrastructure Manager, Plan*



#### VMWARE VIRTUAL INFRASTRUCTURE AT WORK

- ESX Server on four HP DL380 G4s, with dual Xeon 3.2 Ghz processors and 7GB RAM, one HP ML370 with 3GHz processor and 1GB RAM
- Cisco WAN using VLANs and virtual switch tagging
- VirtualCenter on HP ML350 G4 Xeon 3.2 GHz 2GB RAM
- 50 virtual machines with capacity to expand
- Guest operating systems: Microsoft® Windows® 98, NT4, 2000, 2003 and XP Professional, Netware 5.0
- Applications running in virtual machines include: multiple bespoke applications, Microsoft Active Directory, Citrix XPE, Exchange, SQL, Biztalk, ISA, Windows Office 2000

of the entire IT infrastructure to allow staff to test new applications or patches, assess and resolve deployment issues, and review the capabilities of applications in development. Previously the only option was to deploy updates directly into the live environment and then troubleshoot any issues post-installation.

“Rather than concentrating on the server consolidation capabilities of VMware software, we have focused on its capabilities as a tool for increasing flexibility,” explains Luckins. “The new virtual infrastructure will be critical to the success of high profile application rollouts as well as day-to-day infrastructure changes. The subsequent advantages of reduced hardware costs and improved utilization will simply be an added bonus.”

The results for Plan of taking the virtual infrastructure approach include:

- **Increased efficiency & speed of testing.** Developers can now bring up a new test environment and roll back to previous versions using virtual machines that can be copied and created in just a few minutes. As a result, new applications can be brought into production considerably faster than was previously possible.
- **Risk mitigation.** In the past, new applications, infrastructure changes or patch installations commonly caused problems for end users and reduced their productivity. Now that a flexible testing environment is in place the risk of application failure is dramatically reduced.
- **Replication of diverse infrastructure.** It sometimes happened that a newly developed application worked perfectly in the UK data center but encountered problems when deployed over a low-bandwidth network or older operating system, typical in many of the developing countries where Plan operates. Now those networks can be replicated in the virtual infrastructure and applications can be fine-tuned to improve performance and reliability.

#### IT Sustains Charitable Work

While Plan spends 82 percent of funds raised on implementing programs to improve the lives of children, their families and communities, the remaining 18 percent is spent on operating and fundraising costs, ensuring resources are efficiently and effectively used.

“Collection of data about children enrolled in Plan’s programs is essential for continued sponsorship and growth in the number of supporters,” explains Luckins. “Comprehensive, custom applications therefore play an important role in centralizing information about child development, current activities and investment and delivering regular, meaningful updates to sponsors.”

Plan is highly advanced in both the development capabilities of its IT staff and its vision of the benefits to be achieved from IT investment. The VMware virtual infrastructure environment will be a test-bed for four major IT development projects over the next two years. During the development phase, each new application will be tested extensively on a network of virtual machines that mirror the exact set up of the entire organizations’ IT infrastructure. This will ensure that new applications work the moment they are put into production.

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