



Reduce Complexity

Improve Flexibility

Service Catalogue

Enable Automation

Dyfed-Powys Police builds future-proof data storage with Tectrade

Challenge

New guidelines require police forces to store traffic camera data for three years, and Dyfed-Powys Police's existing SAN could not cope with the increased storage demands. The Authority's application and database servers were connected to local tape drives, making backups a time-consuming manual process.

Solution

Dyfed-Powys Police worked with Tectrade to expand the existing SAN, adding an IBM TotalStorage DS4300 storage system to the existing IBM FAST500 server. The organisation used IBM System Storage SAN Volume Controller software to virtualise the storage capacity into a single pool, and deployed IBM Tivoli Storage Manager software to enhance backup and storage management.

Benefits

Increased capacity of new architecture enables compliance with police data storage guidelines; virtualisation ensures efficient use of hardware capacity; flexible IBM hardware can scale to meet future needs at low cost and with minimal service disruption; faster, more automated backups free skilled staff from manual tasks.

Dyfed-Powys Police has increased its storage capacity and improved its backup and disaster recovery processes by working with Tectrade to upgrade its Storage Area Network. With new IBM hardware and software solutions, including IBM Tivoli Storage Manager and IBM TotalStorage SAN Volume Controller, Dyfed-Powys now has the capacity to store traffic camera data for up to three years, enabling compliance with police guidelines, while benefiting from lower maintenance costs and more effective storage management.

Dyfed-Powys Police (www.dyfed-powys.police.uk) serves the communities of Pembrokeshire, Ceredigion, Carmarthenshire and Powys in mid Wales. It covers the largest policing territory and frequently returns the lowest crime levels and highest levels of crime detection of any police authority in England and Wales. The Force reports directly to central government and needs to be flexible enough to comply both with nationwide policing regulations and with policies at a local level.

New guidelines for an Automatic Number Plate Recognition (ANPR) system – which can recognise vehicles registered to disqualified drivers and wanted felons – required Dyfed-Powys to store traffic camera data for use as evidence for a period of three years. This represented a large volume of data, and the Force's existing storage environment, an IBM FAST500-based SAN, lacked the necessary scalability.

Following the introduction of the Freedom of Information Act, Dyfed-Powys also needed better information lifecycle management and greater control over its storage environment, to enable data to be backed up safely and retrieved rapidly when requested.

Infrastructure Objectives

Storage Consolidation

- Centralised Storage
- Mid-Range Disk
- Storage Virtualisation
- Tiered Storage

Data Protection

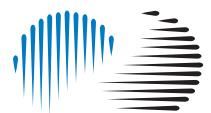
- Enterprise Backup & Recovery

Key Deliverables

- Release skilled staff from manual backup tasks
- Simplified backup procedures
- Improved confidence in backups
- Improved utilisation of storage assets
- Highly scalable solution
- Reduced on-going storage costs

“For the issues we faced, Tectrade came up with the most effective solution – providing a high-performance, high-capacity storage environment that keeps ongoing costs low.”

Aled Williams



TECTRADE

Virtualised storage for greater efficiency

Dyfed-Powys worked with Tectrade and IBM to design a new storage environment, extending the existing SAN by adding an IBM TotalStorage DS4300 storage system to its FAST500 server. IBM TotalStorage SAN Volume Controller (SVC) was implemented to virtualise the disk capacity, effectively creating a single logical 'pool' of storage across multiple disks and physical systems. Local tape drives and backup software were replaced with a central tape library, and IBM Tivoli Storage Manager was implemented to manage backup and recovery operations from a single point of control.

"We held an open tender and decided that the Tectrade solution was the best for our needs. The company was highly recommended by IBM, and the price they quoted for the solution was much more competitive than the other proposals we considered," explains Aled Williams, IT Service Manager at Dyfed-Powys Police.

"The Tectrade consultant was very efficient and dealt with issues well," he adds. "With SAN Volume Controller, we needed to make an unexpected firmware upgrade, and he took it in his stride. Because he knew the technology inside out, the deployment of the entire solution took only 4 days."

Adding the new DS4300 to the existing SAN has increased the available storage capacity to 7TB – more than enough to deal with the demands of the ANPR and core system – and the IBM technology will scale to handle increasing data demand in the future. SAN Volume Controller is used to pool the capacity of multiple disk arrays, enabling host applications to access capacity beyond their island of SAN storage.

"The virtualisation features of SAN Volume Controller have enabled us to extend the value of our investment in existing storage hardware, while simplifying storage management," says Aled Williams.

Full confidence in backup

The new solution radically simplifies Dyfed Powys' backup procedures too. With 25 xSeries servers running the main application and database systems, backups to locally attached tape drives were time-consuming and gave skilled IT staff a high manual workload.

"We used to have to go around all 25 servers ejecting tapes, cataloguing them and storing them in the safe, which took at least 30 minutes every day," explains Williams. "There was no way of knowing if a backup was failing without going to each machine to check."

"With the new centralised tape library, we can store a whole month's worth of backups at a time, and management is entirely automated, freeing up IT staff from repetitive, low-value administration. Tivoli Storage Manager enables us to check backup progress via a simple GUI, and sends email alerts if something is failing. The solution from Tectrade takes away the uncertainty, giving us more confidence that our data is protected effectively."

Non-disruptive growth with SVC

With around 1,800 staff working shifts around the clock, high availability is a priority for Dyfed-Powys. The Tectrade solution ensures that police workers have access to the IT systems they need at all times. Moreover, the use of SVC will enable Dyfed-Powys to carry out non-disruptive upgrades to the SAN – which may be especially important if planned restructuring goes ahead and Dyfed Powys is amalgamated with the other Welsh police authorities.

For the time being, 7TB provides Dyfed-Powys with all the capacity it requires for compliance with ANPR and Freedom of Information guidelines, and the virtualisation features of SVC ensure that optimal usage is made of existing storage resources. In addition, SVC can cache large volumes of data, significantly improving access times for users. In the future, Dyfed-Powys plans to use SVC to manage a tiered storage environment, reserving high-speed disks for frequently accessed data while moving less important data to lower-cost disks.

By increasing storage efficiency and protecting existing hardware investments, while reducing skilled staff workload and lowering maintenance costs, the Tectrade solution is helping Dyfed-Powys deliver excellent value for public money.

"For the issues we faced, Tectrade came up with the most effective solution – providing a high-performance, high-capacity storage environment which keeps ongoing costs low", concludes Aled Williams. "The Tectrade solution enables us to store more data, more securely, backup and restore more quickly, and easily scale our capacity to meet future needs."

Vendor Alliances on this project

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