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End User Experience -- The Performance Management Hat Trick



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Get Ready for a Third Stakeholder -- IT, The Business and now, the End User!

Enterprise applications like ERP, and CRM and SCM automate complex business processes where high levels of application performance are crucial. Yet many frustrated execs find that despite the small fortune they have spent on products to manage servers, networks and applications, the users of those applications still complain about the performance, usability and availability of those enterprise applications.

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Traditional monitoring and management tools manage factors that impact end user experience, but they are blind to the actual end user experience. Excellent tools for measuring application availability, they provide no insight into real application performance from the perspective of the end user. The time has come to expand performance management horizons to include the end user experience. A recent report by Forrester Research, [IT End User Experience Monitoring Software](#) (June 8, 2007) set the stage with a subtitle that proclaimed "The End User is the Ultimate Judge of IT Performance". Judge and jury, in fact.

If one were to think of the performance management landscape as a three-legged stool, securing solid infrastructure is the first leg, managing applications to perform well and function properly is the second leg, and the third leg is managing the end user experience -- capturing metrics and monitoring the end user interaction with the application. The first two legs of the stool are critical to the success of any IT department deploying critical enterprise applications and most IT departments have these technologies installed. But while the third leg is equally important, it has not, historically, been given sufficient consideration in the discipline of application performance management.

Forrester Research has some insight that suggests that is about to change. They have recently forecast that the market for end user experience management solutions will grow by 20% in 2007. End User Experience Management software monitors enterprise applications from the perspective of the end user to capture the actual end user experience. These solutions focus on ensuring that from the end

user's perspective the application is truly performing – meaning it is actually enabling them to effectively execute the key processes required for them to deliver against the responsibilities of their role. An increased focus on the end user will make the world of performance management a good deal less wobbly.

It's the end-user, stupid!

From the end user experience perspective, the application is “not performing” whenever the application makes it harder rather than easier to get the job done. With that perspective, end user management solutions monitor and measure a number of factors:

- Slow transaction times
- Cumbersome navigation
- System Errors (e.g. can't connect to server; data base not found)
- Non-intuitive user interface which causes excessive user errors

A full-featured end user experience management solution captures transaction response times as well as ecosystem and application errors. Because these systems are designed to be real time monitoring solutions deployed in high volume production environments, these systems capture end user metrics from all users, at all locations, at all times, across the entire application landscape. Some end user experience management solutions also capture a record of the end user interaction with the application which provides a 'play by play' recap of both application and end user behavior. These end user metrics and behavioral insight can be used for alerting and proactive remediation of end user issues -- whether they are system errors, user errors or performance problems.

What is often too overlooked in the performance management discipline is that application performance is just one of the key drivers of return on investment (ROI) from enterprise applications. Of course, an efficient, responsive infrastructure, and a well-performing application are necessary. But, it's all for naught if you do not build and sustain adoption and efficient and effective use of the application by your end users. So user performance is also critical. Leading edge companies are discovering that a comprehensive performance management strategy must reach beyond infrastructure and application performance to the monitor, measure and manage how end users are utilizing the application to optimize business process execution. The newest generation of end user experience management solutions is extending the traditional perspective of user-centric application monitoring to include a focus on end user adoption, utilization and performance and delivering a solution designed to manage both end user experience and end user performance.

These End User Performance and Management (EPM) solutions provide a complete picture of end user experience by focusing on both the experience the end user receives from the application and the performance the end user achieves working with the application. A fully featured EPM solution uniquely captures a complete picture of the end user experience and behavior:

- Actual user-experienced response time for key system transactions, such as navigating between application screens, save operations, execute operations, etc.
- Complete “quality of experience”, including system and application errors and user created errors
- Comprehensive perspective of application utilization – which transactions are used, in what sequence, for how long, etc.

Like traditional end user experience management solutions, EPM solutions are used for alerting, proactive remediation and root cause analysis of end user issues and application performance problems. However, with the insight they provide about user performance, they also provide actionable insight into process compliance, training requirements, adoption issues and a number of other application management dimensions that are beyond the scope of a traditional performance management remit.

Unusual Perspective Delivers Unusual Insight

The end user vantage point is the parallax view for performance management. By measuring performance from the perspective of the end user, you observe application performance from a new angle, thus gain insights unavailable before. Consider this real life situation experience from a financial services company who deployed an EPM solution along with their CRM solution. The time to execute searches, particularly user-defined queries, was exceptionally long – an inefficiency that is particularly painful with the high cost workforce and high stake relationships in financial services. Without the visibility provided by the EPM solution, the IT team would have begun to look at the ‘usual suspects’ – the server utilization, the network, the database structure – even though all backend systems were showing “green” on all the systems management dashboards. The application performance team would have revisited the load testing to try to find the bottlenecks. And all to no avail. Because the problem was directly tied to the common end user behavior of executing the queries with no specified parameters. This particular usage, which could have been predicted to be problematic, had been overlooked in the training. But, as often happens, end users do unexpected things in unpredictable ways. In this case, the EPM system quickly highlighted that fact, having captured the actual user behavior before, during and after the transaction. Based on data about actual end user behavior, the IT department promptly identified the root cause, which was then addressed with a two-fold strategy: first, they provided targeted user training in order to avoid the problem; and secondly, they re-engineered the application to disable that possibility for a long term fix. With insight gained via the parallax view of the end-user’s perspective, the real root cause of the performance problem was quickly detected. The productivity losses and infrastructure impact of excessively long (and often failed) queries had amounted to thousands of dollars each day.

A consumer packaged goods company deployed an EPM solution to optimize end user proficiency with their ERP solution. They had reached a sustainable maturity level in their ERP implementation and wanted to focus on optimizing the effectiveness of the employee population when using the application. They knew they needed quantitative metrics about how the end users were utilizing the application and a complete picture of their total experience with the application. In the first months they had some dramatic insights.

The first was the revelation that just five transactions were accounting for 90% of all user errors in one of their ERP modules. This discovery enabled the company to transform its annual user refresher course from a week-long classroom program to a one-hour e-learning module. This one change alone generates annual, recurring savings of \$395,000. Another EPM nugget was discovering the root cause behind troubles with one vexing transaction which kept generating exceptionally long completion times. Users complained the transaction was cumbersome – a plaint borne out by EPM metrics showing that the average navigation time was double the execution time. Users spent more time reviewing drop-down options than in doing useful work with these options. The fix was disarmingly simple; the training team developed a clarifying Quick Reference Card, accelerating transaction times by 20 percent. The EPM solution also proved helpful in monitoring compliant use of the

application. Company best practices include a policy guideline that cost center owners access their Actual/Plan/Variance Report with a certain frequency. EPM Usage and Utilization metrics confirmed that most managers were adhering to the guidelines, but several were not. Not surprisingly, compliance in such matters is much easier to both track and promote when actual behavior is a matter of record.

See the Forrest and the Trees

With global visibility into end-user metrics, companies who have deployed Experience and Performance Management solutions not only know if core enterprise applications are delivering an acceptable user experience, but also if application users are executing key processes effectively and efficiently -- the key to achieving business value and ROI.

- Application Support teams have real-time metrics to proactively address response time issues problems.
- Help Desk personnel have immediate visibility user actual user interaction with the application, so they can quickly resolve issues with minimal disruption to the end users
- Training organizations can pinpoint which specific application areas (and which specific users) require additional training
- Application and Process Engineering can spot cumbersome work flows and errors that are affecting end user satisfaction and efficiency
- The CIO has comprehensive metrics from the entire application landscape to support reporting to the business on SLAs and insight into application usage and performance to make intelligent decisions about where to deploy resources to improve the application performance and effectiveness
- The business executives have actionable insight to drive the highest possible levels of adoption, efficient and effective use of the application which is the key to a business return on the investment

Applications are proxies for business processes. In a report, [IT Management Software Market](#) (March 9th, 2007) Forrester Research stated, "IT is now a fundamental support of business activities — which means the greatest IT operations sins are an unpredictable user experience and a failure to reduce overall service delivery costs." A focus on Experience and Performance management really works both sides of the IT value equation, enabling you to simultaneously improve the user experience and reduce overall service delivery costs.