

Resolving Critical Business Problem Areas in Data Center Operations through Automation

A White Paper Prepared for Opalis
May 2006



**ENTERPRISE MANAGEMENT
ASSOCIATES®**

Table of Contents

- Executive Summary 1
- Critical Problem Areas in Data Center Operations 1
 - Service Level Monitoring 1
 - Event Lifecycle Management 1
 - Self-service IT..... 3
- Managing Data Center Service – Addressing Key Problem Areas..... 3
 - Data Center Automation..... 3
 - Data Center Integration..... 3
- The Drivers for Automation and Integration..... 4
- Automation and Integration Strategy..... 4
- Opalis Integration Server – Capabilities and Benefits..... 4
- EMA Perspective..... 6
- About Opalis Software, Inc..... 6

Resolving Critical Business Problem Areas in Data Center Operations through Automation

Highlights

Vendor name: Opalis Software Inc.

Product name: Opalis Integration Server

Product function: Provides a Data Center Automation and Integration platform that allows IT organizations to automate and integrate complex data center processes.

Vendor contact information:

www.opalis.com

Pricing information: starts from \$35,000

Availability: Immediate

Executive Summary

IT Operations and Business executives face many challenges keeping labor costs down, providing adequate service levels, and driving operational efficiency, especially in critical data center operations such as Service Level Monitoring, Event Lifecycle Management, and End-User Service.

EMA's research shows that complexity, manual management, and non-integrated operational tools cause significant problems to enterprises. Data Center Automation and Integration can substantially address these issues and help IT organizations to reduce labor costs, improve service levels, and ensure more efficient resource utilization in critical areas of data center operations. Opalis Integration Server provides a solution for Data Center Automation and Integration that is likely to deliver significant benefits to IT and to the business.

Critical Problem Areas in Data Center Operations

IT organizations face many challenges in providing and maintaining quality service to their business users and customers. Three critical problem areas for data center operations include Service Level Monitoring, Event Lifecycle Management, and IT Self Service.

Service Level Monitoring

Service level monitoring is the measurement of key metrics – such as user response times, application avail-

ability, storage availability, CPU use, network I/O, and exception events – in order to assure end-users have consistently high service levels. EMA research shows that service level monitoring is a high priority for CIOs. In a recent survey of 100 CIOs, almost 80% listed it as either their first or second highest IT management priority.

However, over half of these CIOs said they experienced problems that affected service levels at least once or twice a week, and a quarter experienced them almost daily. Around 90% rated the impact of these service failures as either critical or important.

Part of the problem is that most IT organizations must integrate metrics from multiple sources, including management tools, monitors, logs, and services. In the 100 organizations surveyed, EMA found 40 different monitoring tools in use, with an average of over five different tools per organization. Manually monitoring and integrating this disconnected, silo-based environment reduces the visibility of important metrics, and increases management complexity. Scripting and other ad-hoc management techniques are fragile, error-prone, and costly to create and maintain. These critical problems result in:

- Higher staff levels and training costs
- Higher service desk costs
- Increased risk of errors and downtime
- Slower remediation and missed service levels
- Increased business pressure on IT service

Event Lifecycle Management

EMA's research shows that when problems do arise, it takes a long time to process them through the event lifecycle, driving up IT costs, and directly affecting business users. EMA surveyed the typical times taken in each of the four stages of the event management life cycle and found the following results:

- **Step 1 – Alerting:** For almost one third of IT organizations, it takes between 15 minutes and an hour to realize they have a problem. Another third take over an hour to realize they have a problem. In almost half of these organizations, IT only realizes a serious problem exists after business users have reported it. Only 18% of organizations use auto-

Resolving Critical Business Problem Areas in Data Center Operations through Automation

mated tools in this step – roughly the same number that detect problems in less than 15 minutes.

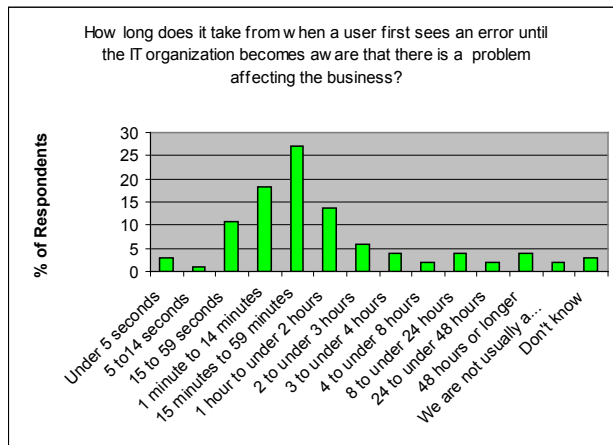


Figure 1 - Alerting Time

- Step 2 – Identification:** Identifying the cause of a problem, and the likely solution, takes between 15 minutes and an hour for over a quarter of IT organizations. 40% take over an hour, and 13% take over a day. Over half of the organizations surveyed identified both the problem and the solution manually, based on previous experience or expert opinion.

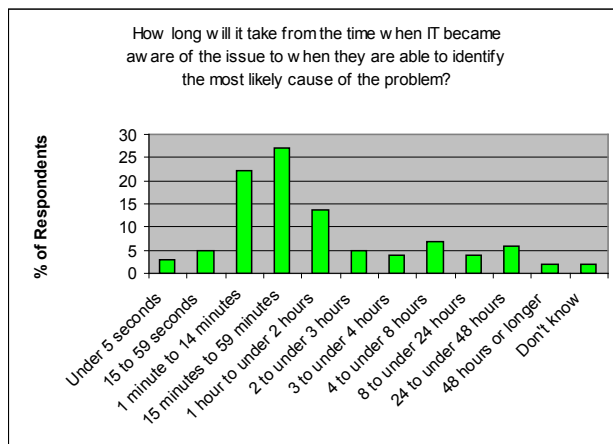


Figure 2 - Identification Time

- Step 3 – Correction:** 23% of IT organizations spend on average between 15 minutes and an hour on corrective actions to fix a problem. However, over half of the organizations surveyed take over an hour to correct a problem, and 20% take more than 8 hours. Over 80% of IT organizations resolve their service problems manually.

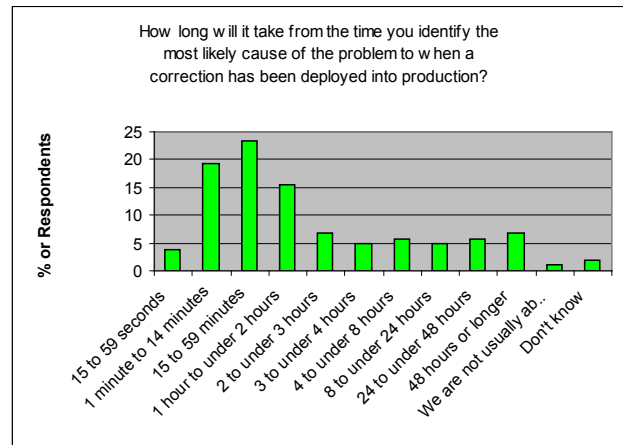


Figure 3 - Correction Time

- Step 4 – Validation:** Validating that the problem is fixed typically take between 15 minutes and 1 hour for 20% of IT organizations. However, almost half of the respondents take over an hour, and over 20% take over a day to verify that a fix has worked. Almost 50% of organizations validate their solutions either manually or not at all.

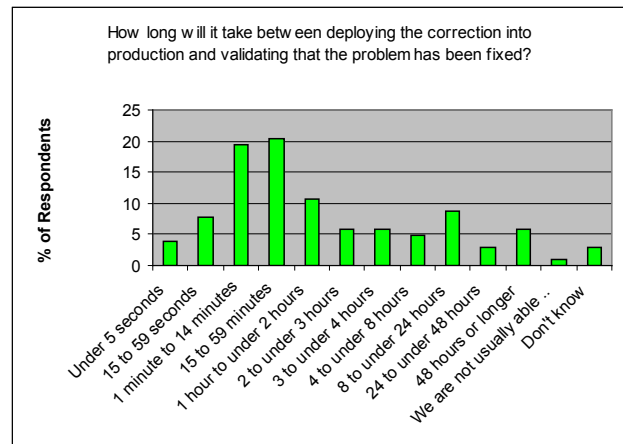


Figure 4 - Validation Time

Most of these IT organizations clearly expend a great deal of manual effort on event lifecycle management. Most also suffer from unacceptably long problem resolution times.

Manual intervention in the event lifecycle, and a lack of integration between diverse environments, tools, and technologies requires involvement across the data center, including resources from service desk, operations, development, network, and production support teams.

Resolving Critical Business Problem Areas in Data Center Operations through Automation

This is a costly and ultimately ineffective waste of specialized resources.

EMA's research clearly shows business users suffer from this critical data center problem. Waiting on average between 1 and 4 hours – and often much longer – for data center operations to resolve serious problems impacts their productivity, reduces their competitive advantage, and hurts customer satisfaction.

Self-service IT

Self-service IT empowers end-users to satisfy their own IT requirements without involving data center staff, especially for routine processes such as for password reset, provisioning, and software updates. For example, when a user starts a new role, they must have the right software, applications, and data. In a manual service model, they must submit a request to the service desk, who route it through a standard approval, then arrange to provision the user. This model is prone to delays and errors, and ties up expensive resources from multiple departments. Informal and ad-hoc solutions create problems with security, licensing, and chargeback. Manual service also delays the user's startup by hours or days, affecting their productivity.

Self-service IT automates this routine process, by receiving requests, tracking approvals, and routing them through multiple systems, with minimal intervention. It frees up skilled resources and makes them available for complex problem solving and service issues. It improves license compliance and chargeback, reduces exposure, and results in fewer errors and process breakdowns. Business users get fast access to business systems, applications, and data.

Managing Data Center Service – Addressing Key Problem Areas

A solution to these (and many other) key problem areas is to automate these routine processes, and integrate diverse management systems, to make response faster, more reliable, less costly, and more secure.

Data Center Automation

Data center automation uses IT systems to do more of the routine work, freeing up IT people for higher-value operations. Automation typically aggregates a multi-step process to a single high-level process that IT can manage easily, with less time and effort, and fewer resources.

Data center automation provides an adaptable, flexible platform to automate manual processes such as service level monitoring, event lifecycle management, and self-service IT. This addresses key problem areas, such as:

- Reducing labor costs by allowing reduction or reallocation of people
- Improving service levels through faster measurement and reaction times
- Improving efficiency by freeing up skilled resources to do smarter work
- Improving performance and availability by reducing human errors and delays
- Improving productivity by allowing companies to do more work with the same resources
- Improving agility by allowing rapid reaction to change, delivering new processes and applications faster
- Reducing reliance on high-value technical resources and personal knowledge

Data Center Integration

Data center integration overcomes the problems of a 'silo' approach. Integration is ideal in mature organizations, and those that utilize a best-of-breed approach to IT management systems. Integration is an alternative to a monolithic framework approach, and does not require a "rip and replace" project to be effective. Integration leverages the best capabilities of existing systems, processes, and environments.

Web services and a service-oriented architecture make integration easier, but are only part of the bigger picture. Web service interfaces will not magically work together – they need to be connected, controlled, managed, and integrated. Data center integration is also quite separate from Business Process Management, or BPM. BPM is a broad framework for reengineering business processes, and is often a quite disruptive "all or nothing" process; data center integration, however, uses existing best of breed tools, fits into current processes, and can be implemented gradually with minimal disruption.

41% of CIOs rate integration of network, systems, and application management as critical, with more than 8 out of 10 surveyed seeing it as either critical or important. Integration overcomes many of the problems posed by

Resolving Critical Business Problem Areas in Data Center Operations through Automation

manual interfaces and interchange between systems and applications. This helps to standardize complex processes, and reduce confusion, duplication, delay, errors, and process breakdowns, while providing a single view of business processes.

The Drivers for Automation and Integration

Data center automation and data center integration have a particular synergy – automation reduces the time taken *during* each step of an operational process; Integration reduces the time *between* each step of an operational process. Together they transform complex multi-system processes into easily managed high-level operational workflows, resulting in:

- Flexibility – rapid response to change, enabling shorter time to value
- Improved performance and availability – faster reactions producing better service levels
- Compliance – procedures are documented, controlled, and audited
- Return on investment – do more with less, reduce cost of operations and management

Automation and integration make service level monitoring faster, more accurate, and more efficient, reducing the impact of service failures. Event lifecycle management experiences fewer delays both *within* and *between* steps, with lower resource costs, faster response times, and less impact on end-users. Self-service IT is able to reduce resource costs, avoid errors, and provide faster response to end-user requests.

The right automation and integration solution allows skilled staff to retain control, while relieving them of repetitive tasks. Key success can be gained in as little as a few hours, to establish confidence to grow the implementation. And it does not require dramatic change to existing processes – even environments with complex processes can benefit from a well-executed automation and integration strategy.

Automation and Integration Strategy

When embarking on a data center automation and integration implementation, enterprises should look for the most benefit. Enterprises are encouraged to automate and integrate:

- The most manual processes
- The most time-critical processes
- The most error-prone processes

With these high-payback processes identified, enterprises should:

- Break down high-level processes into smaller, granular components
- Identify where lower-level processes can be “packaged” and reused in multiple high-level components
- Identify process triggers (e.g. end-user requests, time events) and end-points (e.g. notifications, validation actions).
- Identify linkages and interfaces between steps of each process
- Codify any manual steps wherever possible

Opalis Integration Server – Capabilities and Benefits

Opalis provides a data center automation and integration platform that allows IT organizations to automate and integrate complex data center processes. Specific capabilities in the problem areas described above include:

- **Service Level Monitoring** – Opalis can take input from multiple systems and sources across the enterprise, automatically integrate the source data, correlate disparate events, and respond with predefined resolution actions.
- **Event Lifecycle Management** – Opalis can automatically react to events from many event management systems, and automatically process the event through the entire lifecycle, from Alert to Validation.
- **Self-service IT** – Opalis can respond to user or system events, trigger complex approvals and workflows across multiple systems, and act to service end-user requests without manual intervention.

This delivers specific benefits:

- **Service Level Monitoring** – reduces the time and effort required from operations staff, improves

Resolving Critical Business Problem Areas in Data Center Operations through Automation

accuracy of reporting, reacts faster to service level events, and embeds critical process knowledge into business systems.

- **Event Lifecycle Management** – reduces the cost of manual event management, improves the response time to business users, reduces the impact of service failures, and allows skilled resources to focus on complex tasks that add value to IT and to the business.
- **Self-service IT** – eliminates manual intervention from many user requests, providing faster service to business users, reducing the potential risks and errors or manual fulfillment, and reducing the cost of processing routine end-user requests.

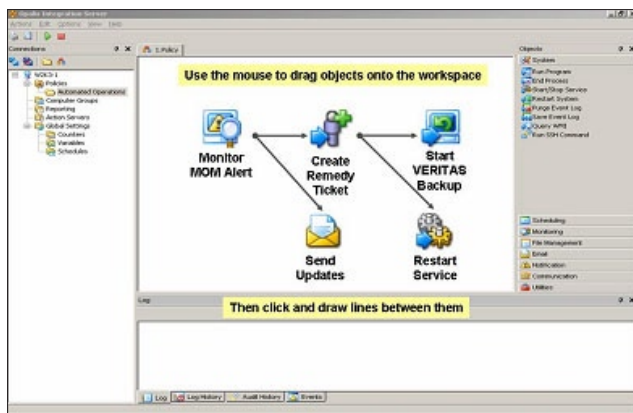


Figure 5 - Opalis Integration Server's Graphical Policy Designer

Metadata such as service metrics, event descriptions, and process requests are passed between system tools by an object-oriented message bus, which provides interoperability between disparate components, without intervention. These linkages are created in a drag-and-drop policy designer – even detailed process workflows can be automated and integrated without any coding. Pre-built integration packs are available for many of the most popular system, network, and application management tools, such as:

- Configuration and Operations tools from BMC Software (Remedy, Marimba), Hewlett-Packard (Peregrine, OpenView), IBM Tivoli, and Microsoft
- Performance and Availability Management tools from Mercury, BMC, IBM, HP, and Quest Software

- Security and Access Management tools from Checkpoint, Symantec, CA (Netegrity), and NetIQ
- Storage and Backup solutions from Symantec, IBM, EMC, IBM and CA

According to customer data supplied by Opalis, these data center automation and integration capabilities have delivered specific, quantifiable benefits, including:

- Improved customer satisfaction for a major outsourcer by reducing problem alert times from 25 minutes to 1 minute
- Improved end user availability for a leading financial institution by reducing problem identification time from 120 minutes to 8 minutes
- Improved SLA achievements for a major retailer by reducing problem correction time from 60 minutes to 1 minute
- Improved resource productivity and utilization for a large pharmaceutical company by allowing each IT service staff to handle almost 6 times as many problems

Opalis Integration Server can also deliver the benefits of automation and integration for a diverse range of data center needs, including:

- Event Consolidation
- Automated Ticketing
- Disaster Recovery and Backup
- Data and File Orchestration
- Provisioning
- Virtualization Management

Resolving Critical Business Problem Areas in Data Center Operations through Automation

EMA Perspective

Opalis Integration Server provides a very good solution for automating and integrating critical data center processes. The automation capabilities will make operations faster and less prone to error. The integration capabilities will provide greater reliability for complex environments. It codifies system processes, providing documentation, controls, and audit records to help achieve license, standards, and regulatory compliance.

With Opalis, organizations will be able to address critical data center problems, including:

- Improved visibility and control of high-level IT processes, reducing the cost and complexity of service level monitoring, and ensuring faster response to service problems
- Faster and better integrated event lifecycle management, reducing resource costs, response times, and error rates, and improving business service
- Easier implementation of self-service IT, reducing the cost, risk, and delivery time of relying on manual IT resources to deliver routine IT services to end-users

In addition, Opalis' drag-and-drop interface, and the wide availability of out-of-the-box integration packs, provides an easy path to implementation and administration, without requiring highly skilled programmers or application architects.

Organizations may face some challenges when implementing any comprehensive automation and integration solution. Some legacy systems may not provide appropriate interfaces. Senior managers may need to manage some difficult political issues. Some custom scripts or complex processes may need to be redefined for maximum benefit.

However, for most medium and large enterprises, integration and automation with Opalis Integration Server will resolve many data center problems. In particular, it has specific capabilities to address the critical problems of service level monitoring, event lifecycle management, and self-service IT.

About Opalis Software, Inc.

Opalis Software, Inc. is the expert provider of integration software that enables enterprises to achieve the automated data center. With Opalis, companies can connect disparate environments and automate routine processes in a way that is simple, fast, and effective. Currently, more than 550 global companies, including Toyota, Harley Davidson, StateStreet, Nokia, Xerox, BlueCross BlueShield, and Woolworths, rely on Opalis to integrate and automate their data center operations.

Opalis is headquartered in Mississauga, Ontario, Canada, and has strategic industry partnerships with EMC, VMware, HP, IBM, Microsoft, NetIQ, Remedy, Veritas, and Cognos.

Opalis Integration Server 5.0 pricing starts from \$35,000. For more information, please visit www.opalis.com

About Enterprise Management Associates, Inc.

Enterprise Management Associates, Inc. is the fastest-growing analyst firm focused on the management software and services market. EMA brings strategic insights to both vendors and IT professionals seeking to leverage areas of growth across e-business, network, systems, and application management. Enterprise Management Associates' vision and insights draw from its ongoing research and the perspectives of an experienced team with diverse, real-world backgrounds in the IT, service provider, ISV, and publishing communities, and is frequently requested to share their observations at management forums worldwide.

Corporate Headquarters:
Enterprise Management Associates
2585 Central Avenue, Suite 100
Boulder, CO 80301, U.S.A.

This report in whole or in part may not be duplicated, reproduced, stored in a retrieval system, or retransmitted without prior written permission of Enterprise Management Associates, Inc. All opinions and estimates herein constitute our judgement as of this date and are subject to change without notice. Product names mentioned herein may be trademarks and/or registered trademarks of their respective companies. ©2006 Enterprise Management Associates, Inc. All Rights Reserved.



**ENTERPRISE MANAGEMENT
ASSOCIATES®**

Phone: 303.543.9500

Fax: 303.543.7687

info@enterprisemanagement.com

www.enterprisemanagement.com

1090.050206