Whitepaper

Pursuing Operational Excellence in IT Monitoring

How an optimized IT monitoring environment can help maximize productivity and quality and mitigate risk in IT operations.
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Executive Summary

IT monitoring is a strategically important part of any business that relies on technology. IT monitoring is simply inevitable when it comes to the high availability and performance of mission-critical services, applications and server systems. Since IT monitoring that lacks functionality or is poorly implemented may directly impact the ability for a business to survive, IT monitoring is fundamental to IT governance, and is an indispensable part of management’s responsibility.

“IT monitoring is especially important because of the complexity and risks involved in IT activities,” emphasizes John Lainhart IV, CISA, a partner with PricewaterhouseCoopers and chair of the IT Governance Board with the Information Systems and Audit and Control Association (ISACA).

However, implementing IT monitoring without the appropriate management disciplines such as change, configuration and quality management is both inefficient and dangerous. IT monitoring is as complex and dynamic as the IT infrastructure itself. Therefore, the metadata in IT management and IT monitoring (a variety of configurations, scripts, documentation, etc.) and the appropriate processes need to be managed in a way that reflects the importance, size, complexity, and dynamic nature of the monitored IT infrastructure.

It is probably not possible to achieve “zero defects” in IT monitoring; however, it is possible to reduce the risk to an acceptable level. The MIDAS Product Family supports your initiative in a key area - IT monitoring. It increases productivity, automate routine tasks, streamline your monitoring processes, and give you a rapid return on investment.
Introduction

“Everything changes and nothing remains still.” – Heraclitus

How better to describe the current situation in IT monitoring? The recent years have witnessed an amazing procession of IT technologies that have completely changed the way we do business. The increasing stream of new technologies, approaches, trends and products will make things even more challenging over the next decade.

One of the consequences of this trend is that the infrastructure in IT operations is constantly changing and is growing in complexity. Especially in enterprise IT, new services and software and hardware components are added and changed on a daily basis. All business-critical services, applications and server systems need to be monitored. This only intensifies the operational challenges that IT faces today.

This whitepaper describes a pragmatic approach towards operational excellence in IT monitoring.

Business Service Availability

No commercial organization can afford to have critical business processes stop because of IT problems. Indeed, most companies invest heavily in service, application and infrastructure monitoring to identify faults early and to avoid prolonged outages. Despite this investment, many companies are not aware of the importance of the metadata in IT management and IT monitoring.

The implementation of industry standard management disciplines such as change, configuration and quality management is just as important for IT monitoring as it is for most enterprise services. A small IT organization may get by without managing the processes and metadata in IT monitoring; but in enterprise IT, it is simply a necessity.

In many companies, IT monitoring is itself a mission-critical service! For example, one financial company does not allow transactions to begin each day unless IT monitoring has been tested and approved. So in these companies, mission-critical business processes such as change, configuration and quality management must be implemented and applied to the company’s IT monitoring.

Some administrators of IT monitoring often operate without these management disciplines. In addition, the IT monitoring tools are not
task oriented and do not support administrative processes, particularly in terms of collaboration. All these deficiencies threaten and jeopardize the success in IT operations.

**The importance of metadata**

IT operations professionals may not think about metadata very often. This is mainly because metadata is typically mentioned in the context of trends like “big data” and technologies such as “business intelligence”. However, metadata and sophisticated metadata management is a very important prerequisite to excellence in IT operations. Metadata is data about data. It’s a road map of the information resources available.

Consider an IT monitoring system designed to ensure the availability and performance of a service that IT provides the business. Such a monitoring system contains metadata that consists of both data describing the technical infrastructure that supports the service and data about non-technical aspects of the service. For example, the infrastructure metadata might consist of data about managed objects such as computer systems, applications, networks and their attributes. In addition, the metadata also consists of non-technical aspects such as data about organizations, processes and their associated attributes.

![Figure 1: Measuring various technical and non-technical aspects of enterprise IT generates metadata and improves IT monitoring by reducing risks.](image)

W. Edwards Deming said, “You can’t manage what you can’t measure”, and it has never been more relevant to IT operations. But there is another simple truth: “You can’t measure something if you don’t know that it exists”. Therefore, the quality of the metadata needed to monitor a business service is vital to its performance and availability. Managing today’s complex and dynamic IT infrastructures with low-
quality metadata is like trying to fly a jumbo airliner without an instrument panel.

**IT monitoring is as complex and dynamic as the IT infrastructure itself.**

In a similar fashion to enterprise IT itself, the metadata in IT monitoring (i.e. the IT monitoring configuration) consists of a vast number of configuration objects such as parameter files, scripts, policies, and settings. A single error in one of the configuration files or a mistake at any point of the administration process can result in a critical situation not being detected. If the metadata in IT monitoring is not in sync with the reality in IT operations, then faults may not be detected early enough to avoid a major outage.

It is pointless to wonder if such errors could occur in your operation; they do occur, and probably already have occurred. It’s a little like walking through a mine field; the fact that you cannot see the mines does not mean that they are not there. The consequences of a mistake range from light to fatal.

**Increased investment, decreased reliability**

Why doesn’t the increased investment in monitoring immediately lead to an increase in system stability and reliability? The answer lies in a combination of inherent complexity, frequency of change, overall workloads, and poor tools and processes. The bad news: you will never eliminate all of these factors. The good news: you can significantly reduce such errors and greatly reduce the risk of stepping on the business equivalent of a land mine.

**Operational excellence with MIDAS and HPOM**

HP Operations Manager (HPOM) is a powerful IT monitoring product. In fact, HPOM has grown to be the most powerful event-management system on the market. Unfortunately, and this is true for most IT monitoring products, HPOM is lacking the appropriate functionality in administration to keep pace with the dynamic nature and complexity of IT operations.
This missing functionality not only impacts the overall quality of IT monitoring, it also affects the efficiency of administrators in particular and the productivity of IT operations as a whole. The administrators’ valuable time is wasted - time that could be used to optimize IT monitoring i.e. improving quality and productivity.

Some of the issues in IT monitoring caused by this missing functionality stem from a lack of transparency. This makes it difficult, if not impossible, for an administrator to see the consequences of a change. But much of what is missing is functionality that makes it possible to implement good IT management processes, particularly in the area of release management. To make matters worse, this lack of processes can lead to more errors which take more time from the administrator, and this, in turn, has an impact on quality and causes more errors. It is a vicious circle.

**MIDAS eliminates HPOM shortcomings**

MIDAS eliminates these shortcomings and helps to reverse the tendency to fall into the vicious circle; with MIDAS, the administrator has more time to develop high-quality monitoring applications, define and implement good processes, and reduce errors. MIDAS is a modular application which enhances HP Operations Manager by aiming to eliminate all of the HPOM’s shortcomings that inhibit productivity.

The intuitive user interface of MIDAS reduces operational costs through increased productivity while simultaneously gaining the advantage of a comprehensive and transparent overview of your IT systems. The MIDAS Product Family also delivers a wider range of functionality than the standard HPOM Administration UI, resulting in an overall improvement in the quality of systems monitoring. Additionally, MIDAS provides strong support for the “release management” and “move-to-production” processes.
The MIDAS Product Family delivers a wide range of functionalities:

- Simultaneous monitoring of multiple HPOM server systems
- Flexible systems configuration and monitoring
- Maximum transparency through intuitive interfaces
- Improved quality and consistency of systems monitoring
- Delegation, reporting and verification of systems outages
- Task and process-oriented administration in IT monitoring
- Support for administrative processes in IT monitoring such as release management
- Automatic documentation generation
- Recoverable configuration data through full version control
- Semantic differentiation for IT monitoring configuration
- Extensive and flexible user model
- Advanced auditing and reporting
- Transparency of configuration through browsing and full text search
- Release management via packages
- Support effective development processes to multiple servers
- Desired state verification for policies running on managed nodes
- Self-service through round-trip configuration within Excel documents
- Distribution monitoring via GUI

Figure 2: MIDAS Configurator is the first of two core products of the MIDAS Product Family. It improves the quality of IT monitoring by adding advanced features to HPOM: documentation, parallel work of many users and HPOM servers, version control, access to the HPOM configurations and full text search.
Conclusion

It is probably not possible to achieve “zero defects” in IT monitoring; however, it is possible to reduce the risk to an acceptable level. Whether your motivation is to reduce risk stems from SOX, BASEL II, CMMI, a Six Sigma initiative, or is just the desire to improve your IT operations, the MIDAS Product Family supports your initiative in a key area - IT monitoring. Unlike many efforts to improve quality by implementing cumbersome processes which actually increase overhead and delay delivery, MIDAS will increase productivity, automate routine tasks, streamline your monitoring processes, and give you a rapid return on investment.

If you would like to know more about the MIDAS Product Family to excellence in IT monitoring or are interested in a demo, please visit www.blue-elephant-systems.com, send an email to sales@blue-elephant-systems.com or give us a call on +49 711 400 425 25.