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Why Tracking Performance is Essential for SOA Success

By Paul Ellis and Mike Malzacher



Application Performance Management (APM) and Service Oriented Architecture (SOA) are both heading into the mainstream, thanks to organizations' need to cut costs, improve efficiency and ensure optimal performance of their customer-facing applications. In fact, the

need for APM increases with complex SOA implementations. After all, you won't know that your application isn't properly serving your customers if you don't have a way to monitor its availability and performance.

APM, which now enables a company to monitor the online experience of users and the performance of critical applications, had its start in the realm of traditional distributed applications and now includes the management of important elements of SOA. APM allows a company to monitor and measure transactions from end-to-end as well as service-level agreements (SLAs) so that performance can be quantified and managed.

And the need to monitor performance and availability becomes even more important with SOA, which is far more complex than its predecessors and often runs across different silos throughout and outside an organization. To track the performance of a transaction and ensure that it is not failing, you need end-to-end visibility into the full path of the transaction — through the entire IT environment and associated components. A comprehensive APM solution can provide this.

We recently commissioned two separate, independent surveys on APM and SOA, and discovered some interesting correlations between the two technologies.

In our APM survey of 400 IT officers, performed in conjunction with *CIO* magazine and IDG Research Services, we found that respondents from all countries value APM for its ability to gain visibility from the end-user through the entire application infrastructure, with the capacity to correlate end-user transaction issues to the supporting application.

We asked participants to rate the importance of monitoring and measuring the end-user experience, and 79 percent said it is very important (extremely/very important). The reason? APM can help organizations detect failed transactions and help determine the root cause proactively and quickly. After all, if your first indication of a problem is an angry phone call from a customer, you're too late, since many other customers have probably already been affected.

This type of risk to business operations due to poorly performing customer transactions was certainly not lost on our respondents. A full 88 percent said that understanding the business impact of performance issues was extremely or very important.

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Similarly, 78 percent of the 615 respondents to our SOA survey, conducted by TechWeb and *Information Week*, said they plan to run mission-critical SOA applications in a production environment.

SOA has clearly achieved mainstream status. An average of 68 percent of respondents said that their company has already implemented some form of SOA application. (Those that had not at least begun to plan a SOA implementation were disqualified from the survey.) And more than 50 percent said they plan to implement SOA solutions within the next year.

More than half (55 percent) of respondents said current or planned SOA implementations are internal *and* external. This increasing confidence in SOA could be a result of APM's ability to deliver acceptable service levels across the enterprise, both internal and external. While SOA performance is most often measured in external applications, many organizations are starting to see the value of measuring performance at both levels. While poorly performing external systems can impact revenues, underachieving internal applications can result in a lack of productivity and slumping morale.

SOA, as with many other new technologies, requires that business-process owners participate in managing the customer experience. Yet only 40 percent of respondents said business process owners are proactively involved with application SLAs, and 39.8 percent said that

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monitoring is handled by IT. This is significant because it shows IT is no longer just a provider of technology services but is, increasingly, a key player in the business process.

Often, however, the IT department and the business owners come from different disciplines and use different jargon. When working together, it's essential that they communicate using the same information and terms. A solution such as CA Wily APM provides common measurements and language that both technical personnel and business-unit leaders can understand.

Another important finding from the SOA survey is the solid indication that Microsoft .NET is gaining in popularity along with Java as an application development environment. When asked which application development environments they expect to invest in over the next 12 to 18 months, 63 percent of respondents worldwide mention

Microsoft.NET, followed by Java (47 percent) and SAP NetWeaver (32 percent). Many organizations, however, will employ both Java and .NET environments.

Running a dual-environment proves challenging because it is difficult to measure performance of applications that span different platforms. As a result, most companies that operate mixed platforms gauge performance with two different measurement tools. And that means they may be measuring disparate Key Performance Indicators (KPIs) and communicating results in different languages. Again, CA Wily APM can measure both using the same tool, communicating results in the same language.

Finally, 60 percent of respondents said they are likely to invest in server virtualization over the next 12 months. Virtualization will add yet another layer of abstraction and complexity to the IT landscape. When you spread out both the processing and the storage capabilities, it becomes even more essential to have an end-to-end visibility of the entire transaction path.

Given these complexities, it's easy to see why more than half of all respondents worldwide (51 percent) said their top concern with regard to the implementation of virtualization technologies is determining and managing both physical and virtual servers.

Overall, these two surveys show that as SOA continues to gain favor as an application development and deployment platform, APM will become a critical part of managing the infrastructure. We believe that APM should be part of the DNA of an enterprise that's implementing Web-based applications, regardless of whether the architectural construct is Web services, SOA or distributed applications.

Paul Ellis, Senior Marketing Manager for CA Wily SOA initiatives, has over 30 years of IT experience spanning a wide range of disciplines including world-wide marketing, product management, strategy and sales related responsibility at companies like IBM, Amdahl / Fujitsu Software Group and Memorex. His background includes significant experience in infrastructure management software and on-demand applications, in addition to storage and communications hardware platforms. He has written articles and delivered presentations at industry conferences in the Americas, EMEA, and Asia Pacific linking business needs with technology solutions.

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