The Beck Group: VDI for GPU Intensive Workloads

Background

Founded in 1912, the Beck Group has a long and stellar history in the building design and construction industry. With six offices in the US and one in Mexico, their work is trendsetting, groundbreaking, and award winning. Over the last 100 years they have been in business, the IT needs for the construction industry have dramatically changed. Sophisticated applications like computer-aided design (CAD), building information modeling (BIM), and other advanced technologies have required the ability to access powerful workstations that are stationary and required to be managed as individual instances.

The Beck Group focuses on evolving, innovating, and expanding for the future, so as the need for users to collaborate across multiple offices and jobsites became more vital to their core business, they began to investigate virtual desktop infrastructure (VDI) as a solution for collaboration. This also met their need to let users become truly mobile without fear of lack of data integrity. The Beck Group defined the following criteria to determine if VDI was a viable solution for them:

- ✓ Simple, reliable, & easy to manage
- ✓ Proven scalability model & realistic 3D capabilities
- ✓ Ability to provide multiple use cases on same hardware
- ✓ Had to meet or exceed physical benchmarking numbers

HVE ConneXions engineers spent six months designing and planning with The Beck Group IT department to create the best possible VDI environment to help them realize their goals.

The HVE Solution

The VDI solution designed for The Beck Group consists of five (5) HVE-3DGFX servers to run their BIM applications in a virtual desktop environment. This not only provides all of the advantages of VDI for traditional workloads, but is also a powerful server based computing environment for BIM applications. BIM data is processed by the server and then streamed as an image to the client device over the network leveraging PCoIP and H.264 technology. Despite higher volumes of network traffic, the load on individual client terminals is significantly reduced. The BIM data processed by the server enables more effective utilization of compute resources with faster rendering times and staff have access to their workloads from any device, anywhere.

Profile

Locations: Atlanta, Austin, Dallas, Denver, Fort Worth, Tampa, and Mexico City

Employees: 700

Recent Projects:

- 2016 – The University of Dallas Engineering Building, Richardson
- 2013 – Sundance Square, Fort Worth
- 2010 Salvador Dali Museum, St. Petersburg
- 2008 – MLK Federal Building, Atlanta

Overview

Number of Virtual Desktops: 75 vGPU Enabled Desktops

(5) HVE-3DGFX Converged v1
(2) HVE-BIX6v3

Length of deployment: 2 weeks

The HVE Solution (continued)

The HVE-3DGFX servers are equipped with the latest generation Intel processors and powerful NVIDIA Tesla GPUs, and deliver excellent performance that meet The Beck Group's performance criteria.

Additionally, Beck purchased two (2) HVE-BIX6 appliances that function as a separate management infrastructure to support VDI back-end control servers. The purpose of this was to leverage their existing SAN infrastructure for user persona data, and all other workloads running on converged storage with cross-replication for resiliency and VEEAM Backup jobs. This proven HVE architecture ensures that back-end control systems and operations do not impair or inhibit performance for users on VDI.

The HVE solution for The Beck Group is scalable to address the need to bring additional team members on board in a turnkey fashion. Furthermore, the solution that was purchased is compatible with the next generation of NVIDIA Tesla GPU cards should the demand for higher graphics capabilities be needed. With the aid of HVE and the 3DGFX line of products, The Beck Group can now empower their workforce to become dynamic and agile as the demands of the projects dictate innovation and collaboration.

"…until the HVE solution, there was nothing on the market that met our 3D graphical needs or provided a simple, stable VDI environment. Our testing went flawlessly with our users and the performance and reliability have been exceptional."

–Bryce Morrow,

CIO of The Beck Group

Outcomes

For The Beck Group, the move to VDI provided the ability to manage continued organic growth, enable the IT department to more easily support remote sites and mobile workers while they were out on jobs, and provide greater security since data no longer is stored on edge devices. Future plans are to expand the HVE-3DGFX environment to up to 140 vGPU enabled VDI sessions along with further expansion up to 500 VDI desktops for other users in the company to lower cost per user.

About HVE ConneXions

HVE's engineering philosophy is to create Manageable, Scalable, and Reproducible and Predictable (MSRP) solutions. We base our solutions on proven virtualization technologies running on high-performance, next generation hardware. The result is an overall cost-effective and high-performance environment that scales to customers' needs.

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