eG Enterprise at St. Charles Health System
Unified Monitoring Ensures Excellent Patient Care Through Major IT Transformation

eG
Total Performance Visibility

Citrix Application and Desktop Virtualization to Support Growing Healthcare Requirements

St. Charles
HEALTH SYSTEM

St. Charles Health System's mission is simple but ambitious: "Creating America's healthiest community, together." As the largest provider of medical care in Central Oregon, with four hospitals and more than 120 medical providers, as well as the region's largest employer with over 3,800 caregivers in total, St. Charles plays a pivotal role in this burgeoning community. As a non-profit health system with multiple locations, St. Charles' success depends on its ability to deliver excellent care and high patient satisfaction through the thoughtful management of efficiencies at every level.

About a year ago, St. Charles decided to streamline IT service delivery for all of its units. As their IT infrastructure was aging and as healthcare information requirements grew, improving the user experience and application performance for each caregiver became an important challenge for maintaining its high standards for patient care. The proposed transformation was multifaceted, with four major project goals, including the transition from physical desktops to virtual desktops via Citrix XenDesktop, upgrading the Citrix XenApp 4.5 and 6.5 farms to the latest version, adopting Citrix Provisioning Services and Microsoft App-V for images and application virtualization, and widespread physical IT expansion and component replacements.

Wendy Howard, Infrastructure Engineer with St. Charles, describes the project as a "massive technology overhaul." In addition to the primary goals, many sub-projects were also introduced, including implementing system-wide, single-sign-on with Imprivata, follow-me desktops, tap-and-go printing and active-active disaster recovery site availability.

The Challenge: IT Transformation While Maintaining Excellent Patient Care

St. Charles selected a proven healthcare IT service integration provider, Denali Advanced Integration, to advise and manage the transition. Richard Hussain, Solutions Architect at Denali, was tasked with helping St. Charles to ensure the success of design, architecture, and rollout. Assessing the scope of the project, he concluded that the challenges of the transformation project required as much visibility as possible into performance across the infrastructure, as managing performance for Citrix XenApp users in a new installation could potentially involve widespread troubleshooting.

Wendy Howard, St. Charles Infrastructure Engineer, with eG Enterprise on the wall monitors. "It's invaluable for us."

Key Benefits

☑ Administrators can identify and fix problems as they occur, across all tiers, before clinicians experience slowness or downtime.

☑ Performance improvements are easy to document and share, with detailed executive reporting and targeted research.

☑ Unified monitoring yielded a 50% improvement in caregivers' login times soon after deployment.

☑ Patient satisfaction is high because clinical systems and applications are performing well.

Why eG Enterprise?

☑ Complete visibility into the Citrix platform and all external network/process bottlenecks impacting performance for caregivers: network, applications, storage, and databases.

☑ Accelerated discovery and diagnosis of performance issues in virtualized applications.

☑ Single, scalable solution for all performance monitoring needs, across all physical and virtual tiers.

The existing Citrix XenApp farms had always suffered from application performance issues, login problems and systems availability. Initially they used Citrix EdgeSight for monitoring Citrix XenApp plus a combination of vendor-included tools and self-built scripting solutions to track performance of the IT infrastructure. Although these tools provided statistics based on previously collected data, the lack of real-time visibility meant that extra effort was required to determine where the actual cause lie when a performance issue arose; whether it was in Citrix, the network, or elsewhere in the physical or virtual infrastructure. Thus, the team's challenge was to gain both real-time monitoring across the entire infrastructure and also complete depth of coverage throughout each tier, including: Back-end servers, hypervisors, Citrix NetScalers and storage, plus the newer technology components, such as the provisioning service's vDisks, StoreFronts, SQL server databases and XenDesktop delivery controllers.

Joe Schiebler, Enterprise Client Architect at St. Charles asked Richard to search for a new monitoring solution that could provide unified monitoring of the IT infrastructure in real-time, to support the existing technologies as well as the newer technologies being adopted in the redesign project, preferably from a single console.

> "We have been able to use eG Enterprise to quantify performance improvements in areas that we were struggling with before. And with a few changes we were able to quickly see that we had a 50% improvement in user login times. It makes me look like a hero when performance improves and it can be shown on a graph.
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> Regarding eG support, I'm just amazed at the response time, availability and help I've received from the eG Innovations team. The training was wonderful.

Wendy Howard
Technical Specialist II
St. Charles Health System

> I like the ability to monitor just about every component you can think of in this entire organization and be able to show it on one single dashboard. It's just like, wow. It's really an excellent product.

Richard Hussain
Solutions Architect, Virtualization
Denali Advanced Integration

The Solution: How eG Enterprise Unified Monitoring is Helping St. Charles Health System

It was Richard who first alerted the team to eG Enterprise, a unified monitoring solution that could provide St. Charles complete visibility throughout their virtualized Citrix Infrastructure and also address the broader performance and support challenges presented by this project. Once implemented, they have not looked back. eG Enterprise has become a mainstay component in the successful operation of the new St. Charles IT department, helping the team improve service delivery speed and solve problems quickly. "eG Enterprise is something we can't live without," remarked Wendy. "It is a fantastic tool, and it gives me confidence that our systems are running as they should."

eG Enterprise makes identifying the cause of performance problems very easy, with color-coded indicators displaying the performance status for each part of the infrastructure and detailing how any issue is affecting the end user experience. Every morning, Wendy simply notes any eG alerts and looks at the dashboards to immediately see any issues that need attention, before users have even noticed a problem. Richard explained how central the eG dashboards have become at St. Charles: "In the IT department, there is a wall with four 60" monitors lined up next to each other, with eG's dashboards running all the time. Anyone who walks by can immediately see what is red, yellow and green."

eG Enterprise helps the St. Charles help desk as well. By enabling IT to provide immediate answers to the actual cause of performance issues, eG allows help desk associates to know quickly where to route each call for fast remediation. Call responsiveness has improved and mean time to repair has decreased. Future plans include adding eG dashboard wall monitors to the help desk department as well, giving those associates instant performance visibility to route calls even more efficiently.

But perhaps of most significance, Wendy notes multiple occasions where eG Enterprise allowed her team to fix issues to prevent system downtime, a very serious situation for St. Charles' clinical staff. Noting instances where eG provided proactive alerts on the Citrix provisioning servers, she says, "if we didn't receive eG's alerts, I know that those problems would have cascaded into outages. It's invaluable for us."

Going forward, St. Charles plans to expand monitoring beyond the current 5500 users, as the scope of the project continues to grow. "eG Enterprise is very helpful as we continue to improve our environment," Wendy says, "and allows me to create meaningful performance reports to understand our progress as new goals are added."

About eG Innovations

eG Innovations is dedicated to helping businesses across the globe transform IT service delivery into a competitive advantage and a center for productivity, growth and profit through award-winning performance monitoring and management solutions. Many of the world's largest businesses and mission-critical environments trust eG Enterprise Universal Insight technology to enhance IT service performance in physical, virtual and cloud environments, increase operational efficiency, ensure IT effectiveness and deliver on the ROI promise of transformational IT investments.