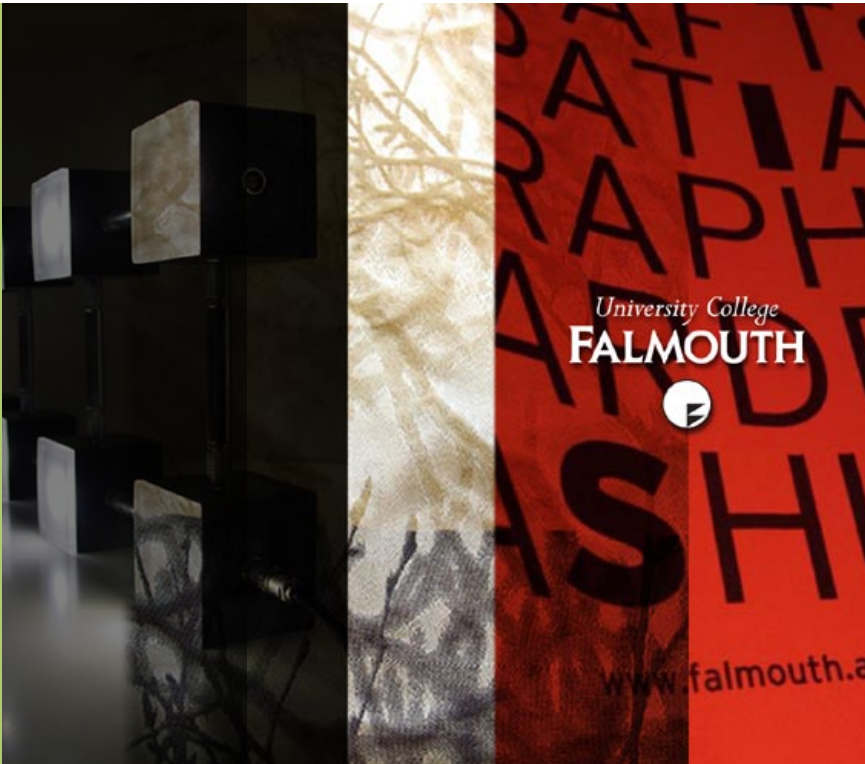


# University College Falmouth

**SAN From Storage Specialist Supports Innovative IT Infrastructure**



## Key Business Drivers:

- Growing student numbers with a huge range of data needs
- Legislation (RIP, Freedom of Info Act, DP Act)
- Control energy costs
- Provide an enterprise storage capabilities non-enterprise cost
- No increase in IT head count

## Key Business Benefits:

- Reduced management man-hours by 50 percent
- Delivered different levels of performance to individual applications from a single storage pool cost-effectively
- Reduced their software licensing costs alone by 20 percent
- Seamless implementation meant students and staff didn't even realise anything had happened
- Cooling costs are 6 percent of those required previously even though capacity is 16 times bigger

## University College Falmouth

Founded in 1902, University College Falmouth (UCF) now has 4,000 students. It is one of the UK's leading university colleges of art, design and media and is the only Higher Education Institution in the UK to have been awarded 24 out of 24 for the quality of its teaching in art and design at undergraduate and postgraduate level, in the Quality Assurance Agency's most recent assessment.

UCF has played a leading role in the Combined Universities in Cornwall (CUC) project, which provides opportunities for Cornish students to remain in the county post-graduation. To date, the project has attracted £120 million of Objective One European funding. Part of this funding has enabled the university to provide students with a state-of-the-art flexible learning environment, including podcasting lectures and VoIP in all student residences.

## The Challenge

The University has had ambitious plans to expand over recent years. The target was to increase student numbers from 2,600–4,000 students by 2007. To maintain its position, UCF needed to invest in all forms of infrastructure, especially the IT department. As part of this, UCF wanted to take the opportunity to provide each student with 4GB of storage space, to store large multimedia files such as images, videos and audio.

In order to achieve this and meet the requirements of the data protection legislation, it was clear that UCF would need to significantly enhance its storage capabilities. In fact this expansion would need a 60 percent increase in storage capacity and be easily expandable. Yet the IT department did not have the manpower to introduce an additional layer of complexity into their environment that a SAN system would create.

As a university, budget was a key factor in the purchasing decision with many universities often finding it difficult to obtain funding. As such the storage system needed to be straightforward to install and maintain. UCF were looking to work with a storage company that could be flexible but also provide long term cost savings. Ensuring that costs would remain within budget constraints for future years as the system grew over the medium term.

## The Solution

The Pillar Axiom® from Pillar Data Systems® has been chosen for its flexibility as the core of the UCF digital data storage system. Running on this system are four MIS systems, MS Exchange and Oracle databases.

One important part of the transition to Pillar was to ensure that the Oracle and Exchange environments, both critical parts of UCF's infrastructure, had around the clock availability and were able to offer the right level of performance at the right time.

"Pillar has provided us with a solution that delivers the maximum flexibility as a result of its architecture," said Nathan Prisk, Head of IT at Falmouth. "The system is able to support many diverse applications, such as file and print, Oracle, Ms Office applications, and longer term video editing, music files and digital stills archiving.

Once the system was up and running the IT team migrated all existing distributed storage to the central Axiom. "We have been through the process of setting up a resilient storage location here at Falmouth. We have taken the time to understand how we can manage the information we have better. With the Pillar Axiom there was all the data protection and high availability capabilities that were needed to ensure no interruption in service during the transition," continued Prisk.

### The system supports the following business critical applications:

- Two Exchange 2003 servers with a total 3,500 mailboxes with a maximum mailbox size of 125MB
- One File store for 4,000 students with each student requiring 500MB
- One File store for 400 staff with each member of staff averaging 2GB

### The Pillar Axiom also:

- Supports centralised management, control, configuration and monitoring
- Ensures there is no single point of failure
- Supports multiple operating systems and application loads simultaneously
- Provides different performance metrics for different applications simultaneously
- Supports web based access to management console

### Pillar Axiom 500 configuration:

- 1 x Axiom 500 SAN Slammer Storage Controller (FCP Protocol)
- 19" 42U rack with power distribution
- 6 x Axiom Brick Storage Enclosures (3x 2.5TB and 3x 5TB SATA Bricks)
- Axiom Pilot Policy Controller
- Brocade switch with 12 ports activated, ready for expansion (16 Port Max configuration)
- Hardware maintenance for 3 years (24x7 on-site response)
- Software maintenance and subscriptions for 3 years (24x7)
- Pillar Approved Administrator training course

Pillar worked closely with the UCF team to ensure there was no disruption to services through the installation of the new storage system. "The implementation took place with students using our existing system but the seamless approach from Pillar meant students and staff didn't even realise anything had happened," added Prisk.

The Axiom is now cost-effectively delivering different levels of performance to different applications from a single storage pool, through the AxiomONE™ Storage Services Manager. Setting the levels of service is a simple procedure which the IT team can now carry out at any time, prioritising different applications and data types depending on the needs of staff and students.

"When it comes to the cost of the project, we have actually been able to reduce our software licensing costs alone by 20 percent. What we did not expect was to be able to reduce running costs in the data centre, and this is a significant bonus," continued Prisk. "In particular we have seen our cooling costs cut to 6 percent of those required previously even though storage capacity is 16 times bigger."

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**Nathan Prisk**, Head of IT, University College Falmouth

## **Why Pillar?**

The Pillar solution gave the university maximum flexibility by offering both SAN and NAS on a single system. It was simple to deploy and using defined performance levels, made the consolidation of new applications onto a single system easy. The Pillar Axiom has enabled UCF to cope with unpredictable capacity growth and performance demands from new applications.

“Having the the ability to provision out different chunks of storage instantly tuned for the I/O requirements of different application components and to segregate those workloads has really helped with performance,” added Prisk. “This was particularly true within Oracle, where different LUNs have been made available for test and production, each with a different level of service. This can be taken further still by tuning different LUNs for different functions, such as log files, data files and flash recovery areas.

In addition, the software-licensing model has cut the cost of ownership and provides clear visibility of costs as the system scales. The fact that there was no incremental charge for licensing when adding additional capacity makes budget allocation a straightforward and simple process.

“Pillar understood the project deliverables and the pain areas that we needed to address. As an organisation Pillar worked closely with us to ensure that our commercial concerns were addressed and included an education plan and project management team to ensure a smooth transition to the new system happened. It was an honest commercial partnership,” added Prisk.

The UCF team now have full ownership of the system, which is easy to manage within their existing skill sets. The university anticipates significant growth in data requirements over the coming years and the Pillar system allows UCF to plan for this expansion and make informed decisions to avoid cost and risk. Of particular concern was the Exchange environment, however the Pillar system is able to scale quickly and easily as the number of emails and attachments grows.

With the increase of students and diverse courses and applications available, UCF are looking to deploy a document management / workflow solution that may include Adobe workflow tools. Pillar continues to support the UCF system and work with them to plan increases in capacity to support existing and new applications.

**For more information visit: [www.pillardata.co.uk](http://www.pillardata.co.uk)**



Pillar Data Systems takes a sensible, customer-centric approach to networked storage. We started with a simple, yet powerful idea: Build a successful storage company by creating value that others had promised, but never produced. At Pillar, we're delivering the most cost-effective, highly available networked storage solutions on the market. We build reliable, flexible solutions that, for the first time, seamlessly unite SAN with NAS and enable multiple tiers of storage on a single platform. In the end, we created an entirely new class of storage. [www.pillardata.com](http://www.pillardata.com)

