



The Systems Management Buyer's Guide

Five Keys to High ROI for Medium-sized Businesses

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Executive Summary

IT infrastructure management in medium-sized businesses involves careful selection of software for systems monitoring and management. Challenges involved in choosing software that will bring the best results and optimal return on investment (ROI) include increasing operational complexity, growing service level demands, lean staff of IT generalists and continuing economic pressures. This white paper examines the five key characteristics of software that can meet these challenges successfully, and specifically considers the capability of Hitachi IT Operations Analyzer software to meet these demands.

Introduction

Software for systems monitoring and management in the IT environment is one of the most important IT investments your medium-sized business will ever make. But given the challenges that systems management poses for companies like yours, how can you ensure that the software you buy will deliver the best results for the highest ROI?

The potential pitfalls in selecting systems management software are many, and the way around them is not always clear. This guide is designed to assist you by presenting five key characteristics to look for that will address the challenges associated with IT management in medium-sized businesses. These challenges include:

- **Increasing operational complexity.** Today's medium-sized IT environment comprises hundreds of network, server and storage devices. This large, typically heterogeneous environment is growing steadily in both volume and complexity, due to increasing use of virtualized devices, Web 2.0 applications and networked storage.
- **Growing service level demands.** Customer expectations for IT have never been higher, as 24/7 network availability, optimized performance and high quality of service have become absolutely essential to business users.
- **Lean staff of IT generalists.** A medium-sized IT environment is typically managed by a handful of IT generalists who are increasingly being asked to take on more and more responsibilities, without being allowed to increase staff numbers or training accordingly.
- **Continuing economic pressures.** In tough economic times, any investment in IT must lower costs, both immediately and over the long term. That means fast deployment is needed up front, followed by an increase in systems availability and productivity and a decrease in support calls.

The five key characteristics of software that can meet these challenges successfully include:

- Single, consolidated view of resources
- Vendor agnostic solution
- Simplified deployment
- Intuitive, automated operations
- Specifically developed for medium-sized companies

Software with these characteristics is more likely to deliver the highest ROI within the software and highest ROI to the IT infrastructure. This white paper:

- Delves into each of these five solution characteristics in depth
 - Discusses the specific business benefits of a solution with these characteristics
 - Describes how Hitachi IT Operations Analyzer software delivers these characteristics and benefits
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The Five Keys to High ROI

Single, Consolidated View of Resources

The Problem

Traditionally, tools for monitoring and managing resources in the IT environment have been specific to operational domains, such as servers, storage, applications, network and so forth. The problem with this approach is that the tools are often not integrated. While each tool may be effective and useful for the specific domain in which it operates, there is no one tool that provides insight into how all the resources operate together and impact each other. These tools lack the comprehensive view of overall performance in the IT environment, and they have no way to detect the cause of interconnected problems and issues.

The consequence of this siloed approach to systems management is that it can make it difficult to acquire insight into performance and availability among interdependent resources. To get a comprehensive view across IT resources of trends that might alert you to problems on the horizon, you not only need multiple tools, but you may also require multiple specialized staff members to use them and to coordinate the results into one meaningful view. This can be nearly impossible to accomplish when working with a minimal staff of IT generalists. Without a single view, your IT staff may end up constantly being forced to operate in a reactive mode, providing support only after problems already have occurred.

A related problem is that more tools require more training. In a medium-sized environment staffed by a small group of IT generalists, this is no small concern.

What to Look for in a Solution

What's needed in the medium-sized IT environment is a single tool that provides broad visibility across all resources. Look for a tool that provides a truly comprehensive view and focuses on specific needs for availability, performance and configuration; many solutions emphasize one area, such as servers or networks, and provide only a cursory look at other areas, such as storage, network switching and Fibre Channel. The tool you choose should provide a single, consolidated view of resources.

Vendor Agnostic Solution

The Problem

In today's business landscape, mergers and acquisitions can result in a tremendous diversity of devices, operating systems and other resources within one organization. This growing heterogeneity can wreak havoc with monitoring and management requirements in the IT environment. Not only do you have to worry about different tools for different domains, but you also must be concerned about different tools for different vendors' offerings. Again, the more tools required to manage resources, the more training and expertise will be required for the staff members who are using them, which will result in a lower ROI.

What to Look for in a Solution

What's needed is a single tool that not only provides visibility across domains, but also supports multiple vendors' devices, from storage resources to switches. Look for a solution that is vendor agnostic, both in terms of the devices themselves and the operating systems they run. It shouldn't matter for monitoring and management purposes whether a server is running Microsoft® Windows® or Red Hat Linux, for example. (Support for VMware also is essential as virtualization becomes the norm in the IT environment.) Be sure the solution you choose will support the vendors and systems you already have in place as well as any you may add in the future. Avoid offerings with limited hardware or software support that will preclude the monitoring of some of the devices and systems in your IT environment.

Simplified Deployment

The Problem

One of the biggest ongoing headaches for a medium-sized business is the increasing complexity of IT solution deployments. Handling such a deployment is generally more than a team of IT generalists, particularly a team that's already stretched too thin, should be asked to handle. As a result, you end up requiring costly, time-consuming outsourcing services.

A specific challenge involves the need for agent software to be installed on IT devices, particularly servers, in order to deploy a management solution. Agentless architectures remove complexity in deployment and maintenance, reduce risk and provide a nonintrusive means of monitoring IT devices.

What to Look for in a Solution

Choose a solution that your company can install, configure and maintain quickly and easily, without significant third party assistance. This will ensure a low cost to deployment and pay dividends with future configurations and maintenance. Look for agentless software that has been architected specifically to minimize the complexity of setup, configuration and maintenance.

Intuitive, Automated Operations

The Problem

The principle is simple: As IT environments become increasingly complex, heterogeneous and interconnected, you can do one of two things to manage them effectively. Invest in increased staff and training to handle the increased complexity, or choose tools that make the environment easier to monitor and manage. For medium-sized companies that do not have the luxury of budget for the former, or that need to keep any additional budget available for other priorities, there is no real choice. Tools that are simple and intuitive to use are essential.

For example, one of the toughest challenges for a lean IT staff in a medium-sized IT environment is finding out what's causing a performance problem in some business service. The time spent painstakingly comparing and coordinating various systems' operations to figure out what's wrong translates to lost productivity and revenue, and a lower ROI all the way around.

What to Look for in a Solution

Ideally, a monitoring and management solution for IT environments will have the capability to automatically detect and identify the root cause of problems without requiring any special insights into system behavior from the staff. Look for a solution that will automatically collect information across the IT environment without manual intervention and then analyze that data automatically to determine why problems are occurring. The solution should then provide analysis that the generalist can understand and respond to for remediation. IT staff should have to do no more than look at a screen to get insight into performance availability problems and isolate the source so that corrective action can be taken.

Specifically Developed for Medium-sized Companies

The Problem

There are many solutions out there for monitoring and managing resources in large, enterprise-class data center environments. But smaller operations have only recently begun to feel the pains of operating dynamic, growing, increasingly heterogeneous IT environments. Large enterprises, which have been coping with these issues longer, have generally addressed them by using integrated management consoles. These consoles coordinate communication across silos but require additional staff to operate them.

Medium-sized companies don't generally have the budget or time to deploy, integrate and operate complex management frameworks that were designed for large enterprises. Nor can they spare dollars or days to bring in outside help to do the job. They need a simpler approach, one that is designed to get them up and running fast and realizing the benefits of improved management.

What to Look for in a Solution

IT systems management software for a medium-sized company should literally be just that: for a medium-sized company. Look for a solution that's not a scaled-down version of enterprise software, but rather something that was designed expressly to address specific midmarket concerns. The software should offer speed and ease of deployment, implementation and operation. It should provide out-of-the-box functionality to support key business processes and should begin to increase IT ROI immediately.

Business Benefits of Investing in the Right Solution

Less Downtime

- Faster, easier identification of problems and potential problems, with a single, comprehensive view of system operations
 - Rapid detection of the root causes of problems that involve multiple interconnected systems, through automated data analysis, significantly reducing mean time to diagnose (MTTD)
 - Comprehensive, yet easily understood analysis and reporting, reducing the learning curve and increasing adoption and use
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- Opportunity for timely resolution and repair, thanks to immediate availability of comprehensive information about problems and root causes

Reduced IT Management Complexity

- Simplified monitoring, with one integrated, comprehensive view of availability, performance, configuration and problem root causes
- One tool to monitor, analyze and report on all devices, instead of having to train staff in different products for each vendor's hardware and operating systems
- Easy to deploy and maintain across the IT environment, with streamlined setup and configuration through the use of an agentless architecture

Decreased IT Expenses and Resource Requirements

- Less investment required in IT environment monitoring and management technology, since multiple functions are consolidated in one tool
- Ability to cover the workload without increasing staff, since there is no need to support multiple products for different domains and system types
- Minimal training requirements, since staff only needs to learn one intuitive, easy-to-use tool
- Management of system availability and root cause analysis in less time and without specialized skills

Hitachi IT Operations Analyzer Software

For medium-sized companies looking for a simplified solution to monitor and manage IT environment assets, Hitachi IT Operations Analyzer software delivers on the five criteria for high ROI described in this white paper. The software diagnoses and monitors heterogeneous server, network and storage assets. It has been characterized by IDC as "an integrated performance and availability monitoring tool created with the needs of IT generalists in mind."¹ The software specifically offers the following to support efficient, effective operations and high ROI.

Single Unified Interface for Monitoring Servers, Networks and Storage

- Monitors servers (application services and server status), networks (LAN and SAN switches) and storage devices
- Provides a unique, condensed network topology view that allows more details, including root cause details, to be viewed than would be possible with more traditional topology displays
- Eliminates extensive training on individual tools for networks, servers, storage and applications
- Does not require separate products to monitor LAN and SAN; does not require separate products for SAN fabric and storage systems

¹ Hitachi IT Operations Analyzer Delivers Performance and Availability Reporting for IT Generalists, IDC, May 2009

Support for Multiple Vendors and Platforms

- Enables performance and availability monitoring of multiple operating systems, including Microsoft Windows, Red Hat Linux and VMware (with the Sun Solaris operating system being added near term)
- Supports most common systems and devices from all major vendors
- Brings event and health summary into a single-pane-of-glass view for easy observation and monitoring

"Agentless" Architecture to Speed and Simplify Deployment

- Eliminates the need to install software agents on each device in the IT environment
- Uses wizard-based discovery and configuration, and standards-based monitoring services
- Requires no reboots of servers or redeployment of agents when updated
- Updates groups of similar devices from a single GUI template

Automated Root Cause Analysis of Problems

- Automatically identifies root cause of errors or problems, using information collected from all IT environment devices (see Figure 1)
- Maximizes system uptime; if network breakdown occurs due to device failure, reduces mean time to diagnose by up to 90 percent
- Requires no manual intervention

Figure 1. IT Operations Analyzer topology view shows problem root cause details and can be easily segmented into logical views to show network path relationships within the IT environment.

The screenshot displays the Hitachi IT Operations Analyzer interface. The main window shows a topology view of the IT environment, segmented into logical views such as Backbone, LAN, Servers, SAN, and Storage. The interface includes a Monitoring Menu on the left, a central topology diagram, and an Events table at the bottom.

The Events table shows the following data:

State	Description	Date/Time (MM/DD/...)	Category	Source	GROUPS	Device
Not Ack	Port0 on SANBOX9200_1 is ...	Mar/01/2010 15:56:43	Status	SANBOX9200_1		Network Device
Not Ack	The performance status of "C...	Mar/01/2010 15:54:25	Performance	SYCTAG-9Y1YXF1		Server
Not Ack	Port0 on SANBOX9200_1 is ...	Mar/01/2010 15:52:37	Status	SANBOX9200_1		Network Device
Not Ack	The performance status of "C...	Mar/01/2010 15:49:23	Performance	SVCTAG-9Y1YXF1		Server
Not Ack	The performance status of "C...	Mar/01/2010 15:34:23	Performance	SYCTAG-9Y1YXF1		Server
Not Ack	The performance status of "C...	Mar/01/2010 15:29:18	Performance	SVCTAG-9Y1YXF1		Server
Not Ack	Port0 on SANBOX9200_1 is ...	Mar/01/2010 15:26:22	Status	SANBOX9200_1		Network Device
Not Ack	Port0 on SANBOX9200_1 is ...	Mar/01/2010 15:24:21	Status	SANBOX9200_1		Network Device

Developed to Meet the Needs of Medium-sized IT Environments

- Designed specifically for businesses with up to 750 server, switch and storage nodes (not a scaled-down version of complex enterprise software); offers ability to deploy additional management servers for larger IT environments
 - Provides a dashboard screen with availability and performance summaries
 - Accelerates IT efficiency with faster and easier problem resolution
 - Is ideal for the IT generalist, with automated reporting, intuitive design using Web 2.0 (Adobe Flex) and wizard-based installation features
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