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**“We really believe that this investment has formed the platform we need to take our company into the future.”**

All aspects of system management are simplified with the virtualised environment. Applying fixes to servers, updating hardware and adding more disc space can all be carried out quickly and without disruption to operations.

Additionally, centralised storage makes for more effective and secure data management. It is much easier to ensure regular backup of data from a single source than from a large number of separate servers, and the process is also much quicker.

A major benefit to the business is the increased responsiveness of the IT organisation. Instead of the six or more weeks needed to buy and commission a new physical server, a virtual server can be added in minutes.

**“ISC has always served us well as a trusted IT partner. ISC’s technical experts understand our needs and we appreciate the objective advice and guidance they provide.”**

*Ray Baxter, Head of IT,  
Ideal Shopping Direct*



## Ideal Shopping Direct PLC

# Building a resilient and flexible IT infrastructure for real-time trading

### Background

Ideal Shopping Direct is a fast growing TV and internet retail enterprise that runs three major shopping channels presented on Freeview, Sky and Virgin. Having established a successful business in catalogue retailing in the 1990s, Ideal Shopping grasped the opportunities presented by the advent of digital broadcasting and launched its first 24 hours a day shopping channel in 2000.

Since then the company has grown dramatically, now employing over 500 staff and operating a television home shopping network that reaches 18 million people in the

UK. It is based in Peterborough, where all filming, presenting and production activities take place, and its core IT services, comprising back office and data storage facilities are also located there.

With around-the-clock broadcasting and internet retailing operations, Ideal Shopping is completely dependent on its IT infrastructure. As Ray Baxter, Head of IT at Ideal Shopping, says, “IT is the backbone that keeps the company trading. As a sales organisation, any failure of the IT infrastructure that causes us to cease trading would be devastating.”



# Ideal Shopping Direct PLC

## The need for resilience

In order to support continued business expansion, Ideal Shopping's management embarked upon a major exercise to replace all their core applications, upgrading their IT services across the board encompassing product maintenance, TV show scheduling, order entry, financial management, web sites and customer services.

Ray knew that the IT infrastructure supporting these critical services had to be extremely robust, not only to provide continuous availability but also to ensure that no business data is ever lost. He decided to adopt a strategy of centrally managed data storage using SAN technology to provide the necessary resilience and turned to his trusted IT partner, ISC, to recommend a suitable product.

The storage specialists at ISC took Ray to NetApp to see its SAN products, which they strongly recommended. Having considerable previous experience of SAN solutions, Ray reviewed the products thoroughly and was pleased to note that the NetApp technology met his demanding requirements for high volume throughput, resilience and backup. In his view,

**“NetApp approaches the requirement from a different perspective than other suppliers, effectively addressing the known challenges to deliver reliable centralised storage.”**

ISC examined Ideal Shopping's business needs carefully and proposed two NetApp 3020C clustered SAN devices configured for resilient failover. By placing the two devices at widely separated locations in the data centre, with a firebreak in between, a high degree of protection from disaster could be achieved.

## The flexibility of virtualisation

The other major component of Ray's infrastructure strategy is server virtualisation. The objective of this approach is to resolve the issues of server proliferation and its associated high system management overhead. With the typically reactive operating style of a fast moving start-up, Ideal Shopping had added servers for new services as needed. This had resulted in the four IT support staff becoming completely over stretched managing 40 servers for their 500 users, with the prospect of more being added in the future.

Virtualisation enables dramatic consolidation of server resources and a new server farm starting with three HP ProLiant DL580 systems, using VMware virtualisation software and connected to the NetApp SANs, was planned. This technology is also inherently resilient, as a virtual server can be automatically switched to an alternative system in the event of hardware failure.

**“Our expectations for the time and effort needed for the project was set by our previous experience with system installation, and by feedback from other organisations. In the event, ISC's professional project management and pragmatic approach resulted in a quick and trouble-free implementation, beating our expectations for timeliness.”**

## Implementing the solution

ISC was given the responsibility for managing the implementation of the SAN infrastructure and coordinated with NetApp to ensure delivery and installation went smoothly. ISC's engineers worked with Ideal Shopping's IT staff to connect the fabric switch, configure the devices and carry out performance tuning, passing on their knowledge in the process. The HP ProLiant servers were then set up with VMware virtualisation software and connected to the SAN.

When set up correctly, the SAN device just looks like one enormous, extendable disc, which can be directly accessed by any connected server. The second SAN was connected by a high-speed iSCSI link, which enabled data replication to be implemented, with automatic failover in the event of a major hardware outage.

The ability of virtualised servers and storage to emulate existing servers also simplified the migration of services to the new infrastructure. It was a simple matter to set up test environments for critical applications to verify their operation before going live.

## The benefits

The combination of storage virtualisation using SAN technology, together with server virtualisation using VMware, has produced benefits in a number of areas. A dramatic reduction in the number of servers has been achieved with as many as 25 existing servers being replaced by the three new HP ProLiant. This has reduced the system administration workload on IT staff, enabling them to take on more business critical projects.

Better utilisation of storage and servers results in large savings, as much less equipment is needed for the same workload. Ray forecasts, "Only one new server will be needed every two or more years, compared to a rate of 10 servers a year with the old infrastructure. And when the need to add a new service does arise, the incremental cost of a new virtual server is much less than buying and installing a new machine. Operational expenditure will also be cut as less space is used and power consumption is reduced, as are cooling costs."