

# Case Study

# Cowplain

# Community School

Clarity IT Advisors

[www.clarityitadvisors.com](http://www.clarityitadvisors.com)

## Project Outline

As a Business and Enterprise College, Cowplain Community School provides its students and local businesses with access to leading edge software and hardware.

New technologies are regularly introduced and supported by an increasing number of servers. These servers run a number of different operating systems and were of varying ages. Inevitably, the older servers began to suffer from hardware failures. This meant that Cowplain's IT department spent an increasing amount of their time and budget, repairing, restoring or replacing servers.



Cowplain Community School asked Clarity IT Advisors to design a strategy to break out of the cycle.

***"Clarity IT Advisors clearly understand the needs of the educational environment. They worked with us to ensure that the quality of learning and delivery of classes was the top priority, not technical issues."***

Ian Newman, Network Manager

## The Situation

The first step was to identify all the servers in use and determine their specification, function and age. This information allowed Clarity IT to look at the system as a whole and combined with a clear idea of Cowplain's IT aspirations the following issues and key objectives were identified:

### Improve System Management

Keeping the older servers operational was consuming far too much time and budget. The large number of servers was also becoming difficult for the limited number of IT staff to manage. The number of servers and the way they were managed needed to be rationalised. This would allow the IT staff to concentrate on new projects and better support their users.

### Improve System Availability

Every time a server failed or had to be taken offline it created significant disruption not only to the teaching of classes but also to the local businesses that rely on their system. Tape backups were also encroaching into the school day and restoring files from it took too long. Any new solution needed to address both these issues.

# CLARITY

## Customer Profile

Cowplain Community School is a co-educational state funded Secondary school and has Special School status as a Business and Enterprise college.

Located to the north of Portsmouth it serves nearly 1,100 pupils with 120 teaching staff. The school has a strong focus on using the latest teaching strategies to ensure ICT is used to best effect throughout the entire curriculum.

With a strong sense of direction on how its ICT assets are developed the school is at present ahead of its contemporaries in employing leading edge technology.

*"Since Clarity IT Advisors helped us move to a virtual system not only has the availability and performance of our servers greatly improved it's also easier to manage them. And as an added bonus we reduced our electricity costs and made the office quieter!"*

Ian Newman  
Network Manager

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## Technologies Implemented

### Windows Server 2008 with Hyper-V

- ✓ Can form part of a cluster of Windows 2008 machines to provide highly available services including VMs
- ✓ Virtualises Windows and Linux operating systems
- ✓ Run VMs at near "bare-metal" performance

### System Centre Virtual Machine Manager

- ✓ Centrally manages multiple virtual machine hosts and their VMs
- ✓ Automatically converts physical servers into virtual machines

### DataCore SANmelody

- ✓ Uses thin-provisioning to provide an almost unlimited number of 2TB drives to servers
- ✓ Integrates with Windows VSS to take instant snapshots of volumes
- ✓ Provides highly available storage directly to servers

Clear Solutions to Complex Problems

## The Solution

Clarity IT Advisors recommended the introduction of Virtualisation and Storage Area Networking. When combined these two technologies would allow Cowplain to:

- ✓ Introduce high availability for all their servers regardless of age or operating system
- ✓ Move aging servers, running legacy operating systems and software, onto fast, modern hardware without compatibility issues
- ✓ Take multiple, instant snapshot backups of all their data several times a day
- ✓ Centralise the management of their servers



A highly available Storage Area Network (SAN) based on DataCore SANmelody was introduced first. This allowed Cowplain's existing servers to immediately take advantage of reliable, high performance storage space and instantly increased their tape backup time window to a full day or longer.

Stage two introduced two new servers which were installed as virtual machine hosts running Microsoft Windows Server 2008 Hyper-V. These servers were configured to work together to deliver highly-available virtualisation services. If a server fails, its virtual machines are immediately started on the partner server.

## Project Results

Cowplain Community School was able to immediately virtualise their important servers. End-users reported that key software worked more quickly.

Backups to tape can now run as long as is required and individual files or the entire system can be restored in seconds from multiple snapshots taken during the day.

The number of physical servers in use has been reduced from 12 to 5. This not only makes management of the servers easier but also decreases the amount of electricity required to power and cool them.

*"The Storage Area Network installed by Clarity IT Advisors has made a world of difference to not only how efficiently we store data but also back it up. If necessary our tape backups can now run all day and the SAN allows us to roll back changes to virtual machines and files & folders."*

**Ian Newman, Network Manager**

The virtual machines and data stored on the SAN are not only protected by redundant drive arrays and mirroring it is also highly available. The Windows Server 2008 Hyper-V hosts have multiple connection paths to the SAN. If a component, an entire SAN node or a connection fails, the servers can continue to read and write data without any disruption.

Cowplain Community School are now well placed to provide leading edge solutions to their end users at a fraction of the cost of traditional servers and storage.

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