



AMD-based Platforms Make the Grade

Collegiate Housing Services chooses AMD and HP for their IT infrastructure

Challenges:

- Outdated server hardware running a mix of legacy operating systems and applications
- Limited datacenter space for upgrading or future business growth considerations
- Key business operations dependent on remote, disconnected client systems that couldn't be supported or maintained over the network

Solution:

- AMD processors optimized for virtualization and power efficiency
- HP servers and clients
- Microsoft® Windows Server® 2008 R2 with Hyper-V™ and Windows® 7

Impact:

- Consolidated datacenter footprint that offers room for future growth while reducing energy usage
- Improved server utilization that increases uptime and availability for customers
- Simplified client and server management for IT upgrades and maintenance
- Helped increase remote employee productivity through improved client portability and battery life



“AMD Opteron-powered servers are the perfect foundation for Collegiate Housing. They provide us with the power efficiency and virtualization technologies that make a difference for the workloads we run.”

**— Sumeeth Evans, Director of Information Technology,
Collegiate Housing Services**



Collegiate Housing Services (CHS) is a full-service student housing company that coordinates a variety of housing needs for colleges, universities and other post-secondary learning institutions in 33 cities across the United States.

CHS's mission is to take the hassle out of student housing – from finding the right apartment, to selecting a roommate, to paying monthly bills. With a focus on schools that lack their own dormitories and dedicated housing support staff, CHS offers a full suite of online services that help students live comfortably while pursuing advanced studies.

But under the pressure of a successful business model, an expanding customer base and increasing workload demands, CHS's existing IT foundation started showing a few cracks. To stay productive and continue growing, they needed to address the limitations of both their server and client infrastructures.

Challenge: Limited Space and Outdated Hardware

Not long ago, CHS found themselves with some significant server issues. While business was expanding, their existing datacenter was nearing workload capacity. An aging mix of disparate hardware, operating systems and application versions was constraining productivity. And with limited space to house their servers, they couldn't continue adding more servers to keep up with increasing workload demands.

CHS decided it was time for a fundamental shift in how IT services were provided. Sumeeth Evans, Director of Information Technology at CHS, manages the company's overall IT systems – including day-to-day operations, maintenance and development. “We were looking for a solution that would enable us to do more with less, and also give us room for future growth,” says Evans.

Evans and his team needed a way to improve datacenter performance while helping to shrink the company's overall IT footprint. And while they hoped to achieve workload gains with new server technologies, it was also important to leverage their previous software investments.



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Solution: From Virtualization to Consolidation

In the process of evaluating their options, CHS noticed that HP server solutions built on an AMD platform offered some unique benefits.

They selected the AMD Opteron™ processor-based HP ProLiant DL385 rack servers running Microsoft® Windows Server® 2008 R2. This combination would allow them to replace their aging, mixed hardware and OS infrastructure onto a consolidated, standard platform with ample processing and memory bandwidth, plus some key features that could help them reduce the cost of running their IT department.

“Using AMD Opteron processors to power our HP ProLiant servers has been the perfect complement to Windows Server® 2008 R2,” says Evans. “The combination delivers optimal real-world performance and increased server responsiveness and reliability. They exceeded our expectations – both in terms of performance and power savings.

“We now have enough compute power to support our business needs. But what really sets this AMD-HP-Microsoft solution apart from the competition are features such as power management, server management and enhanced networking support,” says Evans.

After performance, server consolidation was the next pressing matter. To address their dependence on outdated hardware and lack of room for future growth, CHS wanted to implement server virtualization.

Virtualization would allow CHS to continue running their legacy operating systems and applications on virtual machines within fewer physical servers. Simultaneously, it would help them extend the useful life of prior software investments, enable a more seamless operations transition from old servers to new, and reduce their datacenter footprint.



“In the past, we realized our server platforms were not capable of hardware-assisted virtualization. But all AMD processors are capable of doing that, which gave us peace of mind for our deployment,” says Evans.

The combination of virtualization technologies offered by these HP ProLiant servers – including AMD Opteron™ processors featuring AMD-V™ hardware-assisted virtualization and Windows Server® 2008 R2's Hyper-V™ technology – made an immediate impact on many of CHS's core business functions.

“Key workloads like domain, direct access, BPM, and file print services – a lot of these things actually used to take up physical boxes and were in need of serious upgrades. We were able to virtualize all those workloads and come out with much better performance because of multi-core processing and high memory supportability,” says Evans.

Thanks to virtualization, a smaller datacenter also offers reduced energy consumption and improved systems manageability – which in turn helps their growing company reduce continuing operational costs.

“Obviously with growth there's demand for more uptime and for more application needs. We're definitely looking at additional server growth over the next ten years. And virtualization looks like the technology that will allow us to support this growth. AMD, HP and Microsoft look like the virtualization solution for CHS,” says Evans.

Challenge: A Lack of Remote Control

Because of their geographically dispersed customer base, the majority of CHS's client systems are notebooks used by field representatives who work directly with school administrators on-location around the country. These crucial employees depend on their notebook clients for daily tasks like e-mail, marketing, account management and collections.

With this incongruent assortment of aging mobile clients that were not able to authenticate on the CHS network while in the field, management could only be done in person by IT staff in many cases. The majority of CHS's mobile clients couldn't be updated or maintained by the IT department on a regular basis.

Evans knew that they wanted to upgrade their client systems to Windows® 7. But that alone wouldn't solve all their existing management challenges across the infrastructure:

- Placing client machines into the corporate network
- Integrating client systems into IT patch management
- Making remote management transparent to client users

Solution: Consistency, Manageability and Mobility

CHS found answers to their client management questions by adopting AMD processor-based HP notebooks along with Windows® 7 and the Windows Server® 2008 R2 Direct Access feature. With platform-level consistency across their client spectrum, integrated management tools based on the latest industry standards, and seamless compatibility with CHS's server infrastructure back in Indianapolis, over-the-network IT support was now achievable.

Remote clients that were once unmanaged, non-domain joined machines can now be constantly connected to the corporate network. Regular IT management, backups and patching of these machines are now possible without employees having to initiate a VPN session.

“It has drastically changed the way we manage our machines. In the past, we were more reactive in terms of client management. But now we're able to see the issues and solve them before they even show up,” says Evans.

“AMD has been great for us. From communication, to questions to delivering a complete solution – they have always come through for us.”

The CHS field representatives using the new AMD-HP clients also experienced several tangible end-user benefits, including seamless access to network resources, special optimizations that support improved battery life, and a form-factor that provides better portability.

“Our mobile employees might serve more than one campus in a given day. And to have the ability to get more out of their battery life – that is definitely very important,” says Evans. “We chose AMD processors because of their support for active battery life, optimizations for key features within Windows® 7 and overall value.”

HP notebook features such as a built-in webcam and powerful AMD graphics support also caught their attention. Graphics-intensive visual communication technologies such as web conferencing, video chats and online collaboration tools could help CHS continue to expand their business while reducing travel expenditures in the future.

Impact: A Consistent Foundation for Better Business

Today, CHS has a consolidated datacenter that can keep up with a growing number of schools and students in need of new housing solutions. And CHS field representatives can count on their notebooks to support their efforts wherever and whenever they power up, without having to schedule time with IT to perform maintenance.

CHS chose server and client technologies from HP and AMD to establish a consistent, company-wide IT infrastructure that could help boost business productivity.

“The combination of AMD and HP has provided the optimal platform for Collegiate Housing to roll out Windows Server® 2008 R2 and Windows® 7. These technologies enable our employees and staff to be more productive and our business to run more efficiently,” says Evans.

And in particular, Evans notes that the implementation of AMD processors across their infrastructure helped make these foundational upgrades a success for CHS.

“The balance of cost, performance and power efficiency were key decision factors in moving to AMD for both our servers and clients. Simply put, it has allowed us to deploy power-efficient, high-performance systems with elasticity that will allow us to grow our business seamlessly.”

“From a management perspective, having a unified structure definitely gives us many more capabilities and flexibility for the future.”



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