



eG Enterprise vs. a Big 4 Monitoring Solution: Comparing Total Cost of Ownership

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Introduction

As budgets shrink and employee headcounts follow suit in today's down economy, businesses need to do more with less. More than ever, expenses are being reviewed for necessity, business benefits and to gauge the return on investment. This is especially true in the case of IT-related expenses, and monitoring software is no exception.

This white paper presents a comparative analysis of the eG Enterprise Suite™ against a "Big 4" management solution. Through a case study example of a medium-sized enterprise looking for a monitoring solution, this report provides an analysis of the total cost of ownership (TCO) with eG Enterprise versus one of the Big 4 management solutions. The results highlight the licensing simplicity of eG Enterprise and demonstrate the significant cost benefits that eG Enterprise offers to enterprises of all sizes. Pricing information provided in this document is indicative of typical pricing of the respective products, and is not based on price lists or quotations.

Big 4 Management Solutions

Management frameworks from the "Big 4" -- HP, IBM, Computer Associates and BMC Software -- are considered the leading management solutions. With hundreds of products in their portfolios, these management frameworks cover almost every aspect of monitoring and management in an IT infrastructure -- including network, server, and application management, security management, patch distribution, configuration and inventory management, etc.

eG Enterprise

The award-winning eG Enterprise Suite from eG Innovations, Inc. addresses the performance management challenges in multi-tier infrastructures. In such environments, it is often a huge challenge to determine what resource/s cause a given problem, i.e., where the root-cause lies. Is it the Network? Database? Application? Server? With specialized capabilities for monitoring over 85+ applications, 10+ operating systems, and 5+ virtualization platforms, eG Enterprise is a comprehensive, next-generation enterprise management solution with the widest infrastructure coverage, spanning both virtual and physical environments.



IT managers say they're tiring of the Big 4 vendors, looking to others for ease-of-use and low-cost options

"More than 40% of respondents to a Gartner survey gave the Big 4 vendors a C grade, while nearly 30% suggested the vendors' performance was closer to a D average.

About 1/3rd of management software buyers want to see better pricing and ease-of-use from vendors."

Source: Network World, May 2007

Case Study

The IT organization of the medium-sized business being profiled is looking for a performance management solution that serves as a single pane of glass for its entire heterogeneous IT infrastructure. The target IT infrastructure has 100 servers and 250 network devices. The break down of servers based on operating system and hardware capabilities is shown in the **Table 1** below.

Server Hardware	Server Tiers	Server Count
Windows x86, 1-4 CPUs, < 8GB RAM	Tier 0	35
Windows x86, 5-8 CPUs, 8-16 GB RAM	Tier 1	20
Windows x64, 4-16 CPUs, 32 GB RAM	Tier 2	15
Unix (Linux, Solaris, HPUX, AIX), 1-4 CPUs, < 8GB RAM	Tier 1	20
Unix (Linux, Solaris, HPUX, AIX), 32 CPUs, 32-64 GB RAM	Tier 3	10
Total		100

Table 1: Case Study Server Configuration

While 45 of the servers host file and print services and other infrastructure services, the other servers support business critical applications. The application-to-servers mix in the target infrastructure is displayed in **Table 2**.

Server Hardware	Server Tiers	Server Count
Oracle Database Servers	Tier 0	0
	Tier 1	1
	Tier 2	3
	Tier 3	6
Microsoft SQL Database Servers	Tier 0	5
	Tier 1	3
	Tier 2	3
	Tier 3	4
WebLogic J2EE Application Servers	Tier 0	5
	Tier 1	5
	Tier 2	0
	Tier 3	0
WebSphere J2EE Application Servers	Tier 0	5
	Tier 1	5
	Tier 2	0
	Tier 3	0
Microsoft Exchange Web Frontend, Mailbox Store, Exchange hub, Database Servers	Tier 0	5
	Tier 1	5
	Tier 2	0
	Tier 3	0
Total		55

Table 2: Application-to-Server Configurations

Case Study Requirements

The IT organization has the following key monitoring and management requirements:

- The monitoring system must provide integrated monitoring of networks, servers and applications.
- The monitoring system must provide a web-based interface so users can login from anywhere at any time to view the status of the monitored infrastructure.
- The monitoring system must provide real-time alerts to users when a problem happens.
- The monitoring system must provide the ability for administrators to generate historical reports for capacity planning, post mortem diagnosis, and trends.
- The monitoring system must include a correlation engine to correlate alerts across network, server and application layers, and across the different tiers of the infrastructure.
- Monitoring capabilities provided by the system should include support for Unix and Microsoft Windows operating systems.
- Application-specific monitoring for Oracle, Microsoft Exchange, Microsoft SQL, WebLogic, and WebSphere applications should be provided.

Big 4 Management Solution Pricing

To address these requirements, this white paper uses one of the Big 4 management frameworks. Since the pricing model, product structure and capabilities of the frameworks in this category are similar, this analysis is representative of any of the monitoring frameworks.

Several discrete products from the Big 4 monitoring framework (see **Figure 1**) are necessary to configure a complete solution that addresses the case study requirements. These include:

- Network management solution for monitoring the network devices in the infrastructure.



“A Big 4 vendor's VARs were told they could expect 7 to 8 dollars in services for every dollar of software sold. IT departments started to see their budgets dwindle in order to implement this solution.”

Source: Adventures in Open Source, Blog Archive
<http://www.adventuresinoss.com/?p=109>

- Operations management solution that provides a central console for server and application management; the network management solution also integrates into this operations management console.
- Event correlation engine for analyzing performance, de-duplicating alerts, prioritization across alerts, if-then-else correlation rule implementation, etc.
- Reporting engine to provide operations and executive reports.
- User views capability that ensures unlimited user views when accessing the web console for performance monitoring.
- Active probes for active monitoring of networks and applications by emulating requests to applications.
- Individual agents for monitoring the various server operating systems.
- Application plug-ins for monitoring each specific application.

The Big 4 server agents and application plug-ins are priced based on the hardware capabilities of the server being monitored. The number of CPUs and the server OS (e.g., whether Standard Edition, Enterprise Edition, or Datacenter Edition) governs the pricing of the server and application agents. The higher the hardware capabilities of the server being monitored, the higher the pricing for the monitoring agents. Therefore, the more servers

<i>The Agent</i>	<i>The Manager</i>
• Unix Agent/Tier-0	• Web Viewer (50, 100, 150 users)
• Unix Agent/Tier-1	• Alarm Manager
• Unix Agent/Tier-2	• Correlation Engine
• Windows Agent/Tier-0	• Reporting Engine
• Windows Agent/Tier-1	• Explorer
• Windows Agent/Tier-2	• Performance Manager
• Plug-in for Oracle	• SLA module
• Plug-in for MS Exchange	• Integration manager
• Plug-in for SQL server	
• Plug-in for WebLogic	
• Plug-in for WebSphere	
• Plug-in for Citrix	
• Plug-in for performance	
• Plug-in for prediction	
• External monitoring (50, 100, 250 targets)	
• Transaction recorder/playback	

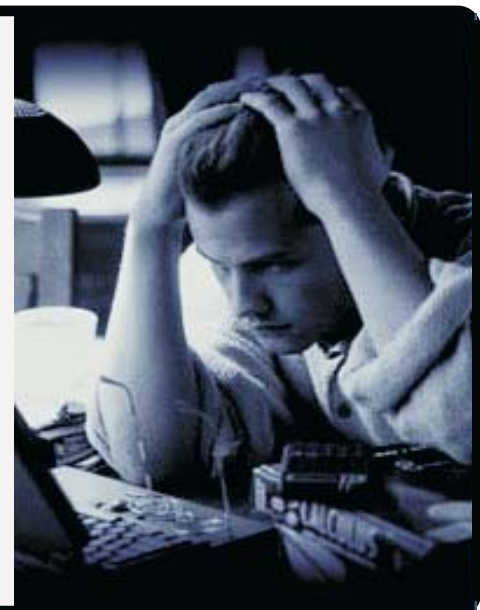


Figure 1: Agent & Plug-in Configuration for a Big 4 Management Solution

Product	Unit Price (US\$)	Units	Total Price (US\$)
Big 4 Operations Management Bundle (includes Network Manager, Event Correlation Engine, System Management Console)	64,790	1	64,790
Big 4 Reporting Engine	29,994	1	29,994
Big 4 User Views (unlimited)	19,195	1	19,195
Big 4 Active Probes (250)	52,196	1	52,196
Big 4 Tier-0 Server Agents	835	35	29,225
Big 4 Tier-1 Server Agents	1,195	40	47,800
Big 4 Tier-2 Server Agents	1,195	40	47,800
Big 4 Tier-3 Server Agents	3,355	15	50,325
Oracle Plug-in Tier 1	2,995	1	2,995
Oracle Plug-in Tier 2	6,595	3	19,785
Oracle Plug-in Tier 3	15,695	6	94,170
MS SQL Plug-in Tier 0	1,795	5	8,975
MS SQL Plug-in Tier 1	2,995	3	8,985
MS SQL Plug-in Tier 2	6,595	3	19,785
MS SQL Plug-in Tier 3	15,695	4	62,780
WebLogic Plug-in Tier 0	1,795	5	8,975
WebLogic Plug-in Tier 1	2,995	5	14,975
WebSphere Plug-in Tier 0	1,795	5	8,975
WebSphere Plug-in Tier 1	2,995	5	14,975
MS Exchange Plug-in Tier 0	1,195	5	5,975
MS Exchange Plug-in Tier 1	1,675	5	8,375
Total Cost			\$621,050

Table 3: Big 4 TCO to Meet the Monitoring Requirements of the IT Organization Considered in the Case Study



“The [Big 4] vendor’s pricing structure was odd... You need to buy a console license for each display. Each new area you want to monitor in addition to the basic OS, Oracle, Internet, etc. has to be licensed and paid for. If you want a notification module, you have to buy that too ... Plus, there are hundreds of parameters you’ll probably never look at.”

Source: Usenet archives

that are in the higher tiers, the higher the total cost of ownership of the solution.

Further, the plug-ins are specific to the different applications being monitored. The price of these plug-ins also goes up with increases in hardware capabilities of the servers upon which the applications are hosted. **Table 3** summarizes the license fees associated with the Big 4 monitoring solution to meet the monitoring requirements outlined above.

In reality, total cost of ownership is more than just the license fees, which are stated in **Table 3**. To fully understand TCO, it is necessary to add the cost of annual maintenance/upgrades for the purchased software and the number of consulting hours required to implement the solution.

While the annual maintenance costs are roughly 20% of price for most software solutions, the consulting requirements depend on the complexity of the software being installed and configured. For any management solution, consulting hours are required for installation of the management console and agents, for configuring the monitoring, for setting and fine-tuning thresholds, etc.

Since the Big 4 monitoring frameworks have event correlation engines that are rules based, several man months of consulting typically is required for building these if-then-else rules used by the event correlation engine for prioritizing alerts. As a rule of thumb, the total consulting dollars for a Big 4 monitoring solution is *five to six times the cost of the product*.

Therefore, in the above example, the IT organization must plan to spend more than \$3 million for its implementation of a Big 4 monitoring solution!

eG Enterprise Suite Pricing

eG Enterprise follows a decidedly different licensing model from the Big 4 management frameworks. The salient aspects of eG Enterprise's licensing model include:

- **Network management is an integrated part of the eG Enterprise suite.** The eG external agent can be used to monitor network connectivity to servers, network devices, firewalls, load balancers, etc. Using SNMP, the eG agent can also be configured to poll specific SNMP attributes from these devices for device-specific monitoring. Standard SNMP MIBs (e.g., MIB-II) as well as proprietary MIBs can be polled. An external agent can also be configured to receive SNMP traps from the network devices, firewalls, etc. To monitor a large infrastructure, administrators can configure multiple external agents, each of which polls and monitors a part of the infrastructure. Depending on the hardware capabilities of the system on which it is hosted, an eG external agent can monitor tens to hundreds of network devices.
- **The eG Enterprise management console is an integrated solution with extensive automation capabilities -- and no hidden costs.**
 - o **Automatic baselining:** The eG Manager uses historical data to compute automatic baselines for metrics, so when a metric deviates from its norm, proactive alerts can be generated to notify an administrator about a problem, often well before users notice and complain.
 - o **Embedded root-cause analysis engine:** The eG Enterprise console includes a patented root-cause analysis engine that correlates among metrics at the network, server and application layers of the protocol stack and across tiers of the infrastructure to pin-point where the cause of a problem lies – i.e., the network, database, application, physical server, VM? Citrix?.
 - o **Reporting engine:** A reporting engine included in the eG Manager provides administrators with web-based access

75% of users found single agent monitoring to be one of the most useful features of eG Enterprise.

(Source:  TechValidate TVID:4F1-736-40B)

to historical reports and trends. Administrators have access to reports tailored for the different needs of executives and operations staff.

- o **Multi-tenancy and personalized views:** eG Enterprise offers unlimited user views. Each user view can be aligned to the roles and responsibilities that the user performs in an organization.

As a result, there are no additional costs for the auto-baselining, automatic root-cause diagnostic capabilities, reporting engine and unlimited user views.

Figure 2 shows the eG Enterprise product architecture. The eG Manager and console are part of the base product offering. Additional plug-ins are required for advanced functionality such as remote control, high availability and extensibility of the monitoring solution for new devices and custom applications.

- **External, active monitoring of applications can be handled by the default agent on the eG Manager system.** Active monitoring by periodically polling applications is a useful method for tracking application availability and responsiveness. eG Enterprise achieves this using the external agent (which is typically installed on the same system as the eG Manager). Additional external agents can be added to the eG Enterprise system as required for scalability.

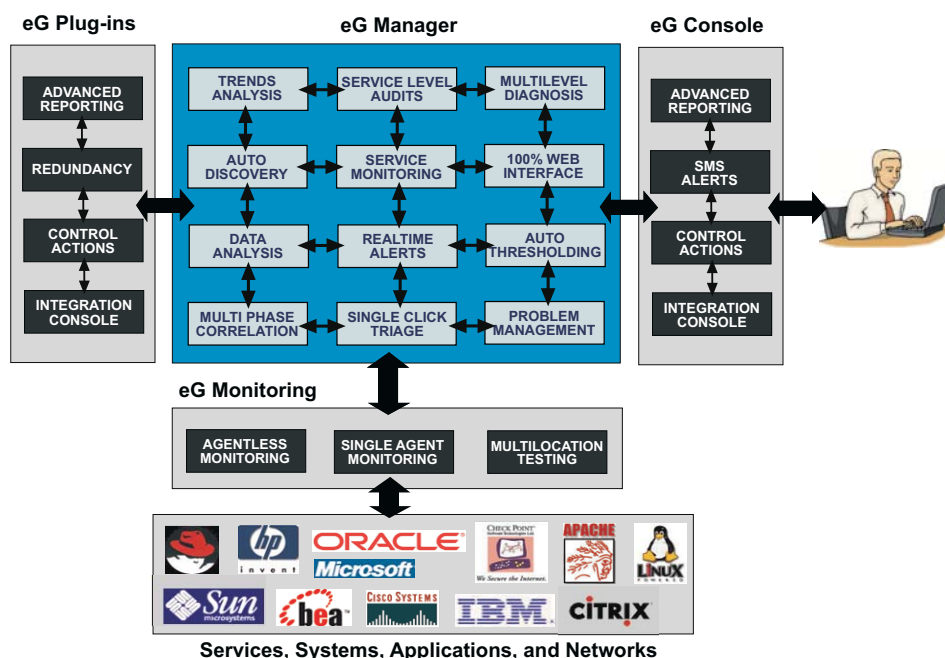


Figure 2: Conceptual Diagram of the eG Enterprise Product Architecture

- **The eG Single Agent offers unparalleled cost savings and deployment flexibility (see Figure 3).** Unlike the Big 4 management frameworks, eG Enterprise does not charge per application monitored. There are no knowledge modules or smart plug-ins. Agent licensing is not specific to the server operating system or to the hardware capabilities of the server being managed. For instance, the same agent license can

one day, and monitor a Sun Solaris server running the Oracle database another day. The ability to have a single agent for monitoring each server operating system and all the applications on it makes eG Enterprise one of the most cost-effective solutions in the industry.



83% of users saw value from eG Enterprise within a month of deployment. 50% of users saw value within two weeks of deployment.
 (Source: TechValidate TVID:DOA-9D5-D51)

Table 4 summarizes the cost of ownership of the eG Enterprise product suite. The pricing indicated below is for comparative purposes only. Pricing for eG Enterprise varies from one geography to another and interested enterprises should contact eG Innovations authorized partners in their territory for more information.

Unlike the Big 4 frameworks, eG Enterprise has extensive automation capabilities out of the box. As a result, administrators and consultants do not spend endless hours setting up, configuring and fine-tuning the solution. Furthermore, eG Enterprise’s correlation engine is rules free. Administrators do not have to build complex if-then-else scripts for prioritizing alerts.

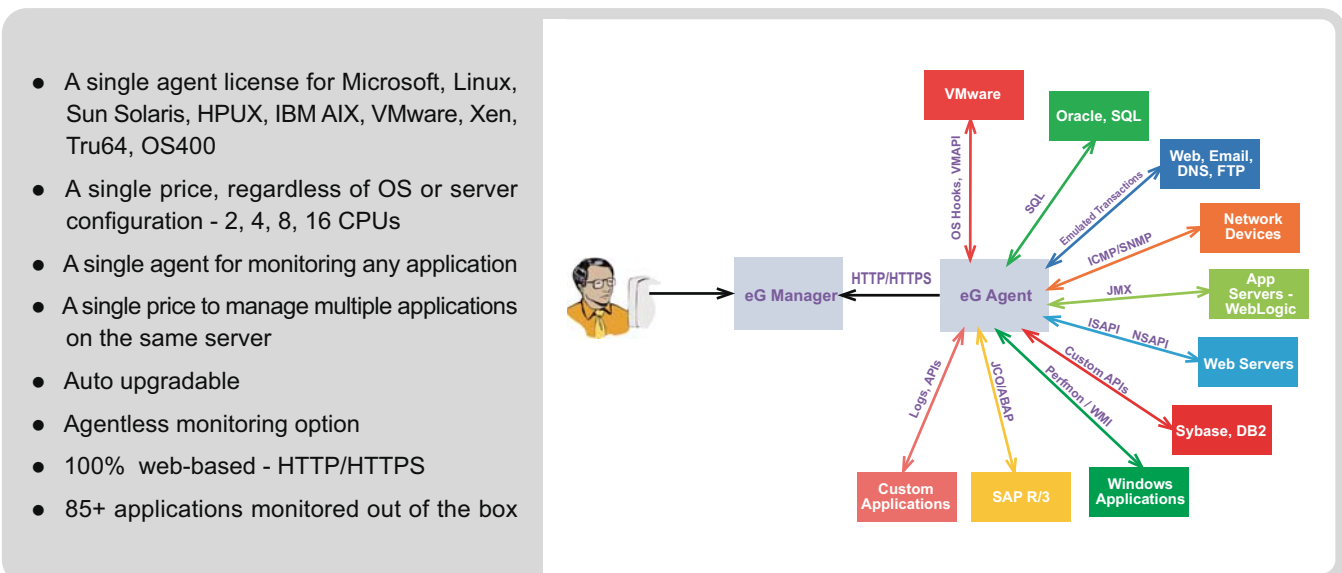


Figure 3: The eG Enterprise Single Agent Architecture

be used for a server with four CPUs and one with 16 CPUs. Moreover, a single eG agent can monitor all the applications running on a server. Since the agent license is not tied to server hardware, operating system or application, an administrator may use the eG single agent to monitor a Windows server running the SQL database server application

eG Enterprise includes pre-defined models for more than 10 operating systems, five virtualization platforms and more than 85 applications. These models define what metrics are collected, how frequently, what thresholds are applied to the metrics, etc. Administrators and consultants do not have to spend endless hours configuring or fine tuning these models.

Product	Unit Price (US\$) ¹	Units	Total Price (US\$)
eG Basic Agent (OS monitoring)	825	45	37,125
eG Premium Agent (OS and application monitoring in-depth)	2,495	55	137,225
eG External Agents (external application monitoring + network monitoring)	2,495	5	12,475
Total Cost			\$186,825

Table 4: eG Enterprise TCO to Meet the Monitoring Requirements of the IT Organization in the Case Study

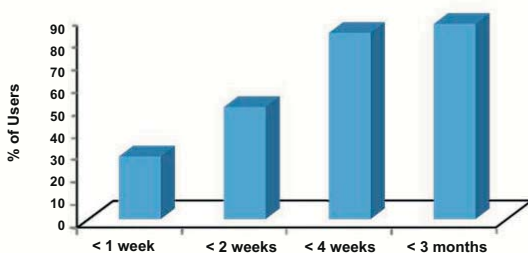
1. Indicative pricing only. Actual pricing varies based on geography. Please contact your eG Authorized Partner or Account Manager to find out the pricing for your geography.

As a result, when deploying eG Enterprise, *typical consulting costs range from 30 to 50% of the cost of the product*². Taking this into account, the TCO of the eG Enterprise solution in this example would be **roughly \$261,800 -- less than 10% of the TCO of a Big 4 monitoring solution for the same infrastructure.**

Summary

With such a low comparative TCO, it is no surprise that the return on investment using eG Enterprise is much shorter than that with a Big 4 monitoring solution. A recent independent survey by TechValidate of 250+ eG Enterprise users found that about 83% saw value *within 1 month* of deploying the solution (Figure 4).

When evaluating a monitoring solution for your IT infrastructure, it is vital to consider the total cost of ownership – not just the direct purchase price. TCO is the total of the product costs, customization charges plus maintenance fees, technical support and professional services that you may need to get the solution working in your infrastructure. Typically, a Big 4 monitoring solution entails a significant investment – several millions of dollars – to get up and running, and requires several years before you can expect to see a return on this investment.



83% of users saw value within a month of deployment

Figure 4: Time to Value with the eG Enterprise Suite

By comparison, the eG Enterprise Suite offers a viable and proven cost-effective alternative to the Big 4 monitoring solutions. Significant automation built into the product suite, a simple licensing model based on powerful single agent technology and an embedded rules-free correlation engine all ensure that eG Enterprise can be implemented and deployed at less than 1/10th the total cost of ownership of a Big 4 monitoring solution.

In closing, this white paper has merely compared total cost of ownership for eG Enterprise and a Big 4 framework in the context of a hypothetical case study. This report has not examined actual performance and capabilities between the two products.



84% of users reported that eG Enterprise helped them avoid service outages by identifying problems before end users were affected.

(Source: TechValidate TVID:85C-B01-D2E)

Without comparing the eG Enterprise and Big 4 products feature for feature, one clear difference between the two must be emphasized. Big 4 frameworks monitor infrastructure elements (applications, systems, networks, etc.) in a siloed basis. That is, they look at applications and business service performance on a piece meal basis according to designated tiers or silos of the infrastructure. Since they do not provide a true end-to-end, top-to-bottom view of the entire infrastructure that can be monitored from a single console, they can only report that a problem has occurred – they cannot pinpoint **where** the true root cause of the problem can be found.

By comparison, eG Enterprise monitors applications and business services – not discrete infrastructure components. By tracking the interdependencies among all IT resources that support a given application or business service, potentially spanning every layer of every tier of the infrastructure, eG Enterprise is able to quickly isolate root cause. For example, the TechValidate customer study found that 84% of users reported that eG Enterprise helped them avoid service outages by identifying problems before end users were affected.

About eG Innovations

eG Innovations, Inc. (<http://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.



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2. Consulting services include installation, configuration, fine-tuning, training, etc. The consulting services required for an installation depend on the scale of the deployment, the specific applications being monitored and the skill level of the operations staff.