



# ***The eG Integration Console***

W h i t e P a p e r



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## The Problem

In some ways, the worlds of network and application monitoring are very different. In the network monitoring world, there is a single universal standard – the Simple Network Management Protocol (SNMP). Most network elements (firewalls, routers, switches, hubs, etc.) support the standard MIB-II definition for IP-enabled devices. Using MIB-II, a monitoring solution can collect a variety of usage metrics (bandwidth usage, data transmit rates, etc.) and performance data (collisions, errors, etc.). Additional, element-specific monitoring is available using proprietary MIBs (e.g., Cisco device support various Cisco MIBs). Monitoring new network elements is quite simple! The appropriate MIB(s) supported by a new network element has to be compiled into the network monitoring solution, and the appropriate MIB variables queried periodically to track the element's status.

In sharp contrast, chaos reigns in the application monitoring sphere! First, the number of distinct applications is several orders of magnitude greater than the number of distinct network element types. As a result of the growing popularity of public domain applications, even large enterprises that use a number of off-the-shelf, commercial application infrastructure products have quite a few public domain applications (e.g., Apache web server, Tomcat application server, MySQL database). Because of the free availability of the source code for these applications, often, public domain utilities are customized by enterprises to meet their unique requirements. Even when commercial applications are used, the business logic that is hosted over the application infrastructure is customer-specific. Further compounding the problem is the fact that there is no universal standard (i.e., SNMP-equivalent) for collecting performance and usage metrics from different applications. While there have been many attempts at coming up with a universal application monitoring standard, most of these required recoding/rewriting of the applications, which is not really possible or practical. Furthermore, SNMP is rarely supported at the application layer. Consequently, application monitoring solutions have to support a variety of measurement mechanisms including log file analysis, user emulation, collecting metrics from backend databases, using application-specific APIs, etc.

While many monitoring frameworks offer monitoring support for the commercial applications/application infrastructure, very few offer the ability for users to manage the custom/legacy application components that are inevitably a part of their infrastructure. In fact, these custom/legacy applications (e.g., payment, core banking, data warehousing) tend to be the most critical components of the target infrastructure. Hence, a monitoring framework that is not able to provide an insight into the status of these ultra-critical application components is offering very limited value to an administrator (of what use is end-to-end correlation and root-cause analysis if the analysis does not cover all the elements involved in supporting an end-user service?). When considering a solution for end-to-end monitoring of an infrastructure, it is not just important to consider what kind of support the monitoring solution can offer out-of-the-box. In fact, it is even more critical to consider how extensible the monitoring solution is – can it be extended to monitor new/custom/legacy applications or network elements? How easy is it to extend? How much time and effort is going to be involved in enhancing the monitoring solution to monitor the critical custom components of the target infrastructure? How much expertise is going to be required for this? Do you have to hire an expensive technical expert to do the customization or can your own administrators do it themselves?

## The Integration Console

This is exactly where the eG Integration Console fits in! While the eG suite of products offer extensive out-of-the-box monitoring for off-the-shelf applications and network elements, the Integration Console can be used to extend and enhance the capabilities of eG's products. Through a web-based interface, the Integration Console allows users to empower their eG agents to monitor new/custom applications and network elements.

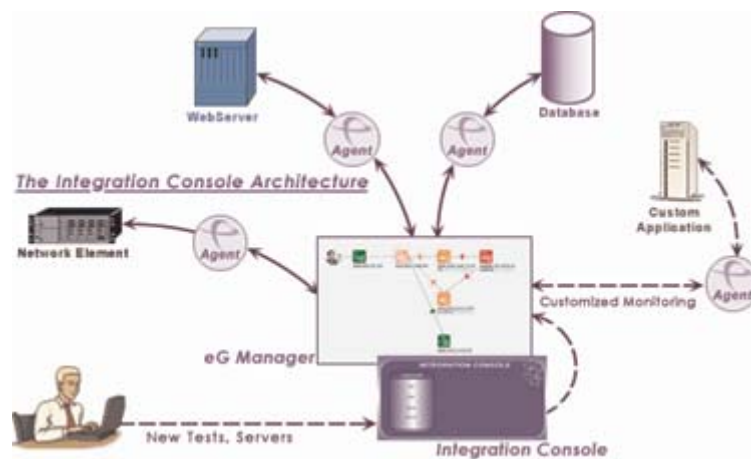


Figure 1 : The eG Integration Console architecture

### The Integration Console is:

- **Easy to use:** A complete web-based, intuitive interface allows users to quickly build new models for new/custom/proprietary applications. Moreover, there is no need for a new monitor to be manually added to each and every agent. A new monitor when integrated with the eG system is automatically made available to any of the agents executing in the system.
- **Effective:** Users can add a variety of metrics for monitoring – from availability to performance to usage. Moreover, the user can choose the mechanism that is appropriate for interfacing with a new application/network element. The Integration Console supports a variety of mechanisms including HTTP, SNMP, log file monitoring, data collection from databases, use of Performance monitoring counters in Windows environments, etc. All the new metrics collected are subjected to the same analysis and correlation capabilities as the in-built metrics of the eG system. Thus, true end-to-end monitoring and problem diagnosis is enabled!
- **Efficient:** A novel programming-free interface allows users to rapidly add custom monitoring capabilities using performance monitoring counters, SNMP variables, Unix/Windows scripts, etc. This capability is ideally suited for the system administrators who are adept at using various forms of scripting for data collection and monitoring. For the expert user, the Integration Console offers an open programming interface through which he/she can enable more sophisticated data collection and manipulation.

Like the other products in the eG suite, the Integration Console is multi-platform. EG agents on Solaris, Linux, Windows, AIX, and HPUX platforms can be augmented with new monitoring capabilities using the Integration Console.

While monitoring the performance and usage of custom/proprietary business applications is the primary function of the Integration Console, it can also effectively used for collecting and reporting business-level metrics that may be of key interest to business executives (e.g., total value of all transactions executed via the business web site).

While the monitoring can be performed in a domain-specific manner, the collected metrics can be integrated in a domain-independent manner into the eG system via the Integration Console for analysis and reporting to users.

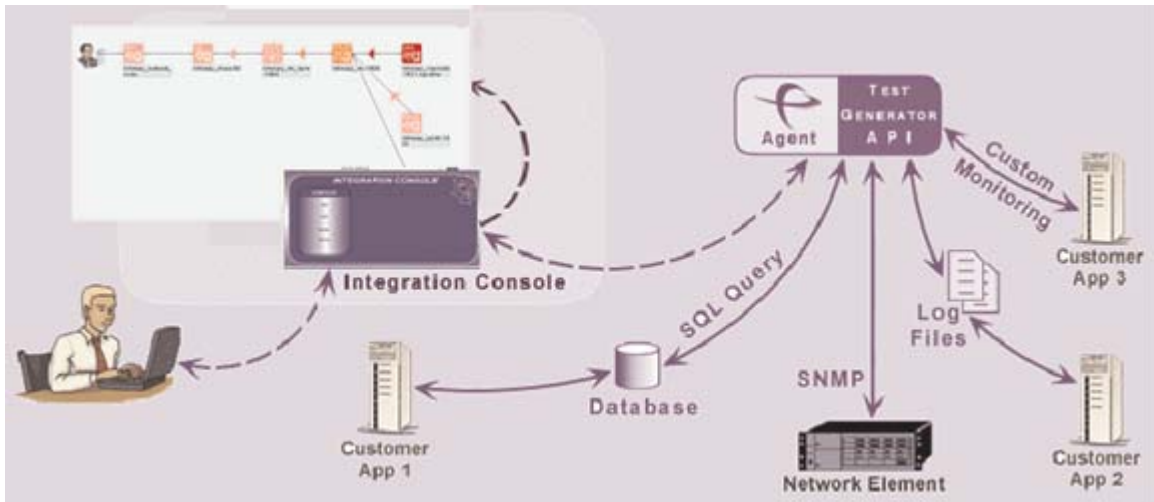


Figure 2 : Integrating custom applications/network elements using the Integration Console

## Who should care?

The Integration Console is ideal for:

- **Enterprises** that are looking to monitor their custom/proprietary applications in addition to the various commercial applications
- **Service providers** that are interested in delivering true end-to-end monitoring solutions to customers by offering monitoring for the critical proprietary applications of their customers
- **Application developers** who are looking to add value to their product line by delivering integrated custom monitoring as part of their total solutions. EG now offers a development kit for application developers who are interested in offering customized monitoring for their product lines.

### The Integration Console:

- Enables you to perform true application monitoring
- Facilitates end-to-end monitoring, including your critical business applications/processes
- Is easy to use; Do it yourself rather than hire expensive consultants
- Enables rapid development of new monitoring capability - you can have customized monitoring up and running in less than an hour!
- Allows application developers to differentiate their products through enhanced monitoring capabilities