

Benefits of eMA in an outsourcing model

A discussion paper

THIS DOCUMENT FOCUSES ON SEVERAL OF THE KEY VALUES THAT eMA PROVIDES TO SERVICE PROVIDERS IN BETTER MANAGING THEIR SERVICE DELIVERY AND REPORTING TO THEIR CUSTOMERS.

Introduction

There are an extremely large number of tools available on the market for system monitoring, and analytics / business intelligence. One problem is that there is no link between the monitoring requirements of IT operations, and the BI reporting expected by the business. eMite Analytics (eMA) was designed to solve this problem by combining real time monitoring and analytical reporting into one tool.

Digital dashboards, or executive dashboards, are a good business management tool, used to visually ascertain the status of a business enterprise through key business indicators. However, their ability to provide more than a mere snapshot of what is or has occurred is limited. eMA interactively allows any user to drill down and analyze present and past key performance data in real time.

Compared to most of vendor solutions in the marketplace, eMA is an agnostic solution that interfaces with many 3rd party solutions. All vendors claim an ability to interface, but only eMA is capable of correlating the data sets together into a single presentation. This is where the majority of vendors fall short. For example, they are not being able to correlate a service desk ticket with an SNMP trap and server performance data from EMC, all represented as a KPI metric on a customer by customer basis.

Multi-tenant Logins

A single instance of eMA is able to support multiple customers/users with differing presentation and security roles. eMA is capable of not only providing different access by customer, it is also capable of defining differing user roles and access within a customer type. This means that all elements within the eMA service model can be restricted by user-id.

Additionally, all reports that are created and offered in the Dashboard will only represent the data that each single user has access to.

Active Directory Integration

The whole process of user interaction with the dashboard can also be interfaced to Active Directory, meaning that once the access policies are defined in eMA, they can be linked to the user access policies already managed and defined in Active Directory, maintaining a single point of user administration.

Multiple Data Feeds

eMA is unique as it allows agents for both Windows and UNIX to communicate across TCP with low overheads. These agents provide several key functions.

eMA integrates with existing monitoring and management technologies, not requiring the replacement of existing tools already in use.

Existing databases, log files and data stores are easily integrated to by the eMA agents. Third party vendor tools for server, network, database monitoring, etc are all able to be connected to.

In situations where an organisation may not have a monitoring solution, eMA also provides a range of performance monitoring functions for operating systems, databases, log files, etc.

One of the key values to eMA's design is that as service provider's sign on new customers, they are able to use eMA to integrate to existing tools a customer may already have and present that data through an eMA Dashboard, providing a consistent look and feel.

Example Data Feeds

Windows and UNIX Metrics

eMA collects all relevant performance counters for operating system level metrics. These metrics are able to be extracted as frequently as required.

eMA has a series of extensive cook books with predefined templates for all key operating system metrics for Windows and Unix Base systems including ZLinux.

Database Counters

eMA measures all key performance counters of the Database server environment, as well as measuring the performance of individual SQL statements for response time data.

eMA has a series of extensive cook books with predefined templates for measurements of databases including SQL Server, MySQL, Sybase and Oracle.

SNMP Counters

eMA has an SNMP adapter that communicates in both a push or pull method. SNMP devices can either be polled by eMA on a regular basis or configured to push alerts to the eMA SNMP listener

Log File Parsing

Parsing of log files with eMA is performed by a common user interface. In addition to being able to parse and tail a log file of a particular type by data that is included or excluded, eMA's agents are able to perform the parsing at the source, as opposed to most solutions that adopt a data warehousing approach. eMA can then be configured to either send a predefined status alert or send the data extracted from the file. There are many benefits to this model, including the minimisation of network traffic.

Integration with EMC SMARTS

eMA is able to replicate the network architecture that is automatically created by EMC Smarts. This means that as devices are added or removed by customer, eMA will be able to reflect those changes in its Dashboards. Additionally, eMA will be able to keep better historical analysis data of events created in EMC Smarts and report on those in suitable time requirements.

CMDB Integration

Organisations invest in various management components such as change management, incident management and configuration management. A weakness of these tools is their lack of integration between themselves and other vendor

solutions. This is apparent even in so called 'all in one' packages, but even more so in the cases where separate vendors are used to provide each component.

This is where the eMA integration provides value. eMA links information from all of these components together to provide a single view of configuration, incident and change management. By integrating to CMDB's senior management can instantly see the status of high level business processes and applications, technical managers can view their relevant technical metrics and their business mappings, and operations can start to prioritize the resolution of critical incidents by visualizing the affected business processes.

How CMDB Integration works

The configuration management database (CMDB) provides eMA with the mappings between technical metrics, business applications and business processes. These mappings can be refreshed in real-time, or on a daily basis.

Incidents are fed in real-time to the eMA system, and alarms propagated by severity to their business mappings.

Change information is also queried to see if any recent changes could have caused incidents impacting business processes. This can help speed up fault resolution, and also provide warnings on failed changes.

Correlation

Correlation of data is key to understanding the performance and availability of your environment. eMA takes the next step by indicating business KPI and SLA data, such as the number of service desk tickets raised, change requests in the queue, or even the customer's business type data such as the number of credit transactions processed each day. A service provider and its customers already have access to much of this data via various disparate sources throughout the network.

eMA's value is being able to integrate performance and availability information from existing tools, and turn that data into real-time KPI information, so that instantaneously teams can make decisions based on fact, rather than wait for a report to be created at a later point in time that would indicate our deliverables.

Service Modeling and Relationships

The core of eMA is the *service modeling capability*. This allows the user to create relationships and groupings between metrics that are being monitored. These relationships can define geographies, team

structures, applications, products and any kind of IT to business mapping. The service model is easily changed and configured via an online relationship editor. Relationships can also be synchronized from the CMDB as required.

Real Time Modelling and Monitoring

Once these relationships are defined they represent the status of the higher levels in the service model, for example the current customer SLA Status. Alarms can be directed at the appropriate members of staff on a customer basis, rather than an infrastructure basis. Propagation rules can define redundancy in the infrastructure so that single failures do not result in the application showing down.

Dashboard Automation

Using a series of pre-created service model structures and automated templates, eMA can automatically create a reporting hierarchy of information on a customer by customer basis. For example the weekly and monthly SLA availability, the number of alarms by product, Top 10 servers causing problems, peak hour availability etc, can all be created automatically for each user.

The power of multi dimensional analysis makes the reporting possibilities with eMA almost limitless. The ability to *'slice and dice'* using the service model relationships is unique to eMA and gives management the information they need to see in order to make their decisions near real-time on capacity, performance and availability trends, SLA's and KPI's.

Configurable Reporting

All reports in eMA are configured via the Dashboard. eMA uses the latest technologies that correlate all disparate data into a single reporting data source. Via an online report builder, data can effectively be sliced and diced by the user to define the report that is required.

This report is then saved as a template and will appear in the dashboard for that user. The value to service providers here is that reporting overheads will be decreased, the reports will be accessed by each customer and we can also hand some of the report generation over to the user with minimal training.

As a standard, each user will be provided with a pre-defined series of reports that will be accessed according to their security profile.

Advanced Reporting

eMA also contains two unique features in the correlation and predictive capability.

Correlation helps find *performance dependencies*. A target metric business metric can be selected and correlated against an IT metric. For example the logon time to a website could be correlated against disk IO and CPU. The correlation would show which servers are correlating most highly with these 2 metrics.

Predictive capability improves *pro-active monitoring* in an organization. The user can be informed of possible threshold breaches 1 month, or even 1 year in advance. This can help capacity planning and also reduce outages.

KPI Reporting

KPI/SLA reporting based on technical events from multiple sources is provided and managed via the Dashboard. eMA calculates the effect of an event from any given data source and presents the current SLA status for the month automatically.

Additionally, eMA's predictive capabilities are able to give an indication on whether the SLA will be in breach if a current performance trend continues over time. This allows a service providers to focus on its business of service deliver, based on the customer's business and SLA's, not just according to a technological outage.

This moves service providers away from industry standard time based resolution, to pro-active based customer focused delivery. These KPI/SLA Reports are able to be calculated on any time slice that is required. This means that we are also able to trend our deliverable over time and to drill down to the incident types that are causing our outages.

Administration

As the eMA product is developed using industry standard technologies, training to become proficient in eMA is relatively minimal. Standard skill sets such as SQL Server, .Net and Windows server already exist in-house.