



Xicon at Work



“Xicon staff made sure that this project was successful because they could provide advice based on real experience. They structured initial time for Cheshire staff to practise and gain skills before starting the project for real and this meant that the work moved forward with a high degree of confidence”

Sue Jones, Infrastructure Manager,
Cheshire County Council

Cheshire County Council has a Transformation Agenda that will modernise working and ensure the citizen is at the centre of activities. The annual ICT work programme is central to delivery of this agenda.

The County Hall data centre hosted approximately 275 Windows Intel servers (including a number of blade servers). The data centre was reaching its capacity for power consumption and cooling, and the management difficulties of rapid growth in servers were costing the authority valuable time and money. It was identified that virtualisation could produce significant benefits.

The Council commissioned an initial analysis of existing servers to assess the potential for virtualisation. Xicon was selected following an open competitive tender to design and implement a server virtualisation solution.

The project was successfully delivered earlier than anticipated and under budget



“The vision for the server virtualisation project was to ensure that that the ICT delivery could be agile to meet these business requirements”

“Xicon fitted quickly into a supportive partnership role that not only delivered the outcomes specified in the ITT but also informed the further development of ideas for the future”

Working in partnership

Xicon designed, implemented and project managed a virtualisation solution to enable Cheshire County Council's ICT department to meet business objectives. Our approach focused on mentoring and strategy - not just software sales.

Server Consolidation

Server characteristics and performance was assessed, and approximately 30 existing servers were identified as low usage with a further 30 as medium usage.

Utilising VMware, Xicon consolidated 50 servers to just 4 Dell PowerEdge 6850 servers in an initial rollout. After this success the scope of virtualisation has been expanded to include more challenging applications such as databases and key Windows infrastructure services.

Xicon planned and managed the virtualisation project, placing an emphasis on skills transfer and the establishment of suitable procedures to enable Cheshire County Council to manage their own investment in the most effective way.

To migrate the existing physical servers to the virtual environment, there were two approaches. In some cases, the council preferred to create a new virtual server and install the latest version of their application(s), and migrate in their own timescale. However in the majority of cases, Xicon assisted in running the Platespin application, which easily transfers the original server configuration and application intact and functioning with minimal disruption.

The new 'Virtual Infrastructure' cluster provides high availability that exceeds that provided by standalone physical systems, and integration with existing management applications provides visibility of the system stability. Meanwhile, staff access is controlled by linking the VMware systems to existing Microsoft user authentication and network access through a secure, redundant connection into all main Cheshire County Council server networks.



Storage Solutions

The authority recognised the benefits in implementing virtualisation with a SAN. Following the successful implementation of VMware on local disk space and, as a temporary solution, an EMC Clariion array, Xicon were instructed to migrate Cheshire County Council to a high performance EqualLogic iSCSI SAN. This change is transparent to virtual machines and the applications they run, which are installed and managed in a uniform manner that is independent of storage infrastructure upgrades.

Project Management

Xicon managed the project using their internal project management method based on PRINCE2, which borrows heavily from other project management approaches including critical-chain project management method.

The project was delivered earlier than anticipated and under budget.

“Xicon take an open and honest approach to project management. Ensuring that Cheshire County Council was a central member of the project providing business insight and advice” throughout the design and build process, minimising risks and ensuring our expectation was achieved”

Project Key Facts:

Initial Project:

Plan, manage and deliver ESX2 virtual solution
Virtual Infrastructure integrated with existing environment
Installation of VMware and EqualLogic storage
Server migrations
Skills transfer and mentoring
Ongoing support

Results:

16:1 consolidation with ESX server
Integration with existing monitoring
Streamlined system management
Migration of existing applications
Control over new server creation
Staff mentored in best practices
Project delivered under budget

Follow-on project:

ESX 3 installed, with high availability services
Upgrade from legacy EMC Clariion system to EqualLogic iSCSI storage architecture
Disaster recovery planning
Further server migrations

VMware Virtual Infrastructure:

6 Dell 6850 servers
Each server designed for 12 migrated virtual machines, 4 new build
VirtualCenter and VMotion
Windows NT, Windows 2000 and Windows 2003
Applications include Windows infrastructure, web applications, databases

Storage:

EqualLogic Ps3600 4.8 Terabyte storage array network



Business Benefits

Simple administration and lower overheads

Virtualisation has direct business benefits through the ability to consolidate and centrally manage servers, in addition to ensuring constant connection to applications

More efficient use of hardware

Transforming IT infrastructure by moving to a virtual infrastructure enables hardware resource to be utilised more efficiently, enabling greater control over power and space consumption.

Flexibility

VMware controls server sprawl whilst ensuring high server performance. In addition allowing implementation of a reliable disaster recovery strategy. VMware virtual infrastructure offers a highly flexible solution that can easily grow when needed.

Scalable iSCSI SAN Storage

EqualLogic's SAN enables simple storage consolidation optimising a virtual infrastructure to increase storage utilisation enrich corporate data protection methods, facilitate disaster recovery and enhance server availability.



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About Xicon

Xicon is an IT solutions company offering a range of Infrastructure, Development and Executive Services. We have worked with our customers for more than 15 years to deliver powerful IT solutions that help businesses develop. Xicon does this through exceptional service delivery, which is only possible due to the high quality of the people employed and the culture in which they operate.

Our experience makes us different from the competition - using real life experience enables us to add real value to every project.

Xicon are a Microsoft Gold Certified Partner, Oracle Partner, VMware Enterprise Partner and EqualLogic Partner.

Our mission

"To increase efficiency, effectiveness, and profitability of our clients through assistance and support, both strategic and tactical and by getting a better understanding of our clients business."

For more information on Xicon's solutions, or to arrange a meeting with one of our Principal Consultants please contact Sian Tudor on 01925 248 224.