

## IT EXCHANGE CASE STUDY

### The Challenge

The e-mail systems within a global organisation had been established for well over five years. Based on Microsoft Exchange version 5.5, the design was deemed to be very solid and there were no major issues other than the fact that this version of Exchange was due to be discontinued. A project was initiated to design and implement an upgrade to Microsoft Exchange 2003 and provide additional improvements as part of the project. The defined business requirements were as follows:

- Provide a worldwide standards document
- Provide a detailed design for the migration within the UK
- Provide improved disaster recovery and resilience
- Provide improved Outlook Web Access

### The Solution

A detailed plan was generated to provide structure to the project and show timescales for the major milestones. This was split into a number of stages, which are detailed below:

#### Investigation and High Level Design

The first stage of the project involved gathering information about the existing Exchange 5.5 and Active Directory infrastructure. A Storage Area Network was also in place and information was gathered about its configuration and support of Exchange to see whether it could be utilised for improved resilience and disaster recovery. Various scenarios were then investigated and documented which were discussed further with the client to provide the outline of the final design.

#### Standards

With the basic design work complete, the existing Exchange 5.5 worldwide standards document was taken and modified to create an Exchange 2003 equivalent. Due to the tight integration between Exchange 2003 and Active Directory this document crossed both areas. On completion and sign off of this document, it was provided to the client for publication to other IT departments across the world for ratification.

### Migration Plan

With the design and standards in place and ratified, a detailed plan for the migration in the UK was then generated. This included analysis of the e-mail traffic to provide accurate server sizing and detailed hardware and software design. To provide improved resilience, a Windows Cluster was utilised with all data held on the Storage Attached Network. The data was then replicated to the disaster recovery site on a regular basis allowing for complete recovery of the Exchange servers and data within two-hours and maximum data loss of around thirty minutes.

### Pre Implementation Testing

Utilising the migration plan, the hardware and software was purchased and implemented, followed by a period of stress testing using a number of tools including the Microsoft Exchange LoadSim utility. This allowed any issues with the performance of the hardware and Storage Area Network to be identified and addressed prior to the migration of any active users. On successful completion of the stress testing, a disaster recovery and resiliency test was performed and formally documented with this documentation added to the clients overall disaster recovery plan. A full rollout was then initiated, starting with the IT departments.

### Handover and Implementation

The entire Exchange 2003 infrastructure was documented and formally handed over to the clients IT department prior to the migration of any business users. At this stage, the migration was handed to the IT E-Mail Administration team with ad-hoc advice provided as required.

### The Result

By providing a formal project plan up front and allowing for detailed testing during the implementation phases, a number of issues were identified and resolved during the early part of the project and with no impact on any live users. The migration was painless and transparent from a user point of view making for a successful project.

The most high profile benefits of the project were those achieved through improved resilience and disaster recovery. By enabling instant recovery for a localised failure, and sub two hour recovery for a full disaster, the timescales and complexity for the core infrastructure disaster recovery were greatly improved over the previous plan. With the loss of e-mail data reduced from a potential seventy-two hours to a maximum of thirty minutes the success of the project was visible at the very highest level.

