



Triangle Dials ESAT BT's Number With VMware Virtual Infrastructure

VMware ESX Server and IBM Become Key Elements in Esat BT's On-Demand Data Centres

RESULTS

- 40:1 server consolidation ratio
- Improved server utilisation
- Reduced management time and costs
- Provided ability to provision new servers in hours not weeks
- Mainframe levels of reliability and data security at lower cost
- Fewer single points of failure
- Renewable pool of hardware
- Scalable, flexible infrastructure

Esat BT's Search for a Future-Proof Data Centre Solution

Esat BT is a wholly-owned subsidiary of BT Group plc. As a fully integrated part of BT's Global Services business, it focuses primarily on providing services and solutions to multi-site organisations as well as operating in the residential home phone and Internet markets. With nearly 1,000 employees, the company is headquartered in Dublin with offices in Cork, Limerick, Galway and Waterford.

Esat BT prides itself on leading the way in new computing models and methodologies in the ICT space. Martin Wickham, CIO of Esat BT, is responsible for all the systems and infrastructure at the company. He runs a team of 70 staff that perform IT services for internal company needs and external customers. The team also manages and maintains two data centres, mirroring about 58 terabytes of data.

Managing such a vast and complex infrastructure is no easy feat. For several years, Wickham had been looking for a flexible solution that would enable him to provide services to best manage peaks and troughs in demand. The desired solution had to meet the following criteria:

- Centralise data centre management
- Improve server utilisation
- Offer flexibility in sharing processor power
- Reduce the hardware footprint
- Increase efficiency in test and development time
- Provide scalability to meet any future need

Triangle Comes To The Rescue With VMware ESX Server

Having identified a long-term strategy for the Esat BT data centres, Wickham found the solution he was looking for when he began a large Siebel project. VMware® Partner Triangle Computer Services Ireland Ltd, a fast-growing technology solutions provider, made Wickham aware of the maturity of VMware products and demonstrated how he could purchase four powerful IBM machines running VMware ESX Server™ instead of the original ten lower-specification servers that had been planned.

Wickham saw in Triangle's proposition the opportunity to implement his vision of a utility computing model that would make fixed capacity servers a thing of the past and allow him to turn services on and off as required. The value of running ESX Server on high performance IBM x440 servers has been demonstrated in a number of ways:

- **Administration Time and Cost Savings.** By reducing the hardware footprint of both data centres, the infrastructure management task has been simplified and can be carried out remotely. This has released technical resources to work on revenue-generating, customer-facing projects.
- **Improved Server Utilisation.** Multiple operating systems and applications now co-exist on a single server in separate virtual machines without any conflict, increasing the utilisation of every server by a significant amount.

"By implementing a virtual infrastructure based on VMware ESX Server and IBM hardware, we have turned the traditional view of infrastructure on its head. We have evolved from a server-centric world to one that is data-centric. The VMware fabric gives Esat BT a pool of processing power that can be sliced and diced amongst applications based on demand and business need. It's not just about optimising costs or saving physical space, it's about building for the future."

*Martin Wickham
CIO, Esat BT*



VMWARE ESX SERVER AT WORK

- VMware ESX Server at Work
- ESX Server on four 8-CPU IBM x440s VMware ESX Server running approximately 40 virtual machines per server
- Windows 2003, 2000 and Windows NT operating systems
- Applications running in virtual machines: Siebel 7.5 (production and test), Citrix, SQL, IIS

- **Increased Reliability.** Esat BT has invested in fewer, higher-specification servers that have proved to be more reliable than multiple lower-specification machines. It also now has fewer single points of failure, but should a problem occur, its failover systems running ESX Server are immediately available.
- **Reusable Environments.** With new applications frequently being deployed and old applications retired, ESX Server offers ESAT BT the ability to reuse its physical server resources to cope with this demand. This provides Esat BT with the maximum possible benefit from its investment.
- **Reduced Support Costs.** Esat BT is currently consolidating 60 physical servers onto two mirrored IBM x440 servers, each running ESX Server with 40 virtual machines. For those applications that are licensed on a per processor basis, this method of deployment represents significant cost savings.

mance issues that could only be resolved by isolating the APIs in a separate environment. Normally the project team would have had to put in a request for a new server, go through the procurement process and then build and configure the server before the solution could be implemented. This could take weeks and would have had a major negative impact on project profitability. With VMware ESX Server, a new virtual machine containing the isolated APIs was up and running the next day, which saved both time and money.

“The requirement for new environments, particularly in test and development, is unpredictable and typically occurs with little notice. VMware ESX Server allows us to be agile in responding to changing business needs with the ability to instantly provision new servers and avoid project bottlenecks,” explained Martin Wickham, CIO Esat BT.

How VMware ESX Server Solved a Critical Project Issue

One of the main applications running in Esat BT's virtual infrastructure is Siebel. A particular Siebel project was configured with application program interfaces (APIs) running in the same environment that users were connecting to. This created perfor-

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