IBM

IBM Express Advantage provides Wilkinson Hardware Stores a cost-effective platform for continued growth

systems architecture LIMITED

Overview

■ *Customer challenge*

Wilkinson needed to radically overhaul its IT infrastructure and install systems to support its switch to Oracle. The new systems had to be configured within five weeks, and commissioned on site within a further two weeks.

■ *Solution*

IBM and business partner, Systems Architecture, provided an innovative solution from the IBM Express Advantage portfolio that comprised expandable IBM BladeCentres and a Storage Area Network. The systems are highly resilient and scalable, with multiple operating systems booted through the SAN.

■ *Customer benefits*

- *Rapid build and commissioning of new IT infrastructure*
- *Resilient blade servers in IBM BladeCentre® chassis with no single point of failure*
- *Cost-effective, simple and elegant solution to a complex requirement*
- *Highly scalable*
- *Knowledge transfer to IT staff for on-going self-sufficient operations.*

Wilkinson Hardware Stores is one of the most successful family owned retailers in the UK. With a proud history stretching over more than 80 years, Wilkinson now have a store portfolio of more than 320 stores across the UK selling more than 25,000 different products to over 200 million customers every year.

The company has a winning business strategy, but with phenomenal business growth come challenges. Wilkinson realised that its custom-developed computer systems that had served the company well, were no longer sufficient to support the company's future growth plans in one of the most dynamic, fast-changing and competitive industries.

With the arrival of a new IT Controller, Wilkinson decided to replace its custom-built systems with a suite of integrated packaged software based on Oracle. Having set out the strategy, rapid action was needed to install a hardware platform.

"Our first priority was to install hardware with the power, agility and scalability to run a large suite of Oracle applications. After a competitive tender, we selected Systems Architecture and solutions from the IBM Express Advantage portfolio because they provided an innovative approach and the best value-for-money solution," says Carl Grainger, Wilkinson's IT Manager.

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Innovative approach

IBM's SME business partner, Systems Architecture Ltd, had been working with Wilkinson for over ten years and fronted negotiations alongside IBM. Systems Architecture called on IBM's expertise with Oracle implementations and jointly developed innovative proposals.

"IBM proposed installing BladeCentres with everything booted from the SAN," Grainger explains. "That's proved a highly cost effective solution and, with no operating system code on the Blade servers, the solution is highly flexible and resilient with no single point of failure."

The initial installation from the IBM Express Advantage product portfolio comprised 2 IBM System H BladeCentre Chassis (production + development/test), 15 IBM HS21 Intel Blade Servers, 2 IBM DS4800 Disk System Storage, 6 DS4000 Exp810 Expansion Shelves and 2 IBM Netbay 42u Racks.

For additional security, IBM installed IBM BladeCenter Open Fabric Manager, which allows a spare blade in each chassis for hot-swapping in the event of a server failure. Open Fabric Manager manages I/O and network interconnects across multiple blade servers and BladeCenter chassis, facilitating expansion of processing and storage capacity.

Speed imperative

Since work could not start on the new applications until the new hardware was installed, Wilkinson set tight deadlines for the new computer systems to be built, configured and installed.

"We allowed just two weeks between delivery and commissioning, and were most impressed that Systems Architecture and IBM managed to configure and commission the new platforms within that timeframe," Grainger added. "The knowledge and experience that IBM's specialists had of the hardware requirements of large application suites was very helpful in achieving that tight deadline."

Complexity was stripped out of the hardware infrastructure. IBM DS4800 (and more recently DS5100) storage arrays were deployed because of their simplicity. IBM's software applications specialists recommended that Wilkinson capitalise on the functionality within the application software for synchronous replication between production and disaster recovery sites in order to save installation time.

Value of experience

Systems Architecture called on IBM's large pool of experience implementing hardware platforms for major software applications to plan capacities, pre-configure the platforms and de-risk the project.

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Capacity planners analysed metrics concerning the number and type of users, and the platform requirements of the various application modules and versions to be deployed. From these analyses, they were able to make an accurate assessment of processing and storage requirements.

At the initial tender stage, consultants from Systems Architecture were able to advise what savings and compromises could safely be made to achieve Wilkinson's time and cost targets without impairing performance or capacity. Using readily available IBM Express Advantage modules, two IBM specialists built, configured and commissioned hardware to meet Wilkinson's requirements in a very short time.

"Systems Architects used some high quality IBM people to configure and commission the hardware. Without their expertise and energy, we would never have achieved the five week turnaround from order to delivery, with just two further weeks to commission on site," Grainger comments.

Dealing with complexity

Wilkinson had elected to implement Oracle running on Linux. However, different software modules required different versions of the operating system. IBM handled the Linux and RedHat implementations and was able to provide a secure operating environment despite the complexity of having to juggle different versions of operating system and application software.

Remote booting off the SAN provided excellent systems reliability and has certainly made life simpler from a management perspective. Centralising boot operations across multiple blade servers required IBM's specialists to exert great skill in devising set-up routines.

Knowledge Transfer

Following the pressured implementation of the new systems infrastructure, Wilkinson wanted to be self-sufficient in supporting the new hardware and operating systems, calling on expertise from Systems Architecture and IBM only in special situations.

"During the rapid implementation period, two of our own IT staff sat alongside IBM's implementation specialists. Working hands-on, they achieved a highly productive and effective transfer of knowledge which means we are now proficient in managing our own operations," says Grainger.

Wilkinson is able to quickly and easily scale its application software architecture under its own control. The software deployed includes Oracle Real Application Clusters.

"The deployment of IBM BladeCentres and SAN technology is a smart, simple and expandable solution which IBM implemented efficiently within budget and in a very short timescale."

– Carl Grainger, IT Manager, Wilkinson Hardware Stores Ltd.

This cluster database has a shared cache architecture that provides for high scalability. As more processing capacity is needed, Wilkinson's own IT staff are able to add and commission incremental blade servers, with the knowledge they gained working alongside IBM.

Systems Architecture has also provided IBM Systems Director, an integrated, easy-to-use suite of tools, to support Wilkinson in managing its own systems.

Platform for future success

Initially the new hardware infrastructure was used to support a data warehouse consolidating all information within the retail business and provide an efficient management information system.

Further new software applications are planned for functions, such as human resources and warehousing logistics. In addition, existing databases and other applications, including JDA demand chain management and PeopleSoft accounting software, are being integrated into the new infrastructure using a service oriented architecture.

Wilkinson has doubled its server capacity in recent months, demonstrating the value of the IBM Express Advantage product portfolio. An identical architecture of IBM BladeCentres and SAN has been built to migrate the many Windows applications deployed across the business onto the new infrastructure.

Working with IBM, Systems Architecture enabled Wilkinson, within less than eight weeks, to make a fundamental change to its entire computing architecture and install cost-effective platforms to support its future growth. "The deployment of IBM BladeCentres and SAN technology is a smart, simple and expandable solution which IBM implemented efficiently within budget and in a very short timescale," Grainger concludes.

For more information

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SMC03038-GBEN-00