

OPTIMIZE

**INFRASTRUCTURE MANAGEMENT
IS NOT ENOUGH: THE NEW IT
OPERATIONS IMPERATIVE**

ABSTRACT

Infrastructure management is not enough to ensure enterprise applications are meeting business goals. Why? Because users experience applications, not infrastructure.

To date, most major enterprises have spent upwards of \$50 million dollars on IT infrastructure management tools. Yet regardless of how much has been spent, IT executives have learned a painful lesson. Yesterday's "system-centric" infrastructure management vendors got it wrong. Today, it's all about business results. And it's IT's job to run the business, not babysit the infrastructure.

That's why smart IT executives spend their time and money ensuring their applications, systems, and infrastructure are *all* optimized to deliver business value – not wondering if a router is running at "5 nines." They're investing in Business Technology Optimization (BTO) software to gain a user-centric, "top-down" view into application management – not just a limited, "bottom-up" view of the systems and infrastructure.

Mercury is the global leader in BTO software. Our Application Management offerings deliver an innovative approach to integrating business, end-user, and system perspectives, while providing a clear picture of the complex infrastructure that underlies key applications. Only Mercury Application Management offerings address the critical IT disciplines of business service management, application performance management, infrastructure management, and change management to ensure production applications are not only up and running, but are optimized to deliver business value.

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INFRASTRUCTURE MANAGEMENT IS NOT ENOUGH

Traditional infrastructure management tools only focus on systems and infrastructure, not the applications and services that customers experience. This limited, bottom-up view makes it impossible to gain visibility into the status of business applications, or understand the business impact of outages and events. And with complex, distributed applications, identifying the root cause of problems with legacy system management tools is difficult and time-consuming. Additionally, change management and problem resolution processes are typically inefficient, time-consuming, and expensive.

APPLICATION MANAGEMENT: OPTIMIZE THE USER EXPERIENCE, NOT JUST THE INFRASTRUCTURE

Application management transforms system management from a bottom-up, technology-focused task to a business-centric, end-user-focused practice. It organizes application monitoring and management from the point of view of the user, and by business processes, rather than by infrastructure components and associated events. With this approach, business objectives and end-user requirements drive priorities, not monitoring tools and management technologies. Performance and availability can then be monitored and managed according to business priorities: end users' experience, service levels, and customer impact.

Application management overcomes the shortcomings of infrastructure and systems management tools, and instead focuses on measuring and managing business outcomes. It takes a holistic, integrated approach that leverages technologies and skills across the IT organization. Application management is guided by several key principles:

- Measuring and monitoring from an end-user perspective.
- Correlation of system data with end-user performance and availability information.
- Visualization of the same data in ways that make sense for specific groups and management levels.
- Generation of alerts when end-to-end performance and availability are diminished.
- Prioritization of issues by impact on the customers.
- Mapping of application and infrastructure dependencies to provide insight into the business impact of all IT changes.
- Driving business value rapidly rather than at the end of a long system monitoring implementation cycle.

Manage Service Levels and Compliance Mandates

IT service management teams are responsible for ensuring that service levels committed to the business are delivered. Some of the challenges they face include:

- Limited visibility into how applications and infrastructure impact business services and customer experience.
- A fragmented, "silo" approach to problem resolution.
- Ineffective communication with end users/customers about how service levels are managed.

"It is no longer enough to guarantee server uptime; it is the end user experience that counts."

–Forrester, 2004

"True application management requires a different expertise – an understanding of the end-to-end application, the infrastructure relationships, and their impact on business value and end-user experience."

– The Yankee Group, 2004

Application management takes a business-centric approach to managing applications according to service levels and business priorities. By focusing on measuring applications from an end-user perspective, service management teams gain a top-down, business-perspective view into the applications and services they deliver. Team members can share results with executives and line of business (LOB) managers in business terms, translate operational results into business key performance indicators (KPIs), and correlate business performance metrics to IT services.

Manage Application Performance and Business Availability

Application support teams are responsible for availability and performance of the applications and resolution of problems. Some of the challenges they face include:

- Isolating application problems to the specific tier and application component.
- Being unclear about LOB priorities concerning application availability and performance.
- Identifying and addressing negative trends before users are affected.
- Organizational constraints that prevent visibility between IT operations and performance teams.

Application management takes a proactive view into managing business availability and system performance. With this proactive approach, application support teams gain the ability to identify problems before they affect customers. When problems do occur, they can quickly isolate, triage, diagnose, and fix the problems with as little business impact as possible.

Reduce TCO and Maximize ROI Across the Infrastructure

System monitoring teams are responsible for the availability and performance of the infrastructure. Some of the challenges they face include:

- Traditional monitoring tools are expensive to maintain, support, and upgrade.
- Difficulty in getting maximum value from existing investments.
- Poor visibility into infrastructure assets and investments.

Application management takes a comprehensive approach to infrastructure management by integrating system availability and performance monitoring technologies to manage the entire production environment of applications, components, and network devices. It supports myriad types of management tools and monitors. It also maps and correlates business processes and applications with the underlying infrastructure – helping reduce the business risks from data center moves and consolidations, as well as proactively manage infrastructure problems and disaster-recovery processes.

Manage Change and Complexity Across the Lifecycle

Change advisory board or change control teams are responsible for managing the impact of planned and unplanned changes to IT services and business applications. Some of the challenges they face include:

- Lack of visibility into the business impact of change.
- Difficulty addressing unplanned changes.
- No repeatable or enforceable change management processes.

Application management enables you to optimize the user experience by:

- **Managing service levels and compliance mandates.**
- **Managing application performance and business availability.**
- **Reducing TCO and maximizing ROI across the infrastructure.**
- **Managing change and complexity across the lifecycle.**

Application management takes an end-to-end view of change across the IT service delivery lifecycle to ensure that planned and unplanned changes cause minimal business impact. It focuses on mapping service and infrastructure relationships to better understand business impact. And it enforces a formalized change governance processes that allows teams to isolate changes and alert impacted parties.

MERCURY APPLICATION MANAGEMENT: OPTIMIZE BUSINESS AVAILABILITY

Mercury Application Management software and services allow you to manage service levels according to business goals, measure and monitor system performance and business availability, map the application-infrastructure relationship, optimize change and configuration management, and proactively resolve problems before they impact the business.

In fact, only Mercury addresses four key business challenges within IT operations:

- **Business Service Management:** Mercury provides an integrated suite of applications and components for managing and monitoring applications according to service levels and business priorities.
- **Application Performance Management:** Mercury Application Management offerings allow you to take a customer-centric view of your applications, as well as isolate, diagnose, and fix potential problems before they impact the business.
- **Infrastructure Management:** Mercury Application Management offerings allow you to collect and monitor system availability and performance data from across your entire enterprise, as well as map IT infrastructure elements to the applications they support.
- **Change Management:** Mercury Application Management offerings allow you to automate the entire change process, leveraging standards such as ITIL, as well as manage the impact of planned and unplanned changes to your applications and infrastructure.

“With Mercury, we have clearer communication between IT and business users, leading to faster problem solving, reduced costs, and increased customer service levels.”

– Bernard Gay, Vice President of Business Operation Systems, Royal Caribbean Cruise Lines

With Mercury Application Management software and services, you can:

- Increase visibility into business service levels.
- Maximize application availability and performance from an end-user perspective.
- Ensure successful deployment and reduce costs.
- Map the infrastructure to the application.
- Gain visibility into the business impact of application and infrastructure change.
- Focus team on reducing time to repair and improving time between failures rather than on deploying and maintaining monitoring products.

Accelerate Time-to-Value via Mercury Managed Services

Mercury Application Management offerings can be implemented in-house or managed by Mercury. If you choose Mercury Managed Services™, we provide the pre-deployed infrastructure and ongoing training and mentoring to ensure your success and deliver faster time-to-value. Traditional enterprise software deployments can take many months. The average time to initial value through the Mercury Managed Services is only a matter of weeks. Mercury Managed Services offers you a full deployment of your Application Management solution, monitored around-the-clock by Mercury's expert team.

BUSINESS SERVICE MANAGEMENT

Mercury Business Service Management solutions take a business-centric approach to managing applications according to service levels and business priorities. They help prioritize IT systems around processes with the highest business value. You can minimize customer downtime and lower the cost of problem detection, isolation, and triage. Ultimately, you can improve service levels by better understanding the relationships between your business and IT resources.

MERCURY BUSINESS SERVICE MANAGEMENT SOLUTIONS INCLUDE:

Mercury Business Availability Center™

- Manage by business-centric service levels with real-time visibility.
- Translate business goals into IT operational-level agreements (OLAs).
- Ensure alignment between LOBs and IT by measuring and reporting on service levels from an end-user perspective.

Mercury Managed Services for Business Availability Center™

- Achieve rapid time-to-value.
- Reduce the total cost of your business service management system.
- Deploy your team to higher-value activities rather than maintaining installed software.
- Provide ongoing mentoring to optimize product effectiveness.

APPLICATION PERFORMANCE MANAGEMENT

Mercury Application Performance Management solutions let you monitor applications from the point of view of the end-user, along with end-to-end problem resolution capabilities – so you can manage application performance according to customer needs and proactively resolve problems when they arise. You can identify, isolate, and diagnose problems to their specific tier and application and provide diagnostic metrics to support personnel to fix recurring problems in packaged or custom applications. And you can leverage your investments in pre-production testing to share common metrics, diagnostics information, and assets during testing and production.

MERCURY APPLICATION PERFORMANCE MANAGEMENT SOLUTIONS INCLUDE:

Mercury End-User Management™

- Resolve business process issues before end users experience them.
- Gain real-time visibility into the Quality of Experience (QoE) of users.
- Assess business impact and prioritize resolution efforts.

Mercury Diagnostics™

- Diagnose complex J2EE, .NET, and ERP/CRM application problems.
- Solve intermittent issues.
- Resolve root cause on a consistent basis.

Mercury Managed Services for Business Availability Center™

- Achieve rapid time-to-value.
- Lower the total cost of your application performance management initiative.
- Provide ongoing mentoring to optimize product effectiveness.

INFRASTRUCTURE MANAGEMENT

Mercury provides system availability and performance monitoring products to manage your entire production environment of applications, components, and network devices. We offer the lowest cost of ownership and fastest time-to-value via our unique agentless monitoring architecture. Plus, with support for more than 60 network system management tools and monitors, you can cost-effectively monitor your distributed application environment. You can also dynamically map and model business processes and applications to the underlying infrastructure – helping you reduce the business risks from data center moves and consolidations, as well as proactively manage infrastructure problems and disaster recovery processes.

Mercury's solutions for Infrastructure Management enable you to:

- Deploy system monitoring more quickly and reduce costs.
- Leverage existing investments in system monitoring and help desk systems.
- View user and business performance metrics in a single dashboard.
- Gain complete visibility into your IT infrastructure and assets.

MERCURY INFRASTRUCTURE MANAGEMENT SOLUTIONS INCLUDE:

Mercury Application Mapping™

- Map and model business processes and applications to the underlying infrastructure.
- Reduce risk to business from data center moves and consolidations.
- Effectively manage infrastructure problems and disaster-recovery processes.

Mercury System Availability Management™ (including Mercury SiteScope®)

- Availability and performance monitoring for systems, applications, application components, and network devices.
- Lowest TCO and fastest time-to-value with SiteScope's agentless architecture.
- Manage entire distributed application environment with over 65-plus supported targets and best-practice-based solution templates.

Mercury Managed Services for Business Availability Center™

- Achieve rapid time-to-value.
- Lower the total cost of your infrastructure management initiative.
- Provide ongoing mentoring to optimize product effectiveness.

CHANGE MANAGEMENT

Mercury Change Management solutions help you to reduce the impact of change while also improving visibility and control across the entire change lifecycle. You can map and model business processes and applications to the underlying infrastructure, and automatically detect changes to applications and infrastructure. You can apply process models such as ITIL to standardize and prioritize IT services. You can understand the business impact of planned and unplanned changes, as well as map infrastructure and application changes to relevant business services. Plus, because our solutions are integrated across the testing, deployment, and production stages, we can help ensure quality and performance across the change lifecycle and prevent reoccurrence of incidents.

MERCURY INFRASTRUCTURE MANAGEMENT SOLUTIONS INCLUDE:

Mercury Deployment Management™ (formerly Mercury Change Management)

- Associate infrastructure and application changes to business services.
- Understand the business impact of changes.
- Drill down into changes to identify affected Configuration Items (CIs).

Mercury Application Mapping™

- Map and model business processes and applications to the underlying infrastructure.
- Automatically detect changes to applications and infrastructure.
- Assess impact on business services of planned and unplanned changes.

Mercury Managed Services for Business Availability Center™

- Achieve rapid time-to-value.
- Lower the total cost of your change management initiative.
- Provide ongoing mentoring to optimize product effectiveness.

CONCLUSION

Mercury Application Management solutions address the No. 1 challenge facing IT teams: the disconnect between the business and technology. With our Application Management products and services, you can:

- Increase business visibility into service levels with business, user, and systems performance in a single dashboard.
- Map services and applications to the underlying infrastructure to highlight impact.
- Optimize application availability and performance from an end-user perspective.
- Reduce cost of operations, ensure success of deployment, and speed time-to-value with Mercury Managed Services and Mercury Best Practices.

Mercury offers the only end-to-end application lifecycle solution that ensures service performance and availability throughout testing and production. Ultimately, you can speed time-to-value by building, deploying, and managing high-performance applications that directly support key business goals.

ROYAL CARIBBEAN CASE STUDY

“Mercury allows us to be efficient as an organization. Inefficiencies could lead to profit losses of \$250,000 or more per hour in our customer-transaction systems. If our systems are not available, we could realize loss of business confidence as well as customer and guest confidence. Using Mercury Business Availability Center allows us to be proactive to ensure that we are able to gain efficiencies.”

– Bernard Gay, Vice President of Business Operation Systems, Royal Caribbean

Royal Caribbean Cruises Ltd. is a global cruise vacation company that operates Royal Caribbean International and Celebrity Cruises. The company also offers land-tour vacations in Alaska, Canada, and Europe through its cruise-tour division. Royal Caribbean enjoyed more than \$3.4 billion in revenue in 2002, with 28 ships and more than 30,000 employees.

Royal Caribbean turned to Mercury to leverage its existing investments by integrating its disparate monitoring tools into a centralized enterprise management platform to monitor the entire IT environment. Mercury provides Royal Caribbean with necessary visibility into its application management process. Mercury Business Availability Center, including Mercury Service Level Management and Mercury SiteScope, enables the company to manage IT from a business perspective.

Mercury provides Royal Caribbean with the unique advantage of integrated applications for business availability management, service-level management, and customer impact. Royal Caribbean has used Mercury Business Availability Center to successfully roll out, proactively monitor, and manage PeopleSoft and Siebel implementations as well as web-based applications and a custom reservation system. These improvements have cut unplanned downtime with PeopleSoft, Siebel, and web environments by 50 percent, avoiding the high cost of downtime. In one example, the savings was estimated at \$250,000 per hour. Web service levels have increased from 95 percent to 99.9 percent.

DOW CHEMICAL COMPANY CASE STUDY

"The practice of Six Sigma goes hand-in-hand with taking a business-centric view of managing IT services. We use Mercury Business Availability Center for end-to-end service-level measurement and management, and to support our Six Sigma methodology. As a result, IT and business units alike are aligned around the same quality-centric goals."

– Art Eberhart, Global Director, Information Systems, Dow Chemical

The Dow Chemical Company is a leading science and technology company that provides innovative chemical, plastic, and agricultural products and services to many essential consumer markets. With annual sales of \$28 billion, Dow serves customers in more than 170 countries and a wide range of markets that are vital to human progress, including food, transportation, health and medicine, personal and home care, and building and construction.

During the past five years, Dow's Global IT Services (GIS) organization has elevated its position and status from a cost center to a vital business asset providing strategic services for the company. This progress is due in large part to Dow's focus on using technology to create value and the company's pioneering efforts in the area of Six Sigma, a business-centric quality initiative that provides metrics for ensuring that business processes – everything from manufacturing to billing – run as smoothly, efficiently, and error-free as possible.

Dow's GIS uses Mercury Application Delivery offerings to test its systems under load and stress conditions as well as to automate its functional testing process. Dow is also using Mercury Service Level Management from Mercury Business Availability Center to create "scorecards" that are routinely published internally and to its service partners. GIS also uses Mercury Application Management Dashboard™ to create an executive dashboard view to see whether or not the company is meeting customer expectations.

Once at 3.5 Sigma with respect to SAP application performance and availability, Mercury Service Level Management has helped improve the quality of Dow's systems to well over 5 Sigma. SAP application availability improved from 10,500 minutes of prime time unplanned outages in 1995 to only 33 minutes or primetime unplanned outages more recently. This improvement in the availability of Dow's business-critical SAP systems translates into a \$38.9 million dollar productivity gain over seven years. Dow is able to provide customers with quality service and system availability when they need it.

REFERENCES

For additional information, see the following papers on the World Wide Web at: <http://www.mercury.com/us/products/business-availability-center/index.html>

White Paper

Optimizing Business Availability: Applying Centers of Excellence (META Group)

White Paper

Best Practices in Application Management

White Paper

Quantifying the Value of Investments in Application Management (6 ROI case studies)

White Paper

Mercury End User Management: Aligning Business and IT with the End-User Perspective

White Paper

Application Management: Beyond Network and Systems Management (EMA)

White Paper

How Mercury Business Availability Center Integrates with Enterprise Management Systems (EMS)

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