



## INFRASTRUCTURE

# Preston City Council

Phoenix Software helps Preston City Council develop an IT infrastructure for the future

Preston is 'England's Newest City' and is actively pursuing its vision of becoming the third city of the North West. City status in 2002 was a significant achievement that recognised Preston's long history, diverse community, sub-regional importance and the Council's ambitious future plans. It also means that Preston's national and international profile has been raised - increasing the city's potential to attract further investment and jobs.

## BUSINESS DRIVERS

As part of its ongoing plans for service improvement, Preston City Council recently undertook a programme of ICT modernisation throughout the organisation.

The Council had approximately 1,000 desktops using a mixture of Novell NetWare and multiple Windows NT Domains for authentication, and file and print services.

Email was facilitated using TeamWare - a GroupWare product comprising of email, calendar, forums and a document library. Council applications were running on a multi-platform basis of Microsoft, Solaris, Linux and NetWare. There was, however, a strong requirement to migrate to a technology platform based on Exchange Server 2003 and Microsoft Outlook for email and calendaring, and SharePoint Portal Server for Intranet and document management.

All systems were to be consolidated into a single Windows 2003 Active Directory back office solution. This all needed completing within strict deadlines and, crucially, with minimum disruption to existing Council services.



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## WORKING IN PARTNERSHIP

This project took the form of a close working partnership between Preston City Council and Phoenix Software. The Council was committed from the start to allocate internal resources where possible to drive down the cost of the project. The Council has many commendable skills in-house, but had never tackled an infrastructure project such as this before and, therefore, required a technology partner with suitable experience.

Phoenix Software has a good history of many successful infrastructure migrations and consolidations, especially in the local government sector. We appreciate the concerns and hurdles, both technical and political, associated with this type of project. We partnered with Preston City Council to provide the technical design and to implement the new server infrastructure.

A plan was formulated to ensure an absolute minimum impact on users. The migration was phased over a number of weeks and the Council's Project Team managed to successfully identify groups of users who could be migrated in batches, to ensure continued shared access to live data with no duplication or conflicts.

Working with the Project Team, it soon became clear that the existing IT infrastructure did not provide us with a good migration source. It had expanded in different directions and there were three separate directory services in use - one Novell NDS and two Windows NT4 domains.

Despite some duplication, however, none of these three contained a full user account database and users were spread across the different directories. The only comprehensive list of users was contained in the Human Resources (HR) database and this formed the basis for an import into the new Active Directory database. Groups were also imported but this was from a cleansed export of existing groups from the three existing directories.

## INFRASTRUCTURE CONSOLIDATION

Twelve new servers were implemented for this project. These included three infrastructure servers to run Windows 2003 Active Directory and all key network services. The Human Resources database was exported from the live HR system and imported into the new Active Directory. No coexistence with NDS was implemented at the server level - this was not considered beneficial due to the disparity of the existing infrastructure. Trust relationships were, however, implemented between the Windows NT4 domains, to simplify the data migration and administration.

Two servers were clustered for Microsoft Exchange 2003 Server. A single Exchange virtual server was created in an active-passive cluster configuration. This provides resilience for the email system - a service upon which business functionality is becoming far more dependent. A decision had to be reached on what to do with the existing data in TeamWare, as there was no suitable migration tool available. The Council, therefore, decided that users would start with a new, empty mailbox at go-live and any emails required from the existing TeamWare system would need to be saved to the Network as TeamWare would not be available after go-live.

Two file and print servers were implemented and the data load was distributed between them. Data was migrated using incremental copy scripts from all existing Novell and Microsoft sources.

Permissions could not be migrated but it was a relatively straightforward procedure to configure for shared data, and home folder permissions were automatically set during the user import procedure.

Windows SharePoint Portal Services was installed onto another two dedicated servers. Some time was spent developing a standard corporate look and feel, then a number of template designs were



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deployed. In addition to defining roles and permissions for users and creating site areas, training and documentation was provided for Content Managers. Shared document libraries were imported from TeamWare. The result was a flexible, fully functional Web portal providing easy access to shared resources.

ISA Server 2004 was deployed onto a dedicated server for two purposes. The first was to provide Internet content caching and control for outbound requests. The second was to reverse proxy inbound requests for Outlook Web Access, ActiveSync and Outlook Mobile Access. This provided remote Microsoft Exchange functionality while negating the need to allow external traffic directly through to the LAN thereby introducing potential security issues. An SSL certificate was installed onto the ISA Server to allow secure traffic encryption from the Internet.

### **EMAIL ARCHIVING & RETRIEVAL**

Symantec Enterprise Vault was deployed as an email archiving solution. Mailbox archiving, Exchange Journal archiving and SharePoint Portal Services archiving were all configured so that business and legal requirements regarding retention policies were satisfied. The archiving policies were implemented, tested and signed-off prior to go-live so that any fine tuning could be performed.

### **DESKTOP MIGRATION**

With the new server infrastructure deployed, and the users and data migrated, it was time to start migrating desktops. Due to the number of changes required to the desktops, it was decided that a visit would be made to each PC. There was a lot of obsolete software and clients to remove and no way of automating this within the existing infrastructure. A complete automated desktop deployment was also ruled out. Once the desktops and users were migrated, however, much of the new user environment was automatically generated using Group Policy Objects.

The Council designated an internal Project Management Team to ensure successful communications between all internal staff, their Project Team and ourselves. This allowed immediate processing of any concerns, issues and feedback. Preston City Council staff also produced and delivered all user training to ensure that users had confidence with the new systems. User acceptance of the new systems proved excellent and all feedback was encouragingly positive.

The Project Management Team worked hard to drive the project to a very successful completion, well ahead of schedule and under budget.

### **FEATURES & BENEFITS**

The main driver for this project was to modernise Preston City Council's technology

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platform. The Council had spent time evaluating various solutions to ensure the new infrastructure would provide the required performance, functionality, resilience and scalability to take them into the future. Consolidating the existing directories into a single directory was also important from a management perspective.

With very clear objectives, the Council required a technology partner who they were confident could work with them to achieve their goals.

Phoenix Software has a great deal of experience with this type of project and the relationship proved very successful. Although the Council wanted to use their own internal resources wherever possible, Phoenix Software remained on call throughout to assist with any problems. Close contact between the Project Management Team and the Project Team also guaranteed that any issues were resolved immediately.

Beyond the core functionality of Windows 2003 Active Directory and Exchange 2003 Server, we also implemented a whole host of value-add solutions. Email archiving and SharePoint Portal Server were driven strongly by business needs and compliance. Expanding on the new technology, however, by using ISA Server to reverse-proxy

Exchange Server and Group Policy Objects to refine and secure the user desktop experience, also played a major role.

We are confident that the new infrastructure will take the Council forward and provide the platform required to expand in the future.

Neil Fairhurst, Assistant Director of Finance (ICT), Preston City Council, concluded: "Like many similar organisations, Preston City Council's ICT infrastructure had developed 'organically' over a period of years. By and large, its composition reflected a number of tactical solutions to a range of business requirements.

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