IBM

Building a foundation for service innovation

Smart is…

Creating a proactive service delivery model that allows IT staff to predict supply and demand, forecast costs, and improve time to market for new services.

For the IBM internal team that provides IT services to more than 400,000 IBM employees and contractors, the key in helping IBM succeed in tough economic times is in its move from an enterprise systems management to an Integrated Service Management model. With this transformation, the team will continue to gain visibility, control and automation across the IT infrastructure to drive service innovation and fundamentally change the economics of service delivery, while satisfying end-user needs.

Nearly five years ago, John Potok, an executive architect with IBM's Office of the CIO, was chosen to head an enterprise systems management initiative that would improve the availability of the company's critical customer-facing and financially significant business processes and applications. Using IBM® Tivoli® Business Service Manager, IBM Tivoli Monitoring and IBM Tivoli Composite Application Manager software, the team created a Global Delivery Business Management service[1] that incorporated service dashboards to measure and monitor business applications from the end-user perspective as well as the underlying infrastructure. This enabled support staff to quickly detect and resolve problems.

At the same time, his colleague Matthew McCarthy, an IBM strategy architect for global asset management, was focused on getting a handle on the company's diverse hardware and software assets—including 450,000 desktops. IBM Tivoli Asset Management for IT, IBM Tivoli Service Request Manager® and IBM Tivoli Change and Configuration Management Database software proved essential to this work.

While each initiative delivered significant returns—reducing costs, decreasing outages and improving staff productivity—Potok and McCarthy today point out that these projects were only the first steps in what would become a larger journey.

"When we started, service management was an evolving concept," says Potok. "To truly enable innovation and change the economics of service delivery, we needed to bring each of those elements together under a unified service management strategy."

Business benefits

- Improved recovery time of mission-critical business applications by up to 15 percent in the event of a failure
- Reduced average outage time, due to failure, of mission-critical business processes by up to 50 percent and expected to help prevent outages
- Avoided nearly US$3 million in software license costs in first half of 2010 through improved software license management; savings expected to double by the end of 2010
- Expected reduction in operating costs and provisioning time with integrated operations, shared services and end-to-end process transformation

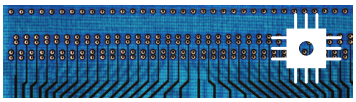
One of the biggest challenges in achieving this goal was in the lack of visibility and control across key business processes end to end. For example, while IT staff could see when a component (e.g., a server) outage occurred, it was often hard to determine which business applications were affected without relying on help desk calls from the users. It was also difficult for staff to confirm the specific configuration of the device, such as how much memory was installed or what problems had been previously reported.

"Before we had to rely on the transient knowledge of the support person to figure out what was on the server or, even worse, they had to physically go out and look at the box," says Potok.

How did that impact IBM's operations? "The better question is how didn't it," says McCarthy. Case in point: When the team was making its business case to move from a systems management to an Integrated Service Management model, outages on mission-critical applications provided the proof the team needed to show that change was necessary.

"Having an Integrated Service Management framework will provide a positive impact on user satisfaction, making sure business services are available to meet their needs," adds Potok.

Smarter Infrastructure: Integrating processes for predictive management



Instrumented

Automated discovery, application mapping and visualization capabilities provide a comprehensive view of attributes and relationships among configuration items and business services.

Interconnected

Configuration and asset inventory data across 450,000 desktops and 10,000 distributed and mainframe servers is stored in a common database for use across service management processes.

Intelligent

New business intelligence into IT infrastructure will help staff predict supply and demand, forecast costs and improve time to market for services.

Solution components

Software

- IBM® Tivoli® Application Dependency Discovery Manager
- IBM Tivoli Asset Management for IT
- IBM Tivoli Business Service Manager
- IBM Tivoli Change and Configuration Management Database
- IBM Tivoli Composite Application Manager for Applications
- IBM Tivoli Composite Application Manager for Transactions
- IBM Tivoli Enterprise Console®
- IBM Tivoli Service Request Manager®

Services

- IBM Global Technology Services—Integrated Technology Services
- IBM Tivoli Software Services

► The inside story: Getting there

Gaining approval and funding for a new IT strategy that can affect more than 400,000 employees across 170 countries can be challenging. "We needed consensus from dozens of different business unit and geography representatives before we could begin," says McCarthy. "The key was getting the executives and the business unit stakeholders to see the business value."

In meeting with stakeholders, the team presented a vision and architecture that was grounded in immediate business requirements. "We had business process availability and software reuse objectives and that's where we started," says Potok. "There are different entry points for service management and, for us, the ones that made sense were systems management, monitoring and asset management."

As part of its presentations, the team emphasized that the goals could only be achieved through a modular approach that would deliver business value at each phase. "This is really a journey," says McCarthy. "We showed that we don't have to implement the whole thing all at once. We're able to implement the components, begin to integrate them, and then build on that integration to provide that end-to-end view."

Additionally, Jeff Anderson, the worldwide Tivoli-Global Services alliance program manager for IBM, points out that having a knowledge partner to support the process helped ease executive concerns. "The linchpin in the organization's ability to change its mindset and take this journey was when we showed the partnership between the Office of the CIO and the Tivoli team and that we weren't undertaking this alone," says Anderson.

Skilled resources ease implementation

The CIO team enlisted the support of IBM Global Technology Services and IBM Tivoli Software staff to support the implementation. "We wanted to ensure that we had people with prior knowledge of the software," says McCarthy. "They [IBM and Tivoli Services] provided deep expertise in how the products were installed and configured and were integral in helping us translate our business requirements and architecture into a deployable solution based on best practices."

"There are different entry points for service management and, for us, the ones that made sense were systems management, monitoring and asset management."

—John Potok, Executive Architect, Systems and Service Management, IBM

Sharing information across processes

As part of its Integrated Service Management initiative for its data centers worldwide, the team's first step was to integrate processes and information to:

- Gain greater visibility and control of key business processes including business applications and the underlying IT infrastructure
- Automate service execution processes to shorten cycle time and improve efficiency throughout the service life cycle
- Automate supply-side delivery of IT services and resources through comprehensive service catalogs

Integral to this effort is the creation of a trusted source for reliable and current configuration and inventory information using IBM Tivoli Application Dependency Discovery Manager and IBM Tivoli Change and Configuration Management Database software. Automated discovery and visualization capabilities, along with the ability to integrate data across IT processes, such as availability, problem and change management, provides operations staff unprecedented insight into and control of business applications and the supporting infrastructure.

"We had some of the tooling in place already," says Potok. "But when we integrated them, we gained the visibility, the control and the automation over availability management, software license management, portfolio management, etc. to truly change the dynamics of service delivery."

For example, when an outage is reported, support staff will be able to investigate the ticket and review the actual configuration information, including cross-tier dependencies, runtime configuration values and complete change histories right from their desktops. Any necessary changes, such as requesting the implementation of a software patch, will be automatically routed through the necessary channels and, once approved, the appropriate resource can be automatically assigned and contacted to initiate the process.

"We will have the right information at the right time in front of the right person to reduce the time and cost of responding to service and change requests," says Potok, who estimates that the organization currently supports about 1 million change tickets and 1.5 million problem tickets worldwide each year.

"Before data was fragmented. This solution is helping us bring the data together so that we have usable business intelligence."

—Matthew McCarthy, Strategy Architect, Global Asset Management, IBM

Enabling predictive management

One of the most significant benefits of moving to an Integrated Service Management model will be a new level of business insight that helps operations and support staff anticipate and proactively respond to infrastructure problems, and stay ahead of business requirements. "Before data was fragmented," says McCarthy. "This solution is helping us bring the data together so that we have usable business intelligence and can begin to predict supply and demand issues, forecast costs and improve time to delivery."

For example, data from problem and change tickets can be used to help operations staff identify server availability and software stability trends, such as if a particular software version is error prone, and initiate a "fix" to avoid potential problems. Likewise, the team can review availability trends for critical business applications and provide feedback to the application owners. With this information, application owners can take action, such as upgrading a system, to avoid future degradation in service availability. Visibility into trends regarding software support life cycles enable staff to better plan for and forecast software upgrades and avoid service premiums levied on out-of-support products.

Additionally, greater insight into configuration data will help staff to optimize platform selection and confirm that core business applications run on the most efficient and cost-effective systems. It also serves as a prerequisite for key IT initiatives, like cloud computing and virtualization, that can help improve service utilization and reduce power and cooling costs.

Already, with its work to date, the organization has improved the recovery time of mission-critical business applications by up to 15 percent in the event of a failure and reduced average outage time by up to 50 percent. It also avoided nearly US$3 million in software license costs in the first half of 2010 (with savings expected to double by the end of 2010) through improved management of software license inventory, request, return, entitlement and reuse of third-party desktop software licenses. Further reductions in operating expenses and faster provisioning of new services are expected as additional work is completed to promote integrated operations, shared services and end-to-end process transformation.

The next phase of the journey will focus on service provisioning. "We've begun building the foundation," says McCarthy. "Over the next few years, the goal is to turn this information into executable automation so that new services can be delivered in real time across business units and geographies."

For more information

To learn more about how IBM can help you transform your business, please contact your IBM sales representative or IBM Business Partner.

Visit us at: **ibm.com**/tivoli

IBM Corporation
1 New Orchard Road
Armonk, NY 10504
U.S.A.

Produced in the United States of America
August 2010

[1] The Global Delivery Business Management service, powered by IBM Tivoli Software, is offered by IBM Global Technology Services. For more information, contact us at: e2egbm@us.ibm.com.

Please Recycle

TIC14128-USEN-00