



CloudAccess.net brings high performance to the cloud

Overview

The need

When CloudAccess.net was chosen to host the Joomla! content management system demo site, the company needed to build a cloud platform that met huge performance and capacity demands.

The solution

CloudAccess.net built the Joomla! Virtual Private Memory Cloud, delivering data center-class performance at a competitive cost with high-performance flash storage from Texas Memory Systems (TMS), an IBM company.

The benefit

Offers scalable performance and affordable high capacity in a compact, efficient design. Enables the company to deliver an unthrottled platform that supports tens of thousands of users.

CloudAccess.net provides a comprehensive range of hosted cloud solutions. Originally founded as MichiganMedia.net in 2008, today CloudAccess.net employs 35 people and serves approximately 15,000 customers every month. CloudAccess.net is the world's premier internet hosting and support company for Joomla!, an open source content management system (CMS) used to build websites and online applications.

Staying on top of huge demand

In 2010, CloudAccess.net beat out strong competition to become the official and exclusive host of the Joomla! demo site. Initial demand for the system surpassed all expectations – within a month of going live with the site, tens of thousands of people had registered.

Faced with such overwhelming demand, the company realized that the original infrastructure could not sustain the load, and moved to upgrade the platform. CloudAccess.net needed to build a high-performance cloud infrastructure that could support extreme processing and capacity requirements.

Thinking outside the box

Key to guaranteeing optimum performance for the platform was eliminating latency issues that led to delays in accessing stored customer data. Building an efficient cloud platform required CloudAccess.net to re-think the conventions of current cloud storage services, designed to minimize the cost of storing inactive data, but lacking the capability to support high-performance applications.

Gary Brooks, CEO of CloudAccess.net, elaborates, “A huge part of the appeal of cloud computing lies in the fact that it can be a much more cost-effective alternative to hosting an elaborate IT infrastructure on site. This perception puts a lot of pressure on cloud service providers to keep costs as low as possible. Taking the low-cost approach, however, often means sacrificing performance. We wanted to design a solution that combined cloud economics with data-center class performance, which could handle our users’ demands for high performance and capacity at a low cost.”



Solution components

Hardware

- Texas Memory Systems
RamSan®-810
-

Building a better cloud platform

CloudAccess.net decided to rebuild its infrastructure from the ground up, and worked to develop the Joomla! Virtual Private Memory Cloud (VPMC), which is currently the world's fastest Joomla! cloud hosting system. The cloud platform is based on Dell R810 servers, featuring Intel Xeon E7 processors and virtualized with Citrix XenServer technology, and uses SAN memory connected through a Fibre Channel network in a high-availability configuration.

While the virtualization model improved hardware utilization and provided the agility to quickly and easily roll out new virtual machines, it also imposed more demands on the network storage as it completely randomizes I/Os, increasing latency on hard drives optimized for sequential-access jobs.

“When you make the decision to virtualize you inevitably create overhead,” notes Brooks. “Using 7200 RPM disks and trying to put a database on them causes bottlenecks, and all you can do is program around it.”

To meet its high-performance goals, CloudAccess.net realized that the new architecture would need more I/O horsepower than was available from conventional 15K spinning hard disks. With this in mind, CloudAccess.net made the game-changing decision to eliminate hard disk storage bottlenecks completely and build its cloud exclusively on flash storage.

Selecting trusted technology

Once that decision was made, selecting a provider for the solid state storage component of the solution was simple – CloudAccess.net chose Texas Memory Systems, an IBM Company, given its three decade legacy and the intellectual property leadership position the company has earned for its solid state storage technology.

Brooks explains, “Since we were programming high-performance applications, we decided to just have the fastest gear underneath the hood from the start to eliminate the bottlenecks. From there, it was a natural decision.

“At the end of the day, I think what matters is the software and firmware that lays the files on the disk and accesses those files and does it quickly and efficiently. I don't know if I trust the new Flash companies to do that properly. TMS has been doing it for 30-plus years.”

“Honestly, we don’t even touch the RamSan – the performance and ease-of-use has gone way beyond our expectations, and Texas Memory Systems has the support and human part down pat. When it comes down to flash technology, they really can’t be beaten.”

– Gary Brooks, CEO, CloudAccess.net

High performance at a competitive price

The RamSan®-810 (predecessor to the IBM® FlashSystem™ 810) chosen by CloudAccess.net offers scalable performance and affordable high capacity that is both space- and energy-efficient. A single unit can provide up to 10 TB of reliable flash, with sub 100 microsecond latency, 4 GB/s, and 400,000 IOPs. Achieving comparable performance with hard disk technology would require more than 1,300 disk drives.

The solution features patented Variable Stripe RAID technology that enhances system resiliency without sacrificing performance or usable capacity.

Easy implementation, strong support

For CloudAccess.net, selecting TMS has proven to be the right decision, given the superb performance of the RamSan-810s, the ease of installation and the excellent customer care. During the installation and configuration, TMS engineers worked closely with the CloudAccess.net project team to ensure everything went smoothly.

“We configured the RamSans, hooked up the Brocade switches and connected the server nodes in less than two hours,” says Brooks. “It was really fast and really efficient, and the TMS team was there to help us through each step of the process.”

Exceeding expectations

The RamSan 810s have exceeded the requirements that CloudAccess.net had for its cloud by creating a bottleneck-free storage environment to easily handle the I/O demands of database and other high-performance applications on the Joomla! Virtual Private Memory Cloud.

Brooks concludes, “Honestly, we don’t even touch the RamSan – the performance and ease-of-use has gone way beyond our expectations, and Texas Memory Systems has the support and human part down pat. When it comes down to flash technology, they really can’t be beaten.”

For more information

To learn more about the next-generation IBM FlashSystem, please visit the following website: ibm.com/storage/flash



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