VINCI builds more efficiently with IBM XIV Storage System

Overview

The need

Transaction and file data growth of around 25 percent annually could not be handled by existing storage systems, which were near capacity, complex and expensive to manage.

The solution

VINCI migrated critical business data to an IBM® XIV® Storage System implemented at its main production site in Watford, with remote mirroring to a second XIV at a site 200 miles distant. The initial configuration of 80 TB on six modules has subsequently been upgraded to 108 TB on nine modules.

The benefit

Daily data loading that formerly took up to 10 hours now takes less than five hours. Time spent on data management has been cut from one day to a few hours each month, a saving of around 75 percent. Storage provisioning is estimated to be more than 50 percent faster, and on some occasions more than 95 percent faster. IT staff time required for data backup and restore has been reduced by around 50 percent. Ultimately, VINCI is able to discover the value of its new corporate acquisitions more quickly and more reliably.

VINCI PLC, based in Watford, UK, is the British arm of VINCI, one of the world's leading construction groups operating in the sectors of building, civil engineering, air, facilities and technology. In the UK, VINCI employs around 9,000 people, generating in the region of £1.9 billion in annual sales.

Business challenge

As an acquisitive company, each new corporate addition's systems and storage have to be incorporated. Ben Paddick, Technical Design Architect, explains, "Suddenly you have 50 or 60 new systems that need to be consolidated, and you have to keep the whole infrastructure manageable."

VINCI needed to extend its Microsoft Exchange e-mail solution to a total of 2,500 users, introduce COINS, a construction and engineering industry ERP solution, and to improve the performance of the company's IBM Cognos environment, essential for business management and analysis. The huge growth of around 25 percent annually in transaction and file data could not be handled by existing storage systems, which were near capacity, and were complex and expensive to manage. Corporate acquisitions could, on occasion, increase one-off data growth yet further, preventing successful analysis of integrated business performance.

Selecting IBM XIV

VINCI migrated critical business data to an IBM XIV Storage System implemented at its main production site in Watford, with remote mirroring to a second XIV at a site 200 miles distant. The initial configuration of 80 TB on six modules has subsequently been upgraded to 108 TB on nine modules. VINCI worked with Silverstring Ltd., an IBM Premier Business Partner with XIV and Tivoli AAA-level accreditations.

IBM XIV allows VINCI to stripe data across a large number of high-capacity disks and read them in parallel, obviating the need for complex storage tiers. This has allowed them to deliver the performance of high-speed storage using less expensive disks.

Designed for Data

- The IBM XIV Storage System solution enables VINCI to manage multi-terabytes of data that can grow at more than 25 percent annually. Using IBM Cognos software, VINCI consolidates and analyzes information from business transactions and corporate acquisitions, and uncovers new insights.

Tuned to the Task

- VINCI has consolidated data and applications from traditional SAN and direct-attached storage to the XIV, supporting IBM System x and other vendors' platforms, reducing information management, backup, recovery and administration costs.

Managed in the Cloud

- With the virtualization capabilities of XIV and deployment of IBM Tivoli Storage Management software, VINCI has automated key storage provisioning and data management issues, hiding the complexity of the underlying infrastructure, allowing it to offer seamless IT services to the business user.

Driving Innovation

- The IBM XIV Storage System enables VINCI to continue on its acquisitive and organic growth path, developing enterprise growth through economies of scale and fact-based market analysis of data.

Success with the XIV system has led VINCI to move systems onto the new platform ahead of schedule and, within nine months of the initial implementation, completed the upgrade from six modules to nine.

"The biggest thing our XIV solution has done for us is give us a system that performs correctly," says Paddick. "With our different business applications, we have processing peak times that might overlap. With the IBM XIV, we can step back and know that the system is going to perform, regardless of peaks.

"By simplifying the storage environment with IBM XIV, we are getting rid of one of the major headaches," says Paddick. "We can just rely on XIV to deliver the performance we need, so we don't have to spend so much time on capacity planning."

"What we wanted from the XIV was something that could give us almost linear scalability, as much reliability as we could have without paying the overhead, and a full suite of products without the cost: asynchronous replication, unlimited and instantaneous snapshots, thin provisioning. All of these bits and pieces are fully included and so our costs are known," explains Paddick.

With the help of IBM Tivoli Storage Manager, software that comes as standard with IBM XIV, VINCI has been able to reduce the backup and restore times by around 50 percent, bringing it easily within the overnight backup window.

"We used to have performance issues, which led to complaints from senior managers," comments Paddick. "The XIV system enabled us to migrate data from the old storage in the background, while the application was still running—the users didn't notice a thing. The XIV has improved performance so much that we no longer get complaints about response times!"

"The implementation went like a dream—it was even easier than the IBM sales team said it would be," comments Paddick. "The support from IBM has been fantastic. If something goes wrong, the XIV immediately 'calls home,' and IBM responds instantly. I came to work one morning to find that a disk had failed overnight: I already had an email and a voice mail from IBM telling me that an engineer was en route, and the new disk had been delivered and was sitting on my desk!"

"IBM XIV is so flexible, you can just plug in more modules when you need them, and it still fits in a single 42-U rack," explains Paddick. "Space, power and cooling in the data center are at a premium, so the XIV is a very practical option; moreover, energy-efficient hardware makes a major contribution to achieving our carbon reduction objectives. Ultimately, we are aiming to move all of our data onto XIV and retire our older storage, gaining significant operational cost savings."

Solution Components

Software
- IBM® Tivoli® Storage Manager

Servers
- IBM System x®
- IBM XIV® Storage System
- IBM System Storage® DS4800

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Existing storage devices, including IBM System Storage DS4800 and equipment from other vendors, are now used for backup and disaster recovery purposes. VINCI deploys around 60 IBM System x and other servers for its COINS and associated business applications.

Working towards smarter computing

By consolidating to XIV, VINCI has started on a strategic journey that aims to simplify and standardize its IT infrastructure. Centralized services that are invisible to the business user – such as flexible storage growth, automated backup – allow VINCI to continue with its ambitious acquisitive and organic growth plans.

VINCI relies on IBM Cognos to provide enterprise-wide business reporting and analysis. As each application's data is migrated to XIV, mining new information to feed into Cognos is becoming faster and easier. Previously, the daily data loading process took up to 10 hours. If a data process failed, it had immediate consequences during the next day's business. With the XIV, data loading now takes less than five hours, which allows larger and more complex reports to be developed and provides recovery time in case of data processing errors with no impact on next-day's business. The result is faster time to production for new reports, delivered at lower costs, more reliably.

Where previously the IT team reserved more than a day each month for data management issues, the simplified interface available from XIV has helped the IT cut storage administration to just a few hours each month, a saving of around 75 percent. Staff formerly occupied with issues such as updating drivers, connecting storage devices and re-allocating volumes have been released to work on more valuable business matters. For example, provisioning new storage is estimated to be more than 50 percent faster with the XIV interface, and on some occasions saving more than 95 percent of the previous time.

Ben Paddick comments, "When we decided to go ahead with the implementation of the COINS ERP system, we were able to create 32 storage volumes on the XIV in less than ten minutes using an automated script. On the old storage, this would probably have taken a whole day."

In another example, IT staff management time required for data backup and restore has been reduced by around 50 percent, handled automatically by Tivoli Storage Manager. With the virtualization capabilities of XIV and deployment of IBM Tivoli Storage Manager software, VINCI has automated key storage provisioning and data management issues, offering seamless IT services on infrastructure that are invisible to the business user.

With all data now stored on the XIV, VINCI has eliminated the need to spend time on storage planning and cuts its administration costs. Reduced energy, cooling and floorspace needs help to cut operational costs and contribute to carbon-reduction targets.

For more information

To learn more about smarter computing from IBM and how we can help you integrate, automate, protect and transform your IT, contact your IBM sales representative or IBM business partner, or visit:
ibm.com/smartercomputing

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