



REMAINING A TRUSTED ADVISOR IN A WORLD OF STORM CLOUDS

Delivering Value Key to MSP Survival

Managed Service Providers (MSPs) have evolved from value-added resellers that sell products and implementation services to low cost, subscription-based outsourced service providers that can take over routine activities from in-house IT operations teams. These services include desktop management, patch administration and maintenance, real-time availability and resource monitoring for servers and networks, remote administration, off-hours support and so on.

Faced with increasing competition and intense price pressure, MSPs have to look at alternative sources for revenue growth. To achieve this, MSPs will have to move up the service provider food chain and closer to their customer's business in order to offer value-added services.

A big challenge for MSPs is to differentiate their service offerings and making them indispensable for their customers in a world of increasing business and technical complexity.



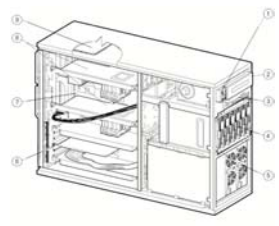
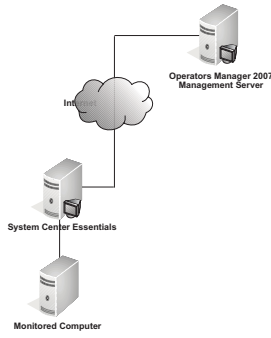

WE ARE ALL SERVICE PROVIDERS

Regardless of whether you are a Type 1 or Type 2 Provider (Internal) or are a Type 3 Provider (External), the emergence of cloud computing has changed the IT landscape. We have entered a services-oriented world, and everyone is a service provider!

A service is a means of delivering value to customers by facilitating outcomes customers want to achieve without the ownership of specific costs and risks¹. In order to protect and grow the customer base, MSPs must relentlessly focus on delivering value to customers.

This white paper describes how eG Innovations' technologies can help MSPs add significant value to their service offerings, help their customers keep up with the rapid pace of technology evolution and business expectations, and in general become an integral part of their customers' IT operations plans.

Evolving MSP Focus

	IN THE BEGINNING...	YESTERDAY...	TODAY & TOMORROW...
VALUE PROPOSITION	Cost savings, per-hour pricing, annual elasticity	Cost savings, per device pricing, outsourcing	Value-based pricing, cost savings, day-to-day elasticity, QOS, Business Agility
MONITORING FOCUS	Components	Remote monitoring, network & server, up/down application monitoring	In-depth monitoring, analysis and fine tuning of the application stack
TECHNOLOGY	Client-Server	n-Tier Infrastructures	Virtualized Infrastructures
OSI LAYER FOCUS	Hardware	Network/Transport	Up to and including Application Layer
SERVICE MODEL	Value-Added Resale, On-Site Staff Augmentation	Managed Service Provider (MSP) Application Service Provider (ASP) xSPs	Anything-as-a-Service (XaaS) Infrastructure (IaaS) Platform (PaaS) Software (SaaS) Multi-Tenancy
	 <p>IN THE BEGINNING... Value-Added Resale (VAR), Hardware Break/Fix, on-site staff augmentation</p>	 <p>YESTERDAY... Managed Service Providers (MSP), Application Service Providers (ASP/Hosting), Remote Network Monitoring</p>	 <p>TODAY & TOMORROW... Anything-as-a-Service (XaaS), virtual service infrastructures, cloud computing</p>

1. Source : The IT Infrastructure Library[®]

MSPs MUST FOCUS ON BUSINESS VALUE

The desire of many MSPs to move beyond per device pricing to value-based pricing reflects an understanding of the need to continually add value or risk becoming marginalized.

MSPs can deliver value in different niches; however it is clear that the greatest value (and greatest revenue potential) is when the service provider influences the key business services of an enterprise. To illustrate this, consider the chart in Figure 1 that highlights the cost of a minute of downtime for different business-critical services. For an enterprise infrastructure supporting ERP services, a minute of downtime costs the enterprise \$13,000 (see Figure 1).

Suppose an MSP can help an enterprise with troubleshooting a service downtime issue and reduce the mean time to repair for an event from 60 minutes to 30 minutes; the total cost savings for just this one downtime event is \$390,000. Furthermore, if the MSP can help the enterprise avert three instances of downtime (at an average of 60 minutes per event) in a year, the cost saving from this would be 2.3 million dollars! It is savings such as these that MSPs need to strive for (see Figure 2).

But adding value at the business level is easier said than done. Customers can have hybrid public/private clouds, multiple service provider relationships and traditional (legacy) infrastructures involved in delivering end-to-end IT services. These kinds of multi-sourced business service environments are requiring greater collaboration between customers and suppliers than ever. MSPs that can position for gradual expansion across this kind of diverse value network will continue to grow and prosper.

Those that do not prepare for this expansion will fight a losing battle, as services get commoditized, margins get squeezed and other providers in the value chain erode customer relationships.

MSPs HAVE TO TACKLE THE TECHNOLOGY CHALLENGES

The technical challenges that customers face are also particularly daunting. The days of client-server applications are long gone, and most infrastructures are now multi-tier in nature, with multiple tiers of hardware and software being involved in delivering a service. While multi-tier architectures are ideal for scalability, they present interesting monitoring and management challenges.

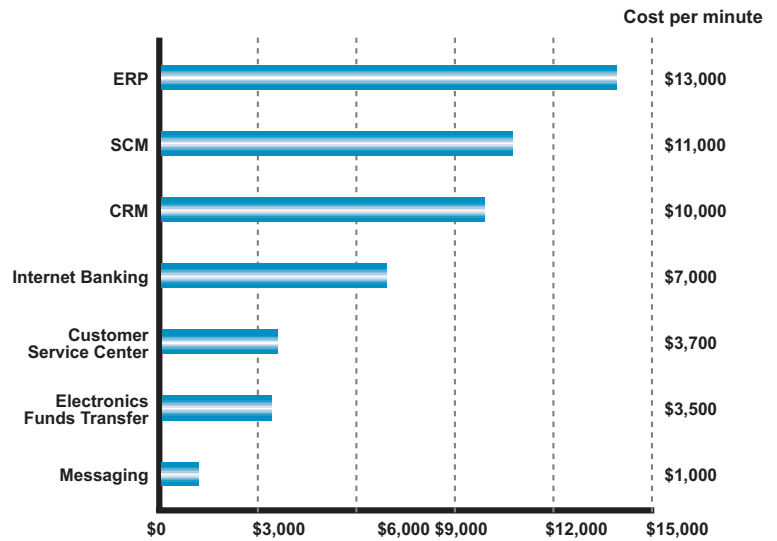


Figure 1: The cost of a minute of downtime reported by a Standish Company study of 250 Fortune 100 companies with an average of 20,000 users

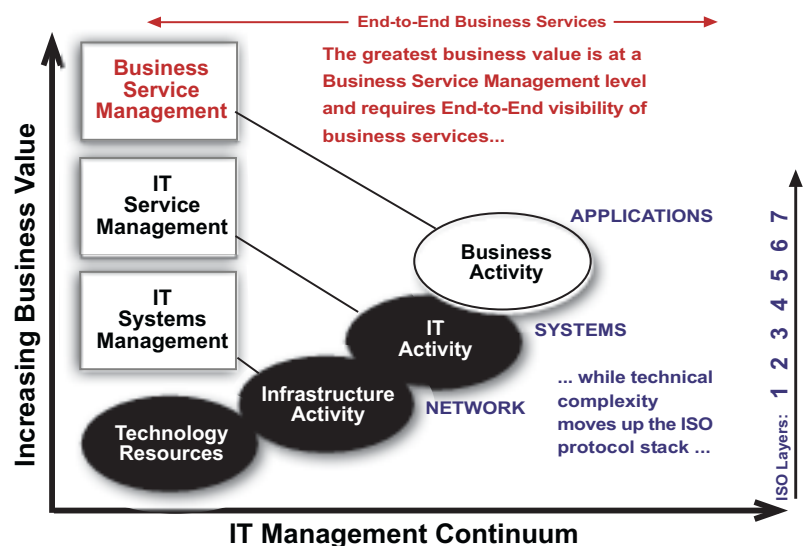


Figure 2: The greatest business value is at the end-to-end business service level. Technical complexity also moves up to the application layers.

“As system/virtualization administrators, what we need is a performance monitoring tool that can tell us very quickly where the root cause of a problem is and, even better, remediate that problem for us.”

– Dave Davis, VirtualizationAdmin.com

In such architectures inter-dependencies between applications exist (e.g., a web server uses a database server backend), and hence, a problem in one tier can impact all the tiers that depend on it. Determining what is the cause of a slowdown in a multi-tier architecture can be an elaborate, time consuming process. Herein lies the opportunity for MSPs. To be successful, MSPs must move beyond looking at the network and operating system layers of the infrastructure to the higher layers of the protocol stack – i.e., the applications and IT services.

“A majority of IT departments are deploying virtualization, but still most don’t feel comfortable with the tools and technologies they have in place to manage application performance or troubleshoot problems in the virtual environment ... when asked what the primary troubleshooting problem was, 78% said identifying the problem source.”
– **NetworkWorld, Network/Systems Management Alert**

At the same time, most enterprise infrastructures are deploying virtualization in one form or the other. In fact, a recent IDC report predicts that over 28 million virtual machines (VMs) will be deployed in 2010, and the number of new VMs added will exceed the number of physical machines added this year. Most enterprises are just coming to terms with the challenges of managing these infrastructures. To be seen as trusted advisors, MSPs must demonstrate expertise in these new technologies.

In summary, the rate of increasing business and technical complexity is accelerating very rapidly in enterprise infrastructures. Not only are end-to-end management capabilities required, MSPs now also have to deal with the complexities of virtual service infrastructures.

THE NEW MSP VALUE PROPOSITION IS OUTAGE AVOIDANCE

MSPs have to consider that customer environments now include:

- Business complexity due to shifting business models and value chains driven by cloud computing
- Technical complexity at the higher layers of the protocol stack (i.e., applications and end-to-end services)
- A critical need to manage virtual service-oriented infrastructures

Monitoring these environments will take much more than a new SLA and dashboard. Moving up the stack requires real time event management intelligence, and goes to the heart of the MSP value proposition.

“Too few IT organizations can monitor performance of the infrastructure and proactively take action to prevent problems. In the virtualized future, these previously unaddressed tasks will become the primary focus of IT operations.”
– **Bernard Golden, CEO HyperStratus**

Many MSPs have embraced the IT Infrastructure Library (ITIL[®]) as a framework for delivering high quality services to customers. Trends like data center automation require a level of Event Management intelligence that is largely missing in many customer environments today. The Event Management process, whose purpose is to detect events, make sense of them, and determine the appropriate control action, is the basis for operational monitoring & control, service assurance, service reporting and service improvement.

Monitoring --- and more specifically monitoring *intelligence* --- is essential in order to deliver on the purpose of the Event Management process, and industry experts are in agreement that in the virtual world this has turned critical.

EVENTS, NOT JUST FAULTS...

Managed Service Providers must evolve from managing *faults* to managing *events*; fault management tends to be a reactive approach to management and will not sustain customer retention and growth in the new world. Customers want providers to anticipate faults and deal with them *before* an outage occurs --- that is the new MSP value proposition.

ITIL[®] Definitions - Faults and Events

An **Event** is any change of state that has significance to the operation of a Configuration Item or an IT Service.

A **Fault** is an Error; a design flaw or malfunction that causes a failure of one or more Configuration Items or IT Services.

The industry uses Event & Fault Management interchangeably, however not all Events are failures.

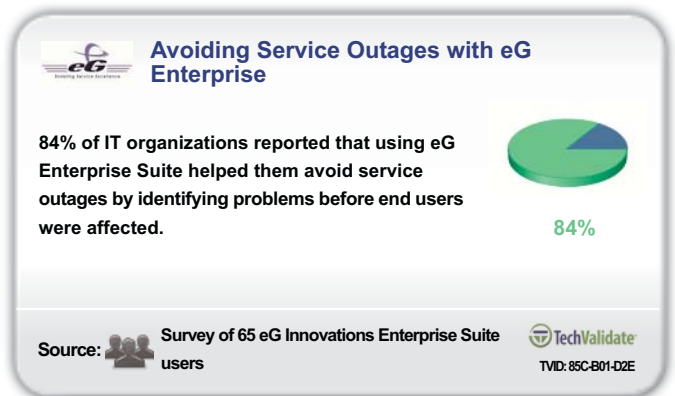
Events - and Event Management *Intelligence* – provide the basis for proactive management.

eG ENTERPRISE ENABLES OUTAGE AVOIDANCE

There are three key components to eG Innovations' Enterprise performance monitoring software that make outage avoidance both possible and extremely efficient:

1. **Collecting the right metrics** : It is no longer important how many metrics a monitoring system collects and simply detecting Events is not always the biggest challenge. More important is the quality of a metric, which is more about making sense of Events. When the inevitable Event storm happens, often the questions you'd like your monitoring & management solution to answer include:

"Did my monitoring system report this problem? ... Did it tell me what is causing the problem? ... Did it warn me in advance?"



To be able to have the right answers to these questions, a true end-to-end monitoring solution must:

- **Be able to monitor every layer of every tier of the service infrastructure.** If it does not have visibility into every tier, the monitoring system may not detect all problems. eG Enterprise offers visibility into most infrastructure tiers including the network, web, middleware, database and storage.
- **Be able to monitor custom or homegrown applications/devices.** Many times, one of the key tiers of the infrastructure is a homegrown application or a custom device. To be able to monitor such components, the eG Enterprise manager includes an eG Integration Console plug-in. This allows MSPs to monitor home grown applications and custom devices that they were not able to monitor earlier. Adding custom monitors can be done in a few hours and eG Enterprise even supports programming-free interfaces that allow administrators to write scripts or database queries to add custom metrics into the eG Enterprise system. All custom monitors are added to the event correlation logic without requiring administrators to configure additional rules or write programs. This capability allows the MSP to differentiate their offering from the competition by including monitors for homegrown applications and custom devices.
- **Have the domain intelligence to detect common problems.** The monitoring system should have embedded knowledge of the typical failure modes of each application or device and what metrics should be collected to allow the monitoring solution to detect such failures. The eG Enterprise monitoring technology has been developed and fine-tuned based on industry standard best practices for monitoring most common infrastructure components (see Figure 3).

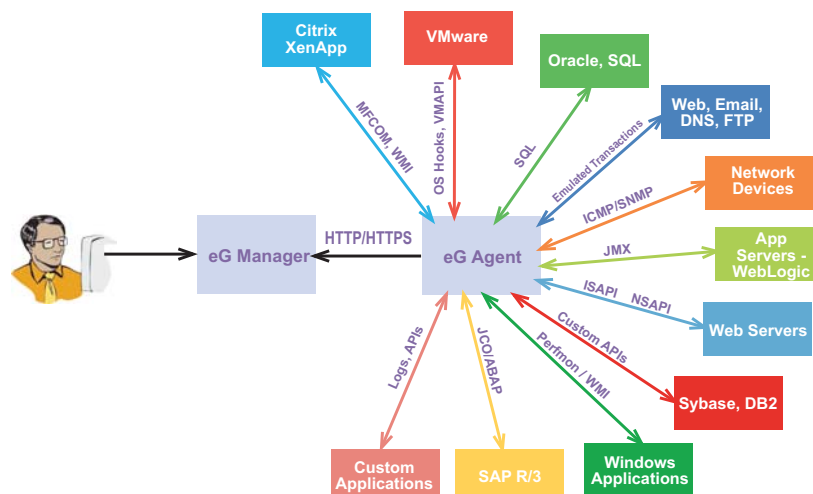


Figure 3: eG Enterprise's Single Agent architecture for network, server and application management

2. Analyzing the metrics to proactively detect abnormalities : A key requirement for outage avoidance is proactive alerting. If administrators can be informed in advance about an impending problem, they can take action in advance to ensure that the problem is not service impacting. eG Enterprise includes an automatic base-lining capability using which the eG manager analyzes the past history of metrics and computes time of day baselines for every metric (see Figure 4). Whenever a metric's current value is deviant from the baseline, a proactive alert is generated to the user.

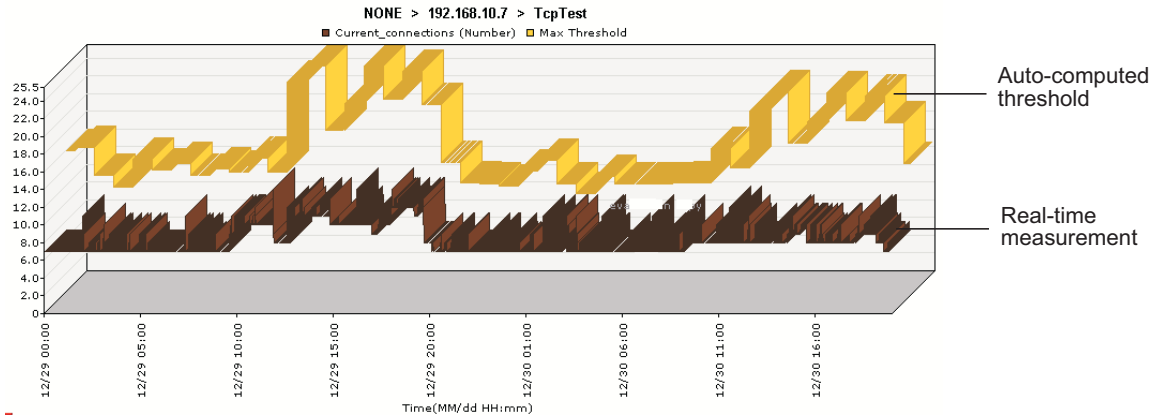


Figure 4: eG Enterprise's automatic, time-varying thresholding approach applied to the user connections metric of a web server

Besides helping administrators be aware of abnormal conditions, automatic base-lining also ensures that the monitoring system can be quickly set up and operational.

Administrators do not need to configure thresholds for each metric, a process that is laborious and extremely time consuming.

3. Correlating alerts across infrastructure tiers to identify where the problem lies : The multi-tier, heterogeneous nature of customer infrastructures poses interesting challenges from a correlation perspective. When a problem is detected, where is the root-cause: is it the network? Database? Application? Storage? etc. eG Enterprise uses a patented root-cause diagnosis engine that analyzes data flow and dependency information to correlate alerts across tiers, to identify the root-cause of problems (see Figure 5). By doing so, eG Enterprise helps administrators identify where a problem originates and where its effects lie, so administrators can focus on the problem cause and not be distracted by its effects.

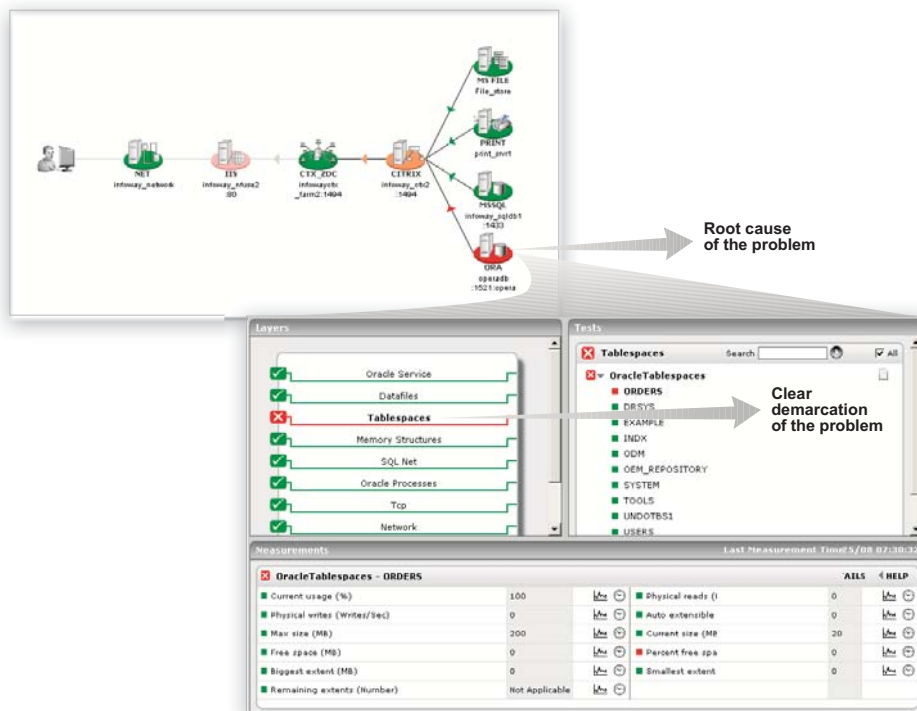


Figure 5: Automatic root-cause diagnosis and IT triage using eG Enterprise

A common failing of many monitoring solutions is that whenever support for a new device, application or platform is added the event analysis and correlation logic has to be modified. One of the key reasons for why eG Enterprise has a much lower total cost of ownership is that as support for new devices, applications, platforms and capabilities are added to eG Enterprise, there is no requirement to do additional work building 'rules' or 'plug-ins' in order for the event correlation to function.

This has enabled the company to add out-of-the-box support for over 120 applications, 10 operating systems, and 7 virtualization platforms. This out-of-the-box support means that all manufacturers' recommended and industry standard best practices and policies are pre-defined for you.

eG Enterprise also offers several other features that are essential for MSPs:

- **Multi-tenancy** – i.e., the ability to monitor multiple customer networks from a common console, so that the hardware, software, and cost of the management console can be amortized across customers.
- **100% web-based architecture** – so no new firewall rules need to be configured to allow eG Enterprise to function across disparate customer networks.
- **Universal agent technology that allows unparalleled deployment flexibility to MSPs** – they can move monitors across servers and applications as required. The same agent can be deployed irrespective of the application monitored – i.e., there are no smart plug-ins or knowledge modules to be deployed specific to each application monitored
- **Pay as you go licensing option** so there is little/no upfront investment by the MSP.
- **Customizable dashboards** so MSPs can white label the service to promote their brand.

The eG Enterprise value proposition maps very well to the Event Management requirement of MSPs.

To monitor what is happening at every layer of every component in an IT service --- network, system and application --- learn the norms of all measurements and automatically isolate which layer of which component is the source of an anomaly.

In virtual service infrastructures, the same basic correlation approach enables customers to monitor how virtual machines are using the physical servers (the 'outside view') as well as what's happening in each virtual machine (the 'inside view').

ADVANCED SERVICE OPPORTUNITIES FOR MSPs USING eG ENTERPRISE

Its varied capabilities make eG Enterprise an ideal management platform for MSPs. Using eG Enterprise, MSPs can offer various services to customers that address the different phases of the IT lifecycle (see Figure 6).

These include:

- **Pre-deployment testing**
- **Performance audits**
- **Advanced remote monitoring services**
- **Cloud monitoring services**
- **Custom application monitoring capabilities**
- **Advanced diagnostics and troubleshooting**

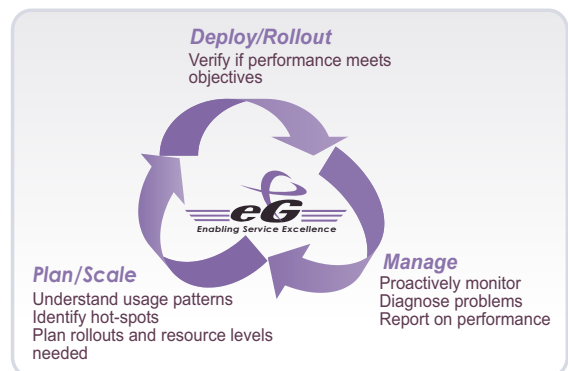


Figure 6: eG Enterprise helps in all three phases of the IT lifecycle

PRE-DEPLOYMENT ANALYSIS

Load testing is often done at the pre-deployment stage to ensure that the service being deployed can meet the scalability requirements defined at the inception stage. While load testing can reveal whether the service can or cannot meet the scalability requirements, it does not indicate where the bottlenecks in the infrastructure are, and if there is a scalability issue, what needs to be changed to improve scalability (e.g., does the Java code need to be tuned?, are the database queries inefficient?, etc.).

A monitoring solution like eG Enterprise can be used in conjunction with load testing tools at the pre-deployment stage to provide insights into performance bottlenecks. Using eG Enterprise, MSPs can offer pre-deployment analysis as an on-demand service that can be deployed in the staging infrastructure when load testing is performed.

Powerful insights into the infrastructure performance are provided to application developers with correlated analysis of the system performance in order to help identify the potential bottlenecks in the system. The reporting module of the eG Enterprise suite can be used to provide documentation of the performance of every tier of the infrastructure under load. Real-time alerts generated during the load testing phase can also highlight problem areas.

Benefits of Pre-Deployment Analysis

For MSPs	For MSP Clients
<ul style="list-style-type: none"> • Demonstrates and reinforces the MSP capabilities. • Positions MSP for ongoing monitoring service revenues. • New service offering and revenue potential. 	<ul style="list-style-type: none"> • Greater confidence in the services being moved to production. • Cross-silo baseline of performance. • Clear understanding of bottlenecks and where additional capacity needs to be added.

PERFORMANCE AUDITS

Following live deployment of a service, enterprises may want to know how well the service is performing, whether the actual workloads match the assumptions made during inception, and where the actual performance bottlenecks in production lie. Periodic performance audits of production deployments are invaluable in providing early warnings of impending problems.

Using eG Enterprise, MSPs can offer performance audits as an on-demand service. The output of this service is a report documenting the current state of the production infrastructure - from networks, to servers, to applications, an analysis of the service levels being offered to customers, and indications of where performance abnormalities may exist.

As part of the engagement, the service provider's team of (eG Certified) experts is deployed to first understand the target environment, the customer's goals, and expectations of the audit. Then, the team scopes out the service deployment and lays down the deliverables to set the customer expectations. For the contracted period, the MSP deploys, configures, and monitors the target infrastructure to collect performance statistics, analyze trends and performance bottlenecks.

The output of this service is a detailed report by the MSP that quantifies the current service levels being provided by the customer's infrastructure and pinpoints areas for performance improvement (e.g., where additional memory needs to be added, how the applications being monitored can be tuned for better performance, etc.).

This service makes extensive use of the eG Reporter engine (see Figure 7). Since a history of every measurement is stored by the eG software, the MSP has a very broad range of reporting options to use in the deliverables to the client.



Figure 7: Performance Audit services are an excellent way to showcase the provider's capabilities for potential new clients, and/or expand to application monitoring for existing clients.

Benefits of Performance Audits

For MSPs	For MSP Clients
<ul style="list-style-type: none"> • Demonstrates and reinforces the MSP capabilities. • Excellent revenue-generating sales tool. • New service offering and revenue potential. 	<ul style="list-style-type: none"> • Greater confidence in the production services. • Inputs for capacity planning and budgeting. • Cross-silo baseline of performance based on real workloads.

ADVANCED REMOTE MONITORING SERVICES

Currently, every MSP provides some form of remote monitoring. Many use freeware tools that offer very low entry points for monitoring various network devices. This is a traditional fault management view of the world --- reacting to faults.

However, in many cases -- particularly with software errors -- there are many indicators and events that occur in the IT service infrastructure that precede the failure. There are literally hundreds of thresholds that can be violated that can lead to failures in an IT service. The increasing volume and complexity of events can quickly become unmanageable for the customer. Further complicating the situation is the fact that while the customer's IT staff may have significant expertise in a particular domain (i.e., network, etc.) they may have limited knowledge of how various domains impact each other.

MSPs can use eG Enterprise's end-to-end monitoring capabilities to offer remote monitoring services that go well beyond network monitoring or simple up/down application monitoring. Using eG Enterprise, MSPs can offer a broad range of monitoring capabilities including monitoring of web servers, middleware applications, databases, terminal servers, storage devices, and virtualization platforms. Using eG Enterprise's automatic base-lining capability and inter-application correlation technology, MSPs can provide precise early warning indicators to customers, thereby enabling customers to react quickly and avert catastrophic service outages.

eG Enterprise allows MSPs to use different deployment models. For example, for small enterprises (with tens of servers), the eG management server can be located in the MSP network operations center (NOC) itself and only agents need to be installed on the customer network (see Figure 8). This ensures that setup time is short and the cost of the management server and associated software can be amortized across multiple customers. Customers are provided with personalized logins, so they can login from anywhere at any time and track the status of their IT services and infrastructure in real-time. Since eG Enterprise uses a 100% web-based architecture (all agent/manager communication is based on HTTP/HTTPS), firewall reconfigurations are not necessary to allow the monitoring to happen. MSPs do not have to set up expensive VPN connections to every customer site to enable this service.

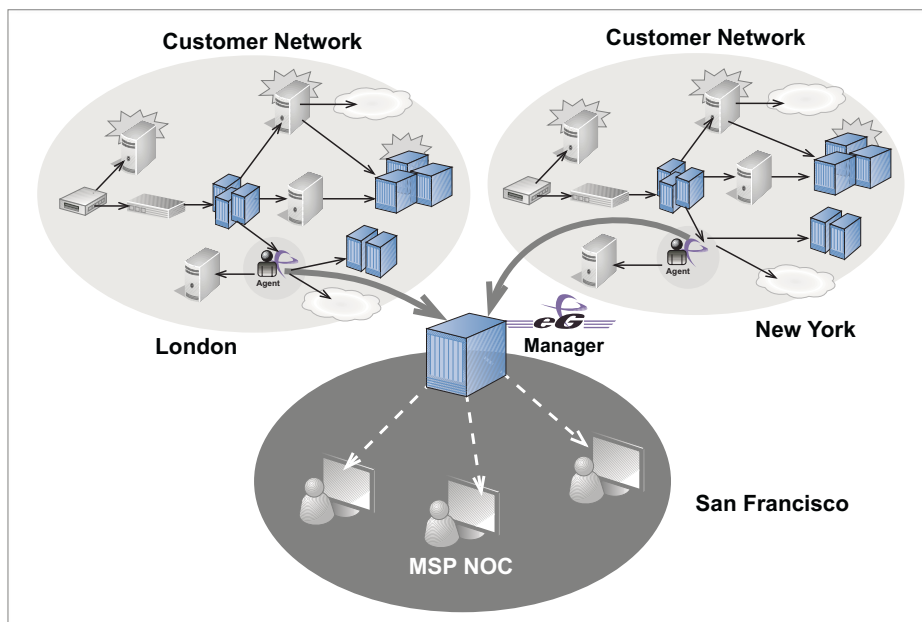


Figure 8: An MSP can host an eG manager in their central NOC, install agents or agentless monitors in the customer networks and have these monitors report over the web to the central eG manager.

For large enterprises (with hundreds of servers), a more efficient approach that reduces the bandwidth used by monitoring traffic is to have the management server within the customer network. The MSP's administrators can remote login into the customer network for monitoring, diagnosis, and alerting.

Benefits of Advanced Remote Monitoring Services

For MSPs	For MSP Clients
<ul style="list-style-type: none"> • The new service positions them closer to the customer's business, increasing the value proposition. • Ability to deliver application management cost-effectively, using existing staff. • New service revenue by delivering higher value to end customers. 	<ul style="list-style-type: none"> • Improved availability. • Satisfied End-Users. • Reduced loss of revenue by avoiding outages and brownouts.

CLOUD MONITORING SERVICES

Legacy monitoring solutions and frameworks struggle to deal with the new requirements that cloud infrastructures pose. These solutions are complex to install and configure and they have rigid licensing policies that are based on applications monitored and the number of CPUs, cores, sockets, etc. Being based on SNMP or other proprietary protocols, these solutions cannot handle the communication requirements that cloud-based services have.

While many enterprises have monitoring solutions for their internal networks, they are looking for a pay-per-use monitoring service that can monitor the applications they are deploying on the cloud. An ideal cloud monitoring service will offer monitoring of the cloud provider and their performance, as well as metrics regarding the applications deployed in the cloud.

eG Enterprise is ideally suited for cloud monitoring. The agents can be deployed in minutes. A silent installation procedure can be used to install agents without any human intervention. The eG agent automatically discovers the major applications running on a server and begins detailed monitoring and reporting for each application. All communication between the agents and the manager are over HTTP/HTTPS. This means no firewall rules need to be changed or ports opened to allow management traffic to flow. The agents also do not listen on any TCP ports.

Benefits of Cloud Monitoring Services

For MSPs	For MSP Clients
<ul style="list-style-type: none"> • Increased addressable market with the ability to monitor public, private and hybrid cloud services. • MSP viewed as keeping pace with technology. • Defend against potential competitors. 	<ul style="list-style-type: none"> • Single supplier for end-to-end services. • Trusted Advisor for emerging technologies (Cloud).

CUSTOM APPLICATION MONITORING SERVICES

IT infrastructures that support critical business services typically comprise of many off-the-shelf software applications, and also include a few customized/home-grown applications and network elements. To ensure end-to-end availability and peak performance of the mission-critical business services, it is essential that the custom applications/network elements be monitored and managed in the same way as the other software applications and network devices.

The eG Enterprise suite includes extensive monitoring capabilities for standard applications and network devices. The Integration Console plug-in enables administrators to extend eG Enterprise's monitoring capabilities for new and customized network and application elements. Through a web-based interface, administrators can use the Integration Console to add new applications and network device types, build customized models for monitoring and diagnosing these components, add new monitoring capabilities for these components, etc. Complete flexibility is provided so users can implement new monitoring capabilities in a quick and easy manner, using different interfaces for the monitoring, e.g., log file monitoring and analysis, custom application APIs, SNMP, etc.

Administrators can use a Java programming interface to craft their own monitors. Alternatively, a programming-free interface is available for administrators to quickly develop new monitors without involving elaborate programming. Using just the user interface, administrators can quickly add SNMP MIB variables and performance monitor counters for data collection and analysis. Existing monitoring scripts can also be easily integrated for collecting new metrics.

Benefits of Custom Application Monitoring Services

For MSPs	For MSP Clients
<ul style="list-style-type: none"> • Deliver business value to their customers by providing monitoring for custom or home grown applications which are often not monitored properly. • Differentiate their offerings from the competition by delivering unique value to customers. • Move closer to being a trusted advisor for their clients. 	<ul style="list-style-type: none"> • Have the entire infrastructure monitored end-to-end including the custom developed applications which are often a source of problems in the infrastructure.

ADVANCED DIAGNOSIS AND TROUBLESHOOTING SERVICES

Customers who are experiencing complex performance issues with multi-tier, virtual and distributed IT service infrastructures are ideal candidates for this service. When you're having a heart attack, you want a qualified Emergency Medical Technician (EMT) now. Similar to a performance audit, the advanced diagnostics and troubleshooting service acts as an EMT for the client's IT business service infrastructure.

The assigned team works with the client to scope the issues and infrastructure associated with the problem, and lays out a plan to diagnose and troubleshoot. The monitoring system is deployed and becomes the primary portal that the MSP's consultants use to track the performance of the customer infrastructure. The MSPs' consultants act as technical domain experts for the duration of the engagement.

Once all findings and observations have been collated, the MSP consultants provide a report of recommendations outlining what the issues contributing to the problem are and what actions should be taken to resolve the issue.

This service positions the MSP as an expert, solves a critical customer problem, and show cases the MSPs service offering.

Benefits of Advanced Diagnosis and Troubleshooting Services

For MSPs	For MSP Clients
<ul style="list-style-type: none"> • Demonstrate their expertise in the technology being deployed by customers. • Gain customer confidence in their capabilities. • Deliver clearly demonstratable value to customers – cost savings from these engagements can be clearly demonstrated. 	<ul style="list-style-type: none"> • Get access to experts who can help quickly resolve critical business issues. • Understand where the problem areas in the infrastructure are and what needs to be done to overcome them.

REMAIN A TRUSTED ADVISOR AMONG THE STORM CLOUDS WITH eG INNOVATIONS

The accelerated movement to cloud computing and virtual service infrastructures is forcing management up the stack to the application layers, which is where real complexity lies. Customers want and expect MSPs to fulfill the promise of Event Management --- detect events, make sense of them, and take the appropriate control action. In today's world of cloud computing and virtual service infrastructures, the volume and real-time nature of events is simply more than even the best customer technicians can deal with.

This is the new opportunity for MSPs. Providing web-based dashboards and new SLAs will be important, but the ultimate differentiator will be event correlation intelligence. Managed Service Providers must embed event management intelligence into their service offerings in order to control costs, manage complexity and deliver value to customers.

The ability to monitor what is happening across every layer of every component in a customer's end-to-end business service infrastructure and automatically detect anomalies --- even across virtual, cloud-based environments --- goes to the heart of the MSP value proposition. The software architecture has enabled eG to seamlessly add support for over 120 applications, 10 operating systems, and 7 virtualization platforms. This now includes the ability to correlate to the code level (Java) as well as configuration/change impacts.

MSPs will need to continue moving up the protocol stack and closer to the business in order to achieve revenue growth and 'trusted advisor' status with clients. eG Innovations can embed a level of event management intelligence into MSP environments that can lower the cost of service delivery and position the provider to broaden their service offerings and increase revenue.

IS YOUR MONITOR CLOUD-READY?

Deployment agility: Deployment should be automated as much as possible to reduce human intervention, and should be a simple process taking a few minutes, not days or weeks.

Ubiquitous access: Web-based so it is accessible from anywhere at any time.

Ability to operate in a secure manner, within and across firewalls: Capability to operate within enterprise networks and also across firewalls. Monitoring agents, if used, should not listen on any additional TCP ports. Where possible, all communication should be protected using industry standard encryption protocols.

Capability to monitor the performance of applications hosted in the cloud: The monitoring system should be able to measure the performance of applications, whether they reside in the enterprise or in the cloud.

Capability to monitor remote desktops efficiently: Desktops as a service is one of the popular applications driving cloud computing. Desktop virtualization technologies allow the efficiency of dozens of desktops on a single physical server. A cloud-ready monitoring solution should parallel that efficiency by allowing detailed monitoring inside each desktop without requiring a monitoring agent on each desktop.

Extensibility to support cloud provider APIs: Each cloud provider offers a custom interface for monitoring the performance and usage of the cloud. The monitoring system should be easily extensible to support any cloud provider API in order to help isolate the root cause of performance issues.

End-to-end monitoring, with automated root cause analysis: The ability to monitor what is happening at every layer of every component in such an end-to-end IT infrastructure— and automatically isolate which layer of which component is the source of an anomaly-- goes to the purpose of the Event Management process as defined by the IT Infrastructure Library (ITIL): "to detect events, makes sense of them, and determine the appropriate control action..."

ABOUT THE AUTHOR

John Worthington has 30 years in IT, having been involved with the service delivery management space from the supplier side, as a customer, and as a consultant.

His career includes executive positions at Unisys, AT&T, Loral and CIBER. In addition, John has experience with several emerging software start-ups in the service management space. He holds the ITIL® Expert, PMP and CISA certificates, is a long time supporter of eG Innovations and a Certified eG Innovations Consultant.

He can be reached at www.MyServiceMonitor.com



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About eG Innovations

eG Innovations, Inc. (www.eginnovations.com) is a global provider of IT performance monitoring and triage solutions for both virtual and physical 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 has customers in 25 countries, including organizations of all sizes in government, banking/finance, telecom, healthcare, manufacturing and service industries.

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