

CSC Solves Challenge of Monitoring Dynamic Desktop VDI Service with eG Enterprise and eG VDI Monitor

eG software provides in-depth insight into end user activity and application performance; aids in SLM, capacity planning.



Company Overview

CSC is a global leader in providing technology-enabled solutions and services through three primary lines of business. These include Business Solutions and Services, the Managed Services Sector and the North American Public Sector.

CSC's advanced capabilities include system design and integration, information technology and business process outsourcing, applications software development, Web and application hosting, mission support and management consulting.

The company has been recognized as a leader in the industry, including being named by *FORTUNE Magazine* as one of the World's Most Admired Companies for Information Technology Services (2010).

Headquartered in Falls Church, Va., CSC has approximately 94,000 employees and reported revenue of \$16.1 billion for the 12 months ended April 2, 2010.

For more information, visit the company's Web site at www.csc.com.

Using the eG VDI Monitor™, CSC, a Fortune 5 IT services provider, is managing the quality of its Dynamic Desktop hosted service end-to-end. CSC is using in-depth views provided by the eG VDI Monitor for every layer of every tier of the virtual desktop infrastructure to detect problems proactively, diagnose problems quickly and get the service up and running in order to maximize the user-perceived quality of service. This is another example of how eG Enterprise helps customers worldwide solve their most critical IT challenges.

The Challenge: Provide in-depth, single-pane-of-glass monitoring of multi-vendor virtual and physical infrastructures running at client sites or in CSC's own data centers. Primary need is to monitor the virtual desktops and to diagnose any problems that are service affecting and help resolve such problems quickly, before users notice and complain. A single monitoring console is required to monitor the Citrix XenDesktop connection broker, the VMware vSphere virtualization platform, storage devices, network devices and Microsoft Windows-based infrastructure services.

Since 2008, CSC has offered a hosted virtual desktop service for clients who want to take advantage of the many benefits of deploying virtual desktop infrastructures (VDI).

Already their clients are deploying several thousand virtual desktops, and ramping up. However, CSC was not happy with the limited, largely manual monitoring tools it was using to track end user activity and virtual desktop performance. It was finding that problem tracking and resolution was becoming more and more difficult as the scale of the deployments grew. Also, the company needed a monitoring solution that would help in capacity planning since deployments were expanding rapidly.

The urgency for improved monitoring had a financial foundation as well. CSC remotely monitors the VDI deployments at client sites, and assumes full service level management (SLM) responsibilities.

In mid-2009, CSC began using the eG VDI Monitor, the virtual desktop infrastructure monitoring tool bundled within the eG Enterprise Suite™. By enabling monitoring and reporting of VDI end-to-end from a common web console, eG Enterprise delivered all the requirements and added significant benefits.

Rather than just monitoring the virtual desktop infrastructure as a collection of virtual machines, the eG VDI Monitor allows administrators to track performance and resources consumed by individual users. Using its patent-pending In-N-Out Monitoring™ technology, the eG VDI Monitor allows administrators to look inside the virtual desktops without needing to install an agent in each and every desktop.

VDI Monitoring in a Hybrid, Multi-Vendor IT Environment

CSC's Dynamic Desktop deployments are based on a standard reference architecture that includes best-of-breed technologies from vendors including Citrix, AppSense and NetApp.

Initially, CSC had been using traditional infrastructure monitoring tools and a number of homegrown scripts for monitoring their VDI environments. Diagnosing problems was essentially a manual process, as the tools being used had no integration. Further, end-to-end visibility was missing as they had limited visibility into the virtual desktops. It was also difficult to correlate events and alarms among the various tiers and layers of the

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client infrastructures. CSC was looking for an end-to-end monitoring solution for VDI and, in particular, needed a solution that could monitor the key components that enable the VDI service; e.g., the Citrix XenDesktop Delivery Controller, the virtual desktops, the virtualization platform, the storage and network devices, etc.

Stephen Jeffers, CSC's solution director for Dynamic Desktop, commented, "With eG Enterprise monitoring the client infrastructures, CSC's administrators quickly see which users are logged on, which virtual machines they are logged on to, what applications they are accessing, what response times they are seeing, etc. This deep-dive user-oriented view also allows CSC and its clients to balance the load in their infrastructure and plan the capacity of their desktop farm for optimal utilization and performance."

eG Enterprise can see if physical machines are running out of disk, memory/CPU allocation, etc. that would drive up utilization of available capacity. It can also tell which users are logged on to what applications and for how long. In addition, eG Enterprise monitors end user performance every step of the way. When there are performance or log-in problems, eG Enterprise can pinpoint the infrastructure tier and layer where the root cause lies.

Focusing on the End User in VDI Monitoring

"Most monitoring solutions focus on the virtualization platform and track VM activity and resource usage levels," said Srinivas Ramanathan, founder, president and CEO of eG Innovations. "We believe that managing virtual desktop infrastructures requires a totally different focus. The resource usage level of a VM depends on which users are logged on to a VM and what applications they are using. It is therefore important to monitor user activity, in addition to VM activity, in a virtual desktop infrastructure.

"With key differentiators such as in-depth models for network devices, firewalls, connection brokers, virtualization platforms, enterprise applications and storage devices," Ramanathan said, "eG Enterprise monitors and correlates events in every layer of every tier of the virtual desktop infrastructure, and can help administrators proactively detect any issues that could affect the virtual desktop service."

In addition to its performance monitoring benefits, eG Enterprise is the most cost-effective monitoring solution available. Licensing is based on the number of servers being monitored – not on the number of desktops deployed as with most other monitoring solutions. This enables greater operating efficiency as VDI density increases.

Since eG Enterprise takes much of the guesswork out of capacity planning, CSC and its clients will know how many desktops and servers will be needed to support end user needs. In addition, eG Enterprise's 100% web-based monitoring means that CSC can monitor all of its worldwide VDI deployments from a single location.

A top industry analyst firm briefed by eG stated that no other vendor matched the company's VDI-centered capacity planning capability, and that IT organizations will likely find this feature very beneficial as they progress in their VDI implementations.

eG Enterprise: A Proven IT Management Solution

For a growing number of customers worldwide, eG Enterprise service management software is the critical link between IT services and business needs. By providing true end-to-end service management in complex, distributed IT environments, eG Enterprise maximizes application performance and enhances end-user quality of experience. eG Enterprise addresses key requirements specific to VDI monitoring:

Availability & Performance

- Should be comparable with the performance of physical desktops
- Identify slow-downs and hot-spots
- Diagnose the root-cause – network? server? application?

Provisioning, Capacity Planning and Optimization

- Identify peak usage times
- Know where the bottlenecks are
- Know what resources need to be added to increase capacity
- Identify how load can be balanced to make optimal use of current resources

Usage Analysis, Compliance Tracking and Billing

- Report on top users
- Identify top resource-consuming applications
- Track log-in times and duration per user



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About eG Innovations

eG Innovations, Inc. (www.eginnovations.com) is a global provider of performance monitoring and triage solutions for both virtual and physical IT infrastructures. The company's patented technologies provide proactive monitoring of every layer of every tier in the infrastructure, thereby enabling rapid diagnosis and recovery in enterprise and service provider networks. By ensuring high availability and optimum performance of mission-critical business services, eG Innovations' solutions help enhance customers' competitive positioning, lower operational costs and optimize the performance of their infrastructures. The company's eG VM Monitor™ was judged "Best of VMworld 2008" in the Application and Infrastructure Management category, and won three categories in the 2008 Virtualization Review Readers Choice Awards.