

Performance Monitoring for Citrix XenServer Infrastructures



Key Benefits

- ✓ **Triage issues faster** by analyzing performance of XenServer hosts, between the hosts & guest VMs, and across guest VMs
- ✓ **Auto-correlate performance metrics** across applications hosted on XenServer using VM dependencies
- ✓ **Diagnostics for VM right-sizing:** Track how VMs are using host resources and see what application/process is consuming resources inside each VM
- ✓ **Out-of-the-box reports provide actionable insights** using real-time and historical performance data from the XenServer environment
- ✓ **Universal monitor licensing:** A single monitor for the hypervisor, control domain, and all guest VMs



eG Enterprise helps us pinpoint the nature and origin of the IT infrastructure problems right away, so we can resume normal operations as quickly as possible.

Doug Oppenheimer
CEO, prototype:IT



Adoption of server virtualization is significantly increasing in mainstream IT environments. From being used primarily in QA and development environments, virtual server technologies, such as Citrix XenServer, are now being used to support mission-critical business services. Effective monitoring technologies are essential for ensuring that software-defined virtualized infrastructures deliver the cost savings and performance benefits envisaged, and justify the replacement of traditional hardware-based infrastructures.

Citrix XenServer Monitoring Challenge

Several challenges need to be addressed to ensure that Citrix XenServer infrastructures are performing well:

- A malfunctioning application on a virtual machine (VM) can impact the performance of applications running on other VMs on the same host
- Excessive resource consumption by one or more guest VMs can throttle the performance of other VMs on the same XenServer host
- Over- or under-provisioning of resources to VMs can limit the workload that the XenServer infrastructure can support

Management tools such as Citrix XenCenter measure the resource usage levels of the VMs, but do not provide visibility into each guest operating system. Also, deploying agents on each guest VM to track its operations is a time-consuming task, has a higher resource overhead, and involves additional cost.

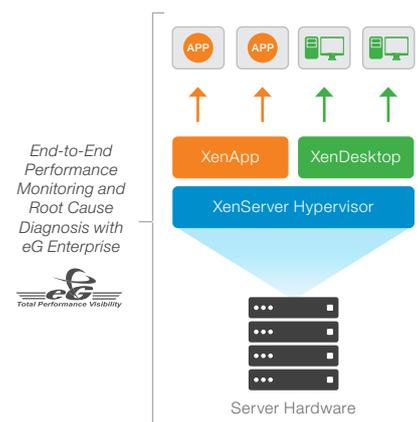
End-to-End Virtualization Monitoring with eG Enterprise

eG Enterprise serves as a one-stop shop solution for monitoring and managing the entire XenServer virtualization environment. It provides deep visibility into the performance and resource utilization of the hypervisor, host server, guest VMs and applications running on them. Storage tiers supporting the virtual infrastructure are also monitored. Using a patented, virtualization-aware root cause diagnosis technology, eG Enterprise auto-correlates performance insights across all physical and virtual infrastructure tiers and pinpoints the root cause of the problem for faster troubleshooting.



Purpose-Built Solution for Citrix Infrastructures

eG Enterprise is purpose-built for Citrix infrastructures. Developed based on domain expertise acquired from working with several of the largest Citrix deployments in the world, eG Enterprise includes out-of-the-box support for Citrix XenApp and XenDesktop, which are the most common workloads on Citrix XenServer.



Deep Visibility into the Hypervisor and Virtual Machines

eG Enterprise monitors Citrix XenServer in an agentless manner. Leveraging XenServer's web services APIs, eG Enterprise tracks all aspects of resource utilization at the hypervisor: CPU, memory, IOPS, network bandwidth, etc. XenServer's control domain is also monitored to determine times when a process running in the control domain is affecting the performance of VMs running on XenServer.

Using a patented "Inside-Outside" monitoring approach, eG Enterprise provides a comprehensive view of all VM hosted on the XenServer.

- Using XenServer APIs, eG Enterprise provides an "outside view" of every guest VM's performance. Resource usage levels of all the guest VMs reveal which VMs are consuming most resources. VM right-sizing and optimization decisions can be made using these metrics.
- eG Enterprise obtains an "inside view" of each VM from the VM guest operating system. This reveals which user is connected to the VM, and highlights resource usage of applications running inside the VM providing critical insights for diagnosing why a VM is taking up excessive resources (e.g., a malfunctioning application, high workload, unexpected application usage, etc.)

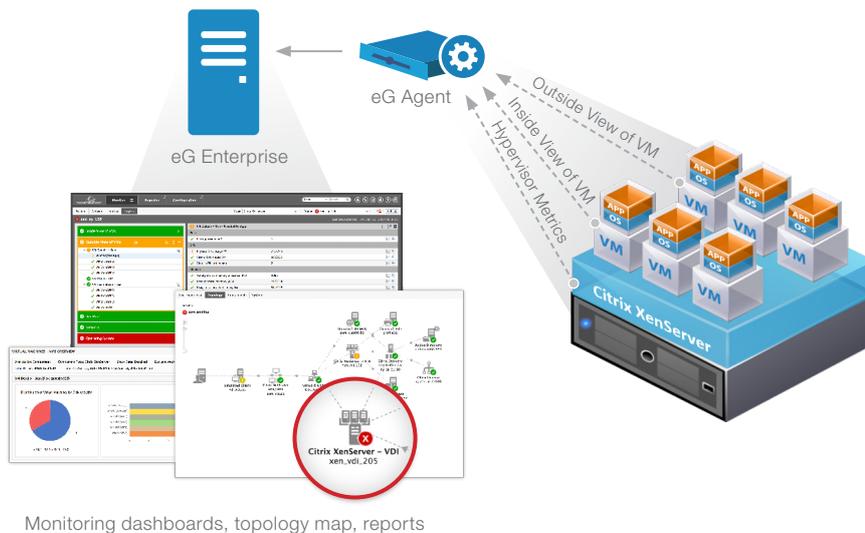
Automated, Infrastructure-wide Root Cause Diagnosis

eG Enterprise goes far beyond managing virtualized servers as discrete entities. Intuitive topology maps show the applications and network devices that support each business service and their inter-dependencies.

- Applications are associated with the VMs they run on, and each VM is dynamically mapped to the physical machine on which it is hosted
- eG Enterprise's patented root cause diagnosis engine provides a service topology layout with virtual-to-physical machine mapping enabling administrators to visually pinpoint issues in seconds

Virtualization-Aware Application Performance Monitoring

eG Enterprise monitors over 180 applications out of the box including SAP, PeopleSoft, Java, Microsoft Dynamics, SharePoint, and more. Application performance is monitored in context of the virtual infrastructure performance, which helps administrators understand the impact of virtualization issues on application health. eG Enterprise delivers actionable alerts and insights by auto-correlating performance metrics. Intuitive monitoring dashboards and built-in reports offer simplicity and ease of use.



"Inside-Outside" virtualization monitoring using eG Enterprise

Reap the Full Benefit of Server Virtualization

eG Enterprise makes it easy for businesses to realize ROI from server virtualization. IT departments can reduce investment in physical servers, save on operations costs, optimize the infrastructure, and run workloads on virtual infrastructures while delivering great user experience.



In addition to monitoring Citrix XenServer, eG Enterprise provides out-of-the-box monitoring for other hypervisor platforms such as VMware vSphere, Microsoft Hyper-V, Nutanix Acropolis, Linux KVM, Red Hat Virtualization, and more—from a single pane of glass. This makes eG Enterprise a unique end-to-end solution for monitoring heterogeneous, multi-hypervisor environments.

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. Many of the world's largest businesses use eG Enterprise to enhance IT service performance, increase operational efficiency, ensure IT effectiveness and deliver on the ROI promise of transformational IT investments across physical, virtual and cloud environments.

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