Pivot3

Vertical Case Study: Healthcare

Nationally Ranked Hospital Solves Business Intelligence Pain Points and Improves Patient Outcomes With Pivot3 Hyperconverged Solution

The IT department of a major healthcare provider in southern California implemented a business analytics project to bring near-time data mining and intelligence information to their systems in order to help determine cost per care, hospital treatment stats and updating nurse and doctor schedules. Due to the hospital's legacy monolithic infrastructure solution, the hospital experienced challenges in performance management and scale-out, as well as long data load and processing times, a large datacenter footprint and challenges associated with migrating BI applications to the existing platform. The hospital turned to Pivot3 to help improve performance, manage costs, reduce complexity, and improve the operational efficiency promised from its data analytics solution.

The Challenge

The hospital's existing legacy monolithic HP/3Par solution for business analytics wasn't able to scale to the level it needed, was expensive to maintain, and increasingly complex to manage. As a result, the system wasn't meeting basic performance management requirements and was impacting productivity by requiring significant time by IT and operations staff to manage system performance.

Due to its exceedingly large data center footprint, IT had to address increasing space, power, and cooling expenses. The hospital need a higher density solution that would provide the agility and ability to scale as needed to meet the provider's analytics demands.

Additionally, the provider's data load and processing times were unacceptably long – in excess of 20 hours, resulting in untimely business insights and dashboard refreshes. In addition, disparate, decentralized data sources from Cerner, McKesson and Oracle applications made it difficult for the healthcare provider to share and compare valuable data across systems, and to analyze relevant data necessary for informed, timely decision making. IT was also concerned about the difficulties in migrating its Tableau application to a newer, more modern platform.

The Solution

The hospital selected Pivot3 hyperconverged infrastructure to support its entire BI/data mining system, which included development, quality assurance (QA) and production migrated to seven Pivot3 vSTAC HCI All-Flash 2U nodes with 56 TB usable storage capacity.

Pivot3's partnership with Zerto allowed the healthcare provider to easily migrate its BI platforms and data from HP/3Par to Pivot3 vSTAC HCI using the Zerto replication solution. The hypervisor-based Zerto replication solution allows for continuous replication with zero impact on application performance, and was easy to deploy and manage.

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END-USER BENEFITS

- **55%** faster processing times
- **78%** improvement in data ingest
- Data load and analytics window shrunk from **20 to 2 hours**
- **84%** improvement in overall computation
- Achieved **sub 1 millisecond** storage response times
- Reporting times improved by **10x**
- Reduced datacenter footprint to **14U of rack space** for all analytics

Pivot3's vSTAC HCI combines storage, networking and compute to enable healthcare customers to gain twice the performance compared to other HCI solutions and scale to massive volumes with 30 percent less infrastructure. Pivot3 also provides the versatility to scale compute and storage independently, healthcare organizations have the control to scale horizontally or vertically to meet specific application requirements.

These features make it easier for healthcare customers to collect, store and analyze rising amounts of critical research and patient data, help provide better internal transparency and optimize clinical and operational efficiencies, and effectively lead to a reduction of the average length of stay, higher patient satisfaction and clinician productivity.

Business Results

After deployment, the Pivot3 HCI vSTAC solution began providing remarkable results. The hospital's IT department was able to achieve consistent, predictable high performance, minimize analytics processing times and accelerate medical insights to improve patient care and outcomes. With Pivot3, the hospital was able perform all data analytics operations, while also reducing their administrative overhead, in only 14U of rack space.

The simplicity of Pivot3's single-pane-of-glass management boosted staff productivity and provided IT with a granular, near-time visibility and reporting of performance parameters including IOPS, latency and capacity utilization. The increased performance provided by Pivot3 improved overall computation by an impressive 84 percent, which lead to increased data analytic speeds.

Additionally, processing time improved by 55 percent, data ingest improved by 78 percent, and storage response times improved to sub 1 millisecond. IT also realized 10X faster reporting times and a data load and analytics window that shrunk from 20 to 2 hours. And Pivot3's partnership with Zerto and its hypervisor-based data replication software was instrumental in simplifying the migration of the healthcare provider's applications and data to its new Pivot3 platform.

For more information, visit Pivot3.com