DEUTSCHE TELEKOM AG

» Taking the pain, cost, and complexity out of middleware management

BEFORE

- » Slow, labor-intensive approach to monitoring middleware
- » Unacceptably low success rate of change requests
- » Difficult to determine how well communications services were performing
- » Hard to identify the root cause of a degradation in performance
- » No reliable means of estimating the business impact of incidents

AFTER

- » More than 90 percent of change requests are now completed in 15 minutes
- » Reduced number of expensive outages
- » Enhanced customer service, while improving end-user productivity
- » Shared view of performance trends and accurate forecasting of capacity needs
- » Minimized risks associated with performance problems and outages
- » Enhanced relationship between IT and business stakeholders

Deutsche Telekom

GEOGRAPHY
Bonn, Germany

INDUSTRY
Telecommunications

SOLUTIONS
BMC Middleware Management

How does one of Europe's largest and most successful telecommunications providers ensure the health and availability of its complex middleware environment? That was the challenge facing Deutsche Telekom as it labored over a slow, manual, resource-intensive approach to monitoring and managing the German company's WebSphere MQ messaging-oriented middleware technology. Once the company discovered BMC Middleware Management, it never looked back.

By proactively managing Deutsche Telekom's middleware environment, the IT team has reduced service disruptions and ensured faster resolutions when problems do occur. Satisfaction among business service stakeholders is rising, more change requests are being completed more quickly, and Deutsche Telekom is minimizing the risks associated with performance problems and outages.

A BUSINESS DRIVEN BY SERVICES

Deutsche Telekom is one of the world's leading integrated telecommunications companies, with approximately 129 million mobile customers, 36 million fixed-network lines, and more than 16 million broadband lines. Deutsche Telekom's service-oriented architecture (SOA) strategy is the heartbeat of its business. Interoperable services support many of the German telecommunications company's products and solutions, and they are never far from a customer interaction or transaction.

More than 1,000 mission-critical applications rely on the enterprise service bus (ESB) messaging middleware component of the SOA and some 70 million messages pass through the ESB every day — and unless those messages pass at optimal speed and reliability, Deutsche Telekom risks undermining the quality of service that is a hallmark of its business.

Take the example of a customer contacting Deutsche Telekom to inquire about the availability of different broadband/DSL telecommunications services to his or her home in Germany. Customers can go online and click on a link to receive an automated reply, or they can choose to speak to an agent in the call center. On average, Deutsche Telekom processes up to 300,000 inquiries for this business service every day — and it's a service that involves hundreds of applications synchronized to deliver a fast, accurate response.

IDENTIFYING THE ROOT CAUSE OF MIDDLEWARE PROBLEMS

There is an inevitably high degree of complexity when business-critical applications depend upon an underlying ESB. This makes it very difficult for the Deutsche Telekom team to determine how well the applications are performing, and if there was any degradation in performance, it would be consequently hard to identify the root cause of the problem. Moreover, in the unlikely event of an error on the ESB, a system crash, or a general performance slowdown, there was no reliable means of estimating the impact on the business.

> "Using the middleware monitoring solution from BMC Software, we now have a transparent view of transaction performance and availability. We can see a shared view of the root cause of the problem, and that's helping to eliminate finger-pointing and enable a closer degree of working together."
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> **AXEL VON DIELINGEN**
> **GENERAL MANAGER AT GEYER & WEINIG**

In fact, 12 years ago, up to 50 percent of requests about Deutsche Telekom services were failing. Instead of a quick, accurate response, customers and staff simply saw the following message on their screen: "an error occurred." For example, if customers were experiencing Internet connection problems, one of the troubleshooting methods was to reconfigure the carrier network line with an end-to-end change port. However, this reboot only worked in about half the cases it was applied, owing to shortcomings in the middleware environment.

Axel von Dielingen is general manager at Geyer & Weinig, a company working closely with Deutsche Telekom to tackle its middleware management problems. Throughout Germany, Switzerland, and Austria, Geyer & Weinig is among the leading specialists for the conception and implementation of middleware-based monitoring solutions. "Every day, changes are being made to the infrastructure and the dependencies between those changes and the underlying business processes could not be estimated easily," he explains. "In the past, Deutsche Telekom put together a task force involving application stakeholders, system administrators, and other teams to tackle the challenge. They spent months trying to identify any irregularities in the log files or system monitoring tools, which was slow, resource-intensive, and didn't result in a great deal of success. We had to find an alternative means of ensuring application performance satisfied business service delivery."

BMC SOFTWARE BEATS IBM TO MIDDLEWARE MANAGEMENT

Three years ago, von Dielingen and his team performed a proof of concept of BMC Middleware Management (at the time MQSoftware) against an alternative solution from IBM. "The technology approach from the two solutions was similar. However, BMC Middleware Management impressed us with the level of support and the expertise of the team behind the technology. Their post-sale service was excellent too."

Geyer & Weinig used its high-level experience and deep-rooted knowledge of Deutsche Telekom's infrastructure to implement BMC Middleware Management to automate the management of the telecommunication giant's middleware performance and administration. The design of technical monitoring profiles, including the performance of procedure, documentation, and operation-related issues, is a service of Geyer & Weinig's portfolio that may be of interest to other customers as well.

The solution monitors the company's WebSphere MQ messaging-oriented middleware technology, together with the application servers and ESB. From a single, unified console, Deutsche Telekom receives an "early warning" about conditions that could affect business operations. The IT team can then drill down into real-time views of performance in order to quickly assess the health and application use of its middleware technology. BMC Middleware Management also gives the organization the flexibility to report on trends, predict future requirements, and analyze system issues.

The BMC Software technology was initially used by those members of the IT staff responsible for administering the ESB. Over time, von Dielingen's team added interfaces to other monitoring and reporting systems, providing more and more Web views into BMC Middleware Management. Individuals analyzing the performance have most recently been broadened to those responsible for application operations, governance, and business services. "BMC Middleware Management is re-shaping Deutsche Telekom's middleware environment, reducing service disruptions and ensuring faster resolutions whenever problems do occur," says von Dielingen.

MEASURING AVAILABILITY AND PERFORMANCE OF BUSINESS SERVICES

Deutsche Telekom can refer to several key performance indicators to validate the success of the BMC Middleware Management implementation. First, the team now has a compound indicator to examine the availability and performance of a business service, including how often it fails and the relationship between success and failure.

Second, the carrier network service reboot process that previously only worked in about half of cases now exceeds 80 percent, thanks to the automated middleware management. The service change consists of synchronous and asynchronous parts, and the Deutsche Telekom staff can now simply key in the technical data to the Web application to identify the customer's specific phone or broadband line. A request to reboot the line takes 10 seconds, and within 15 minutes, an email arrives to confirm the line is up and running again. In the past, it sometimes took hours for that confirmation email to arrive. "Before we used BMC Middleware Management, about 70 percent of all change requests arrived within 15 minutes — the rest took hours; now that figure is more than 90 percent," says von Dielingen.

One of the other benefits of using BMC Middleware Management is that the technology has brought Deutsche Telekom stakeholders together. He explains, "Using the middleware monitoring solution from BMC Software, we now have a transparent view of transaction performance and availability. We can see a shared view of the root cause of the problem, and that's helping to eliminate finger-pointing and enable a closer degree of working together."

So where would von Dielingen be without BMC Middleware Management? "Our Business Service Management strategy would be in the stone age," he says.

ABOUT DEUTSCHE TELEKOM

Deutsche Telekom is one of the world's leading integrated telecommunications companies, with approximately 129 million mobile customers, 36 million fixed-network lines, and more than 16 million broadband lines. The company is present in around 50 countries. With a staff of some 247,000 employees throughout the world, Deutsche Telekom generated revenue of EUR 62.4 billion in the 2010 financial year, over half of it outside Germany.

BUSINESS RUNS ON I.T.
I.T. RUNS ON BMC SOFTWARE.

Business runs better when IT runs at its best. That's why more than 25,000 IT organizations — from the Global 100 to the smallest businesses — in over 120 countries rely on BMC Software to manage their business services and applications across distributed, mainframe, virtual and cloud environments. With the leading Business Service Management platform, Cloud Management, and the industry's broadest choice of IT management solutions, BMC helps customers cut costs, reduce risk and achieve business objectives. For the four fiscal quarters ended March 31, 2012, BMC revenue was approximately $2.2 billion. Visit www.bmc.com for more information.