McMaster University

Intelligent Infrastructure Management

McMaster University is a public research university in Hamilton, Ontario.   Their Faculty of Health Sciences is one of the partners in the Canadian Longitudinal Study on Aging (CLSA). This study is collecting data on the changing medical, lifestyle and economic aspects of people's lives as they age. The study will follow over 50,000 men and women over a 20 year period.   The end result will be one of the most powerful health data sets available. Researchers will use the collected data to help find ways to improve the health of Canadians.

"The Anvil's reliability, hands-free operation and simple administration have greatly improved our operational uptime while reducing and simplifying our sysadmin workload."

Sean Hurley, System Administrator

Executive Summary

The study relied on a high-availability virtual server platform to host the critical applications that were used to capture and process the data. In order to properly support these critical applications, the IT team sought to replace the existing system with one that could provide better performance and reliability. Other key requirements included a more responsive support mechanism with easier access to expertise, simplified and reduced system administration, reduced operating costs (licensing fees).

The team undertook an extensive selection and evaluation process to find a new availability solution. The team concluded that the *Anvil!* (a reliable, drop-in solution) from Alteeve was the clear choice to deliver improved uptime, simplified management and reduced system administration.

Challenges

Improved system availability and uptime were key to order to support the research team's ability to collect and analyze data on a consistent basis.

The department had a tight operating and capital expense budget. A new availability solution would not only have to provide improved performance but also be very cost-effective.

The system had to function with minimum administration, intervention or maintenance by IT support staff.

The vendor support mechanism needed to be highly available and proactive in detecting and addressing pending issues without being prompted by McMaster IT staff.

How The *Anvil!* Helped

The *Anvil!* bridged the gaps to deliver a reliable, autonomous availability solution. The platform quickly became an integral component of the IT infrastructure created by the IT team - in cooperation with faculty - to collect, manage, analyze and share the participant data with a geographically dispersed research team.

The size and scope of the study group, generated vast amounts of data which necessitated that the servers and applications be always available. Hosting these mission critical applications on the *Anvil!* Has allowed the team to meet this critical operational requirement.

The *Anvil!* and its Intelligence Availability (IA) software offers a host of features which work individually and in concert to protect server

uptime and optimize organizational performance.

The IA software, coupled with Alteeve's resilient system architecture, has transformed standard off-the-shelf x86 hardware into a fortress of resiliency with no single point of failure.

With the *Anvil!* IA software, the system now operates autonomously, managing and protecting itself. The platform predicts and proactively mitigates against risk conditions which would otherwise take the system offline and disrupt the study program.

Best of all, there is almost zero requirement for system administration in the infrastructure support formula, enabling the IT team to focus on supporting and managing the critical application layer.

Results, ROI and Future Plans

The success of the CLSA is intricately linked to the availability and reliability of its critical applications and data. The *Anvil!* has ensured that these resources are always there when they are needed.

The *Anvil!* has minimized complexity, provided full-stack redundancy, reduced administration burdens and lowered costs to close both functionality and usability gaps. In short, the *Anvil!* is an important part of the technology supporting the study.

It will take a combination of innovative and integrated technologies to ensure the long term success of the CLSA project. The *Anvil!* is proving to be integral to supporting data availability and other critical services supporting this effort for the research community.