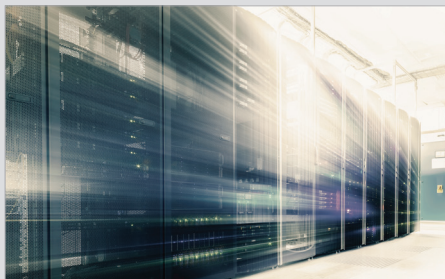


# End-to-End Performance Monitoring for VMware vSphere Environments



## Key Benefits

- ✓ **Enhance application performance and business productivity** by ensuring a high-performing VMware infrastructure
- ✓ **Accelerate virtualization troubleshooting** using in-depth performance visibility and automatic root cause diagnosis
- ✓ **Optimize capacity and forecast resource depletion** using predictive analytics and out-of-the-box reports
- ✓ **Guarantee successful VM migration** with the help of actionable performance insights, pre- and post-migration
- ✓ **Ensure maximum ROI by right-sizing** your VMware infrastructure to do more with existing resources

“eG Enterprise provides the best value for the money coupling visibility and excellent reporting. Using its automatic root cause analysis, we avoided throwing money at the problem, and realized \$20,000 in savings immediately.”

**Rob Salmon**  
CEO, Office Port

## Virtualization Performance Challenges

The success of a physical-to-virtual transformation not only depends on the cost savings from a reduced hardware footprint, but also on the performance of applications hosted on virtualized servers. Application performance on virtual servers must be on par with that on physical servers.

Virtualization administrators often only have access to tools, such as VMware vRealize Operations Manager (vROPS), which report on the performance of the virtual infrastructure (for e.g., providing metrics such as VM CPU ready times, memory ballooning and over-provisioning, etc). Although these tools are effective when performance bottlenecks originate in the virtualization tier, they do not provide the complete picture as it relates to application performance. Therefore, virtualization administrators often do not know where to start when they are faced with user complaints of application slowness. Being prepared for this situation requires contextual insight into performance of both the user-facing application and the virtual infrastructure supporting it.

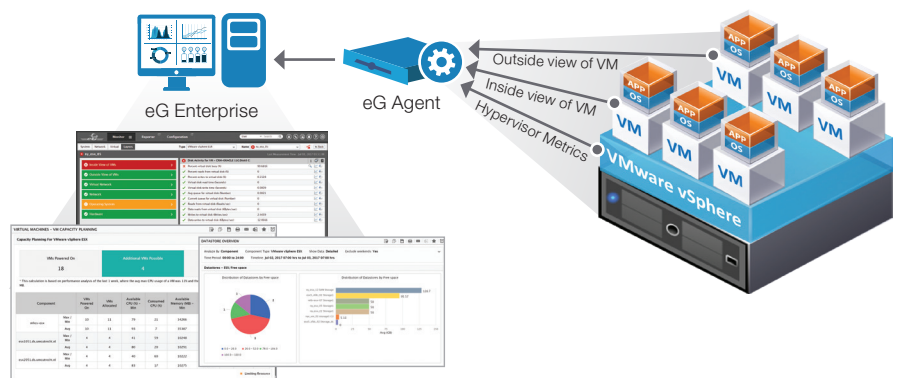
## Simplify VMware Administration with eG Enterprise

eG Enterprise is a next-generation solution that provides application-aware virtualization performance monitoring, diagnosis and reporting. Traditional performance solutions monitor the VMware servers as just another infrastructure silo, but eG Enterprise monitors the VMware tiers as an integral part of the entire application infrastructure.



Only eG Enterprise analyzes and automatically correlates VMware performance with the performance of every other tier in the infrastructure to pinpoint the exact cause of an issue: Is it the network, storage, virtualization, application, or database tier that is responsible for application slowness?

eG Enterprise delivers total visibility of virtualization performance across ESX hosts, VM clusters, datastores, storage LUNs, vSwitches, vSANs, VM snapshots, and more. Using a patented 'Inside-Outside' monitoring technology, eG Enterprise monitors VM performance both from the hypervisor perspective ('Outside View' of a VM) and from an operating system perspective ('Inside View' of a VM).

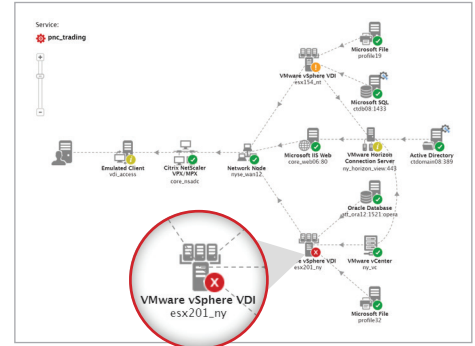


End-to-end VMware vSphere performance monitoring

# Key Capabilities of eG Enterprise for VMware Performance Management

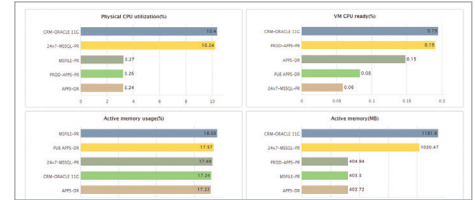
## Monitoring, Problem Diagnosis and Troubleshooting

- Automatically discover your VMware infrastructure, correlate performance alerts, and isolate the root cause of virtualization problems
- Avoid VM sprawl by closely monitoring VM creation, resource allocation, zombie VMs, and old snapshot files
- Compare performance pre- and post-VM migration, and ensure successful production rollouts
- Track configuration changes in VMs and ESXi hosts, and be the first to know when there are errors and unauthorized changes



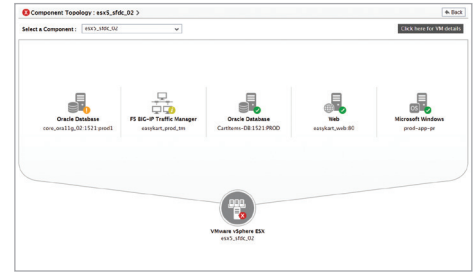
## Capacity Planning, Optimization and Right-sizing

- Forecast when your virtual servers will run out of capacity
- Analyze historical trends to determine how many more VMs can be supported based on current resource consumption levels
- Get insights to right-size your virtual infrastructure for optimal performance



## Going Beyond VMware Monitoring

- Understand virtualization dependencies with SAN/NAS devices and find out if slowdowns are due to storage issues or virtualization bottlenecks
- Discover application-to-VM dependencies and understand how VM performance affects application performance
- Monitor your multi-hypervisor environment (vSphere, Hyper-V, XenServer, Nutanix Acropolis, Linux KVM, RHEV, and more) from one console



## Get Critical VMware Performance Metrics at Your Finger Tips

**ESXi Host**

- Datastores and LUNs
- Storage capacity and disk activity
- Memory (kernel, active, reserved, balloon, granted, shared, etc.)
- pCPU utilization
- NICs and vSwitches
- Server hardware (fan, power supply, etc.)

**Outside View of Virtual Machine**

- VM management info (powered-on VMs, registered VMs, etc.)
- pCPU, vCPU utilization
- Memory (balloon, swap, configured, shared, active, etc.)
- Disk capacity, reads and writes
- VM network connectivity and bandwidth

**Inside View of Virtual Machine**

- Disk space and disk activity
- vCPU utilization
- Processes on guest OS
- Memory (free, swap)
- VM handles
- TCP connectivity, retransmits
- Network traffic

**Datastores**

- Availability
- Number of LUNs
- Disk space (free, used, provisioned)
- Snapshot files
- Swap files
- Disk activity (read/write latency, IOPS)

**VM Clusters**

- Details of VMs in the cluster
- CPU (available, reserved, used in resource pool, host CPU used by VMs)
- Memory (available, reserved, consumed by VMs in resource pool)
- Distributed vSwitches

**vCenter**

- Cumulative view of ESXi hosts, VMs, clusters, datastores, etc.
- Events and sessions
- Tasks
- Licenses
- vMotions

## 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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