CASE STUDY

DRBD® with GFS, MySQL Hosting, Campus-wide CMS

: BACKGROUND

With approximately 28,000 students enrolled and employing roughly 5,000 faculty and staff members, Portland State is Oregon’s largest university.

: BUSINESS CHALLENGE

One year prior to launching a new content management system (CMS) based in Drupal, PSU began evaluating the feasibility of placing 150+ departmental Web sites on a single server. Clearly, a High Availability cluster was required that would be capable of taking over in the event of hardware failure. Furthermore, the architects of the system wanted to ensure that no connections existed to other systems, which excluded SAN usage for storage. To ensure the utmost in reliable Web services, the CMS servers needed to operate in a completely stand-alone and redundant fashion.

: SOLUTION

PSU now runs two DRBD® replicated devices to host the large Drupal multisite install. One DRBD® volume is active/active, running GFS, for the file storage. The other is a standard MySQL active/standby setup with Heartbeat. With a load balancer brokering traffic to each server, this also provides additional scalability on the Web processing front.

“DRBD® allowed us to proactively design this system in the most HA way possible, without resorting to high-cost replicated SAN solutions. The best part is that DRBD® is poised and ready for the next phase: off-site replication of this cluster, which will take minimal work to implement. The performance, scalability and ease of use of DRBD® proved to a skeptical audience that our SAN is a liability, rather than an asset – both in terms of performance and maintenance!”

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