

Application Performance Management

Compuware APM for SAP Applications

- gkv Informatik
- Certia
- Woongjin Holdings

Introduction

A lack of service availability or poor performance can quickly lead to a drop in user adoption and consequently to productivity losses as users revert to manual processes. For users to get the job done efficiently and effectively, they must have continuous high performance and availability regardless of their locations or the devices they use.

The SAP Performance Challenge

In a previous Pierre Audoin Consultants study, we showed that:

- Of the organizations surveyed, **50 percent** said they are not satisfied with the proactive control of the overall performance of their SAP environments.
- **52 percent** struggle with the detection of performance problems.
- **53 percent** say troubleshooting performance issues and gathering root cause is a challenge.
- Nearly all the companies recognize that SAP performance problems result in financial risk exposure, and only **30 percent** are able to measure the financial loss.

Companies make major investments in SAP applications to improve business-critical processes, cut operational costs and increase efficiencies across their organizations. There is no question that, if done right, SAP can be a huge value and benefit to a company's bottom line. To deliver on this promise, and return tangible ROI, the business is putting great pressure on the IT department to deliver absolutely best-in-class SAP services.

This is easier said than done in today's highly integrated application delivery chain where there are a great many connection points, and points of potential failure, between the end user and your data center. And, any and all of these areas along the chain can experience problems and impact SAP system performance, and thus your user and business capabilities.

With so many points of risk, it can seem a challenge to monitor all of this, or quickly pinpoint and resolve problems. So how can you ensure excellent performance and reliability when facing the complexities of today's application delivery chain?

This paper describes the Compuware APM solution for SAP applications and how three companies proactively, with thousands of users and complex SAP environments, managed the performance of their SAP services. Each customer case will describe the value they are getting from the Compuware APM for SAP solution and share their challenges and best practices.

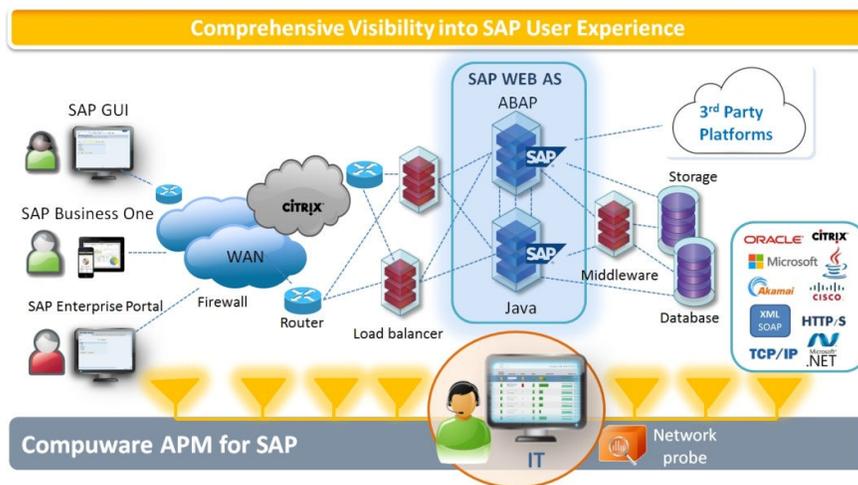
The Solution: An Overview by Compuware

In a stable SAP production environment, the reality is that the majority of the issues do not come from the SAP components themselves. Instead service performance issues frequently originate from other non-SAP components. For example:

- Users accessing from remote locations (via mobile or laptop) across the Internet or LAN through the data center
- Thin clients, WebGUIs, Internet service providers, firewalls, load balancers, Citrix servers, SAP routers, databases or calls to third-party solutions
- Human error or user behavior, such as lack of training, incorrect use of SAP transactions or too many concurrent SQL queries

These have a very negative impact on response time and the user experience because what look like SAP problems might not be SAP problems at all. They make it critical for IT to monitor the service performance from an SAP user perspective.

The SAP-certified Compuware APM solution complements and extends the existing SAP tool set, such as **SAP Solution Manager**, to give full visibility into the true SAP user experience, whether the user is inside the company (employees, departments) or outside the company (customers, suppliers).



Compuware APM provides:

- Proactive performance issue detection
- Broad visibility across the SAP application delivery chain
- True insight into the end-user experience (EUE)
- Deep troubleshooting capabilities down to the SAP T-code

Irrespective of how your users connect to SAP (local or remote, Citrix or WebGUI), Compuware provides real-time analysis of the real end-user performance of critical SAP transactions. It generates alerts when performance drops below thresholds that can be dynamically adjusted or preset. It also provides role-relevant, deep-dive

diagnostic and business-impact information to IT, SAP application owners and the line of business.

This unique approach offers broad visibility into the performance of 100 percent of SAP user transactions and the supporting infrastructure, including:

- All tiers found on the service delivery path
- The true end-to-end SAP user experience (transaction)

1. Customer Case Study: gkv informatik, Germany

gkv *informatik* in Wuppertal, Germany, is an IT service provider of infrastructure and SAP applications. Clients of the company include BARMER GEK, HEK and a range of local statutory health insurance companies (AOKs).

The SAP Environment and Context

gkv *informatik* operates around 600 SAP systems. Many of the SAP users, around 35,000, access the application via a disparate network of branches. The core system is made up of a client-specific application called oscare®, which was developed by AOK Systems GmbH based on the requirements of the statutory health insurance companies in Germany. The mission-critical SAP processes include financial accounting and controlling, claims management, CRM, payroll and personnel management, supplier relationship management and business analytics.

The Performance Challenges

The company had no visibility into SAP user experience in terms of response time and the quality of service metrics. They had difficulties reporting on the service levels agreed upon with their clients. Without reliable metrics, defining acceptable levels of SAP performance and delivering against the SLAs was nearly impossible.

In reality, gkv *informatik* was only able to get a sense of the performance of the physical systems in the data center in terms of CPU, memory or disk availability, but nothing tied to the end-user experience (EUE). In addition to the inherent complexity of a distributed SAP environment, users would access the application via a Citrix terminal server, making it very challenging for IT to detect, capture and monitor the user experience across the infrastructure tiers.

The company initially implemented automatic, computer-generated synthetic transactions (robots) to simulate end-user traffic. This turned out to be inadequate, as it did not produce the anticipated results and was too difficult to handle. After looking at different solutions, gkv *informatik* realized it needed a solution capable of monitoring the performance of the real SAP transactions occurring on the network and executed by its real users.

The Deployment of the APM Solution

With the Compuware APM for SAP solution implemented, gkv *informatik* was able to easily capture response time and availability as well as the number of SAP users impacted by performance — right out of the box. The company now operates from a single console and can monitor in real time the performance of every single tier found between the users and the SAP back-end system for every single SAP transaction. The information on the

dashboard consists of a consolidated report from different data sources: all SAP transactions executed by the users, the synthetic transactions simulated via robots and the network performance monitoring data.

Why Compuware APM for SAP?

The choice of Compuware APM was made based on its ability to capture precise response-time measurements of user transactions accessing the SAP system via a Citrix terminal server. The solution determines the utilization of the Citrix terminal server and the performance of the Citrix network, in context of the SAP application performance, to produce an end-to-end view.

Furthermore, the detailed performance analysis report helps the IT department find causes of infrastructure problems faster and almost immediately can identify the affected locations, or tiers at fault, and respond accordingly in a more efficient and timely manner.



Only after we installed the [Compuware APM for SAP] solution were we able to limit the cause of bottlenecks for transactions on the SAP and Citrix environment.”

–Hans-Jürgen Müller, Departmental Head of Operations Monitoring, gkv informatik

In addition, the solution provides SLA reports for each client and for each site, making the report generation easier and faster, taking the process from hours down to minutes to complete.

Finally, the trend analysis reports produced by the software include traffic evolution and performance baselines over time, which have enormous significance when planning for the future expansion of the SAP environment and the required capacity of the IT infrastructure.

2. Customer Case Study: Certia, Finland

Certia is a public-sector service company in Finland that provides the country's universities with IT-based services in the field of financial accounting and human resource management.

The SAP Environment and Context

Certia offers SAP-based business services (financial and human resource management) to eight of its clients. SAP is also used internally at Certia, including SAP ECC with HCM, SAP BW, SAP IDM for identity management and SAP PI for process integration.

The majority of its 15,000 users access the system via SAP Enterprise Portal. A smaller number use SAP GUI while a few others use the SAP GUI in a Citrix environment. Certia does not operate the SAP systems itself, leaving that to Atos, an IT service provider. The company has also outsourced the hardware infrastructure to the IT service provider CSC.

The Performance Challenges

Certia sought a solution that provided a broad monitoring view of the performance of the entire SAP and non-SAP environment, with insights into the quality of the service delivered. Assessing the quality of service from an end user's perspective was a must-have requirement for the client.

First-line support is handled by a fairly small Certia IT team. Given its size, the team could not afford to operate in a firefighting manner when issues occurred. Certia realized it needed to switch to a more proactive approach and sought an efficient solution that could detect and identify potential performance problems even before they impacted the SAP users. Certia also needed a way to reduce the time individually spent on unplanned tasks such as troubleshooting issues, reproducing incidents, gathering applications and generating system logs. In addition to rapid fault domain isolation, Certia required the solution to rapidly investigate the cause of any poor response time or performance issue whether it originated from the SAP system or not. Also, the company asked that the chosen solution offer a granular view into every client and each individual user-interaction with the SAP system. The ultimate challenge was that the solution would be operating from two Certia sites: one in Helsinki, Finland, and another in London, U.K., which would combine organic and other data from different service providers (Atos and CSC).

The Deployment of the APM Solution

Today, the company uses Compuware APM for SAP to continuously monitor the overall performance of the SAP application and thus the service levels delivered to the end users and customers. It gives the IT department deep insight into the contribution of the network and/or the application layers in terms of slow response time or latency experienced by the SAP users.

For each user, and for each transaction, Certia customer support now can determine precisely the quality or performance of the SAP service currently offered to each individual user. It shows the SAP transactions as well as gets down to the sub-transaction for impact analysis and troubleshooting.

Certia leverages Compuware APM's agentless solution for SAP which passively monitors the network traffic. This fits very well because no agent installation is required, making the solution a risk-free add on, which does not interfere with the SAP system or Solution Manager, and therefore has no ties to system upgrades. This was a must-have during the selection process so that Certia could address their external services providers and their customer organizations, as very few universities would allow installing software agents on their premises.



We need to be able to monitor all elements of our service so we can identify and eliminate problems before they impact our clients."

--Heikki Syrjälä, CIO, Certia

Why Compuware APM for SAP?

Certia now can combine performance monitoring with business service management, monitoring SAP performance and ensuring that financial management and human resource services meet the quality levels agreed upon with the customer.

If any performance problems occur, Certia experts can immediately locate the issue, identify what tier is at fault, determine how many SAP users impacted and gather the necessary troubleshooting information for the specific support team to fix and restore the service in a timely manner. Performance monitoring of the hardware, the network and the software components are now all being performed from the Compuware APM one-stop console. There is no need to learn, use and maintain the myriad system-specific monitoring tools the company used to run.



The more we found about the Compuware solution, the more impressed we were. You can even track performance at the level of SAP transactions and sub-transactions — no other product we saw does that."

— Heikki Syrjälä, CIO, Certia

3. Customer Case Study: Woongjin Holdings, South Korea

Woongjin Holdings is an IT services company in South Korea that provides shared services for its parent company, Woongjin Group. The group consists of several businesses that offer various goods and services in the fields of education and publishing, consumer and household electronics, food and beverages, solar energy, chemicals, construction and finance.

The SAP Environment and Context

The company runs SAP ERP as the core business application for all its business entities. This includes finance and controlling, treasury management, materials management, sales as well as transportation and distribution.

Woongjin's SAP system is accessed via the web front-end and SAP GUI, by both the internal users and sales representatives who frequently work outside the office. Overall, Woongjin has about 12,000 SAP end users and around 2,200 SAP transactions per second.

The Performance Challenges

The growing number of users and transactions caused the SAP application to show signs of slowness and the number of unsatisfied SAP users to increase. Therefore, the company sought ways to proactively monitor the service users were getting in order to improve the performance and reduce the time and costs associated with resolving issues.

When a performance issue occurred that impacted a client, IT would work as fast as possible to gather root-cause analysis information in order to accelerate the investigation and restore service. In addition, Woongjin received complaints from users about the performance of the SAP application when, in fact, the problems were caused by the users themselves improperly operating the system.

The Deployment of the APM Solution

Woongjin decided to deploy Compuware's real-user monitoring solution for data centers. The company could monitor the SAP application to cover both SAP and non-SAP system performance and availability, all from a single console.

Why Compuware APM for SAP?

It was the agentless and passive real-user monitoring solution that first caught the interest of Woongjin, as it provides the ability to proactively monitor the performance of the SAP and non-SAP components driven from an end-user perspective. It was the only solution they reviewed that rapidly identified and isolated SAP performance and availability problems with real-time and synthetic monitoring of the entire service delivery chain, not just the SAP parts.

Overall, the solution provided a holistic view of the behavior of applications by considering all tiers of the respective IT environment, from the user front end, through the data center, to the back-end database.



Compuware's performance management system provides a comprehensive view of user information, application, transaction, server, region and quality per task group. As business applications and infrastructure are so closely linked, a holistic approach to management through application-centric monitoring from the customer's perspective is imperative these days."

--Seung-hyun Kim, Department Head, Woongjin Holdings

In addition to providing performance metrics, Compuware APM shows SAP process usage by department and group, complete with user-level details and information on the transactions, servers and business processes used. These features, combined with flexible reporting capabilities (on system availability, for instance), are critical to improving IT's ability to do its job well. This, in turn, provided better quality of service and ensured Woongjin Holdings met the service levels agreed on with the business.

Conclusion

The customer case studies described in this paper show that companies can benefit from a monitoring solution that considers application performance from the end-user perspective. This is in line with the market trends of adopting transaction-centric application performance management solutions versus the more traditional IT component-based performance management solutions.

The growing complexity of today's interconnected applications and systems, coupled with the growing demand for faster digital services, requires performance to be assessed from the customer perspective.

The companies we have interviewed have thousands of users who rely on SAP every day to run their businesses. Poor performance — due to the application itself, the network, the system or any other component — is just not an option. Today, IT departments want to move from being reactive to end-user complaints to becoming proactive for all the following reasons: ensuring best availability and serviceability of the revenue-generating applications, increasing user adoption, reducing operational cost, increasing productivity, and ultimately creating extra time for IT staff to work on strategic projects.

Pierre Audoin Consultants believes the new way of managing the business should be based on what matters the most: the customer's, or end user's, perspective. APM solutions can, in many cases, be an answer to today's performance challenges.

From Compuware's point of view, whatever the initial business driver for selecting an APM solution for SAP, these companies found Compuware APM for SAP to be the ideal solution for them because it:

- Extends the SAP Solution Manager capabilities
- Provides fast detection of performance and availability issues and quickly pinpoints problem origins
- Is a passive agentless solution so there's no intrusion into the SAP system
- Monitors all users, all SAP transactions, from all locations, through all infrastructure tiers, 24/7

About Compuware APM

Compuware APM is the industry's leading solution for optimizing the performance of web, non-web, mobile, streaming and cloud applications. Driven by end-user experience, Compuware APM provides the market's only unified APM coverage across the entire application delivery chain — from the edge of the Internet through the cloud to the data center. Compuware APM helps customers deliver proactive problem resolution for greater customer satisfaction, accelerate time-to-market for new application functionality and reduce application management costs through smarter analytics and advanced APM automation. With more than 4,000 APM customers worldwide, Compuware is recognized as a leader in the “Magic Quadrant for Application Performance Monitoring.”

Compuware is a member of the SAP Partner Program. Compuware APM has been validated by the SAP COIL Labs for “Certified Integration with SAP NetWeaver.”



To learn more about Compuware APM, go to compuware.com/sap or contact APMsales@compuware.com.

About Pierre Audoin Consultants

From strategy to execution, PAC delivers focused and objective responses to the growth challenges of Information and Communication Technology (ICT) players.

Founded in 1976, PAC is a privately held research and consulting firm for the software and ICT services market.

PAC helps ICT vendors optimize their strategies by providing quantitative and qualitative market analysis as well as operational and strategic consulting. It advises CIOs and financial investors in evaluating ICT vendors and solutions and supports their investment decisions. Public institutions and organizations also rely on its key analyses to develop and shape their ICT policies.

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