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AN ENTERTAINMENT STORAGE ALLIANCE™ EVENT



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TITLE: Solving I/O Bottlenecks in VMware Environment

ABSTRACT

In the highly competitive video-gaming market, technological agility and the ability to deliver feature-rich, fun-filled games help High Moon Studios stay ahead of the pack. With availability, flexibility and performance in mind, the studio virtualized their build server environment under VMware with shared SATA-based bulk storage.

The environment is characterized by highly random and bursty storage accesses. As the number of virtual servers grew over time the IOPS capabilities of the shared storage arrays were exceeded, creating an I/O bottleneck. The builds slowed down drastically making it a real challenge for the IT department to meet their service level agreements. Slower builds not only lowered the productivity of the developers but resulted in fewer iterations of the code. Fewer code iterations potentially impact the features and quality of the games, and in turn affect sales.

The build environment included two HP c3000 BladeSystems enclosures with four blade servers each and embedded Brocade 300 SAN fabrics. The servers had dual-port Emulex 4Gbps Fibre Channel (FC) Host Bus Adapters (HBA) and two Nexsan SATABeast highcapacity disk storage arrays with an aggregate of over 80TB of usable storage. The servers ran VMware vSphere Hypervisor™ and Virtual Desktop Infrastructure (VDI) to host around 200 virtual servers that dynamically moved around the server cluster using vMotion.

BIOGRAPHY

Jeff Froehlich is the Finance Manager at High Moon Studios, a subsidiary game development studio of Activision Blizzard. Jeff earned his BS in Finance at Penn State University. Jeff is responsible for managing the game development budgets and operational budgets within the studio. Prior to his current role at High Moon Studios, Jeff served as a senior accountant at Malin, Bergquist & Company, a regional public accounting firm. There, he specialized in business and intangible asset valuation services and financial statement audits.