



JISC RSC Scotland South & West Case Study @ Cardonald College

Server Virtualisation

Martin Forte - Network Manager and Allan Forsyth Assistant Principal at Cardonald College in Glasgow spearheaded a server consolidation project that has transformed the way IT services are hosted.



About the Institution

Cardonald College is a large community college situated in the south west of Glasgow. The Mossspark Drive Campus, was opened in 1972 and each year is home to over 2,000 full-time students and 10,000 part time students.

The Challenge

Most servers that are deployed conventionally on campus only utilise a fraction of their capabilities. The accepted norm is to host one main application per server due to the inherent risk of sharing memory and processors across several mission critical institutional applications. This results in colleges having to host many more servers than they would like in their server rooms, all needing maintained, powered and ultimately replaced. With this in mind Allan Forsyth and Martin Forte investigated a more efficient way of hosting Cardonald's servers.

The Activity

The force for implementing their virtualised hosting service was three fold, to save costs, disaster recovery and environmental. Cardonald had 30 servers each on a rolling program of being replaced every 3 years means £20k - £30k being spent annually as servers became obsolete. By replacing their physical servers with 3 large servers with an integrated storage array, all managed by VMware virtualisation software, Cardonald could make substantial

savings. The total cost of the project was £60,000 including licenses and training but with £30,000 being saved annually it did not take long for savings to make an impact. Additional savings were made from the reduced power consumption that was calculated to around £4200 annually with more savings of around £2000 pa on reduced air conditioning costs.

The Outcomes

One by one the physical servers were ported over to their respective virtual equivalent until all but a few were migrated. The implementation process proceeded without incident with users not noticing any interruption to services. Once completed Martin Forte was able to implement a far more robust disaster recovery policy resulting in a reliable service that the college management could feel confident would deliver the services demanded. The effects of the project were felt immediately as the server room was significantly cooler resulting in one of the two condensers being shutdown saving power in the process.

Lessons Learned

Allan Forsyth said that as the initial design & building of the VMware environment was a specialist job so they engaged the services of a consultancy company who brought specialist skills to bear on the Cardonald project. Some applications are not officially supported in a virtual environment however it was found that most will run in VMware regardless of vendors support. Other applications that require a hardware dongle for security unfortunately do not lend themselves to the VMware environment. Specific training is expensive but is vital for technical administrators to be adequately trained in managing the new technology.

Useful Links

Listen to the Interview; <http://bit.ly/ipjtmf>

Listen to the Presentation; <http://bit.ly/iiVDhh>

Read the article; <http://bit.ly/iWUBgE>