



Reduce Complexity

Improve Flexibility

Service Catalogue

Enable Automation

## Gloucestershire Constabulary consolidates and centralises backup with Tectrade and Tivoli Storage Manager

### Challenge

Gloucestershire Constabulary needed to rationalise its backup and recovery infrastructure, in preparation for a planned move to new headquarters and the implementation of major new systems. The existing procedures for protecting and restoring data were difficult to manage and could not scale to meet future demands.

### Solution

Working with Tectrade, Gloucestershire Constabulary consolidated and centralised its backup and recovery infrastructure, implementing IBM Tivoli Storage Manager to run incremental backups to an IBM TotalStorage 3584 Tape Library with LTO-3 media.

### Benefits

Significantly increased capacity, able to cope with massive growth in data storage requirements; much faster backup and restore, reducing strain on network resources and enabling users to retrieve files more rapidly; ability to run backups on live Microsoft Exchange systems, supporting 24/7 working environment; reduced administration and improved reporting.

**Gloucestershire Constabulary has dramatically improved the performance of its backup and recovery processes with IBM Tivoli Storage Manager and LTO-3 tape technology. The new infrastructure, designed and implemented by Tectrade, gives the Constabulary ample capacity for the future and has significantly simplified backup management while offering more reliable support for remote sites.**

Gloucestershire Constabulary ([www.gloucestershire.police.uk](http://www.gloucestershire.police.uk)) was founded in 1839 and is responsible for policing the county of Gloucestershire. The Constabulary has three divisions – Forest and Gloucester, Cheltenham and Tewkesbury, Cotswold and Stroud – each divided into neighbourhood areas, and employs more than 1,200 full-time equivalent (FTE) police officers, with around 800 FTE support staff.

As part of a planned move to brand-new headquarters, the Constabulary set out to refresh its data backup and recovery infrastructure. The existing systems for protecting and restoring data were beginning to struggle as the amount of information grew, causing performance and management issues. More importantly, the introduction of several new data-intensive applications threatened to completely overwhelm the existing backup systems.

Mark Buckley, IT Specialist at Gloucestershire Constabulary, explains the challenge: "It was often difficult to complete backups within the available windows, and there were multiple different systems for backup and recovery. The future introduction of Automatic Number Plate Recognition software was likely to add a significant quantity – perhaps terabytes – of image data to our backup, and the existing systems simply would not have coped."

#### Infrastructure Objectives

##### Data Protection

- Enterprise Backup & Recovery

#### Key Deliverables

- Highly scalable solution
- High speed recovery, managed by help desk
- Efficient use of tape media
- Ease of management & reduced administration time

**"The Tectrade and Tivoli solution has given us an enterprise-class backup and recovery solution that offers low long-term cost of ownership."**

*Mark Buckley, IT Specialist at Gloucestershire Constabulary*

## Boosting back-up performance

Gloucestershire Constabulary had implemented ArcServe backup software for its file servers and was using the standard Windows NT backup software for its Microsoft Exchange email servers. As a further complication, a number of other Windows servers had their own tape drives and backup software, contributing to what was a fragmented backup infrastructure.

"We wanted to consolidate and centralise backup and recovery – partly to reduce administration and improve reliability, and partly to make it easier to scale up in the future," says Mark Buckley.

The Constabulary instigated a public tender process to find the right partner to refresh its backup and recovery infrastructure, and awarded the contract to Tectrade. "Tectrade's proposal represented the best value for money, and we were also impressed by their level of professionalism and experience with organisations similar to ours," says Mark Buckley. "The solution was delivered on time and within budget, demonstrating Tectrade's technical competence with Tivoli Storage Manager."

The Constabulary's new backup and recovery infrastructure is built on IBM Tivoli Storage Manager (TSM) software, which provides 'incremental forever' functionality – taking one full backup initially, then only updating the data that changes, for dramatic improvements in performance. Tectrade implemented TSM on a dedicated Dell server, and configured it to back data up first to disk, and then to LTO-3 tape media in a new IBM TotalStorage 3584 Tape Library.

"We saw an enormous improvement in the speed of backup and restore with the Tivoli software," says Mark Buckley. "The incremental functionality is particularly useful for backing up our 50 or so remote sites – it's extremely rapid, even over their low-bandwidth connections. The high speed of the IBM tape library also contributes to this performance improvement, and TSM makes very efficient use of the media, enabling us to reclaim spare capacity on our tapes."

## Supporting around-the-clock work

Policing is a true 24/7 job, so it was formerly a significant challenge for Mark Buckley's team to find windows in which to back up data without having a negative impact on users. A key benefit of the Tectrade solution is its use of the Tivoli Data Protection (TDP) for Mail module, which enables Gloucestershire Constabulary to back up its Exchange 2003 email systems without taking them offline.

"The ability to perform online backups of Exchange data is a phenomenal advantage," says Mark Buckley. "Email is becoming an absolutely critical tool for us, and Tivoli enables us to protect it without stopping users from working."

## High-speed recovery of data

With the former infrastructure, all backup tapes were stored offsite, making it slow and labour-intensive to recover data. If a user needed to restore an individual file, a member of the IT team would first have to go offsite and retrieve the right tape from the safe. Under the new regime, the Constabulary always has the most recent backup in the 3584 library as well as offsite – so data can be recovered in minutes rather than hours.

"Most restore functions are handled directly by the helpdesk – it typically takes just a couple of minutes to find and restore a file using TSM, so we can offer a much faster service to users," says Mark Buckley.

## Simplified management for greater reliability

With the consolidated backup solution from Tectrade, Gloucestershire Constabulary can manage its data more easily and effectively. TSM automatically backs up systems according to pre-defined policies, and provides daily status reports and maintenance scripts.

"TSM generates a plan file every day, detailing the contents of each tape, which saves us a great deal of time and effort," says Mark Buckley. "This also makes us more confident that we are correctly backing up the right data, and will enable us to recover more rapidly in the event of a disaster."

He concludes, "The Tectrade and Tivoli solution has given us an enterprise-class backup and recovery solution that offers low long-term cost of ownership. The consolidated backup infrastructure is producing significant savings in time and administrative effort, and can easily be scaled up to meet our growing data storage requirements."

## Vendor Alliances on this project

Tivoli

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