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Application Performance Management

The Lifecycle Approach Brings IT and Business Together

June 2008

Executive Summary

Aberdeen surveyed 206 organizations between May and June of 2008 to examine best practices for managing application performance. These findings serve as guidelines to organizations looking to improve the performance of their business critical applications.

Best-in-Class Performance

Aberdeen used three key performance criteria to distinguish Best-in-Class companies: 1) average improvements in application availability; 2) average improvements in application response times; 3) improvements in success rate in preventing issues with application performance before end-users are impacted. Best-in-Class organizations reported:

- 106% average improvement in application availability
- 11.4-times average improvement in response times for business critical applications
- 85% improved success rate in preventing issues with application performance before end-users are impacted

Competitive Maturity Assessment

Survey results show that the firms enjoying Best-in-Class performance shared several common characteristics:

- Nearly four-times more likely to have the ability to predict application response times prior to the deployment as compared to all others
- Nearly three-times more likely to be able to identify the source of response time delays in production as compared to Laggards
- Nearly five-times more likely to have tools for optimizing web application performance in real-time as compared to Laggards

Required Actions

In addition to the specific recommendations in Chapter Three of this report, to achieve Best-in-Class performance, companies must:

- Develop capabilities for measuring quality of end-user experience
- Deploy an application acceleration solution that is integrated with robust capabilities for visibility into application performance
- Develop tools for testing, monitoring, and optimizing the performance of web applications
- Incorporate all aspects of the lifecycle of application performance management into the overall IT strategy

Research Benchmark

Aberdeen's Research Benchmarks provide an in-depth and comprehensive look into process, procedure, methodologies, and technologies with best practice identification and actionable recommendations

"I make sure that on a monthly basis I am looking at the trending of individual circuits: utilization and availability. I ensure that I am aware of new applications that are being planned for the network and that testing has been done to verify any impact that may have."

~ IT Manager, Professional Services Company

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Chapter One: Benchmarking the Best-in-Class

Business Context

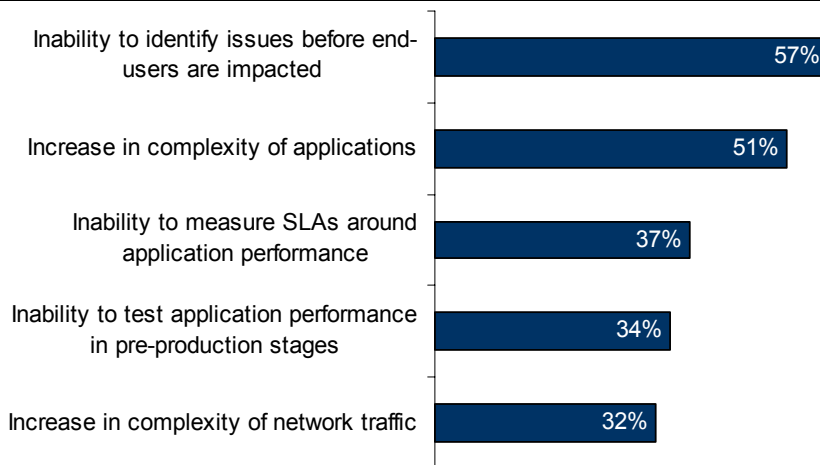
The 2008 Aberdeen Report: The State of the Market reveals that investments in new enterprise applications are the top IT initiative for 2008. Aberdeen's research also shows that, on average, organizations are using six business critical applications and are planning to rollout four new applications over the next two years.

The research also shows that only 58% of organizations surveyed are unsatisfied with the performance of applications that they are currently using. Figure 1 shows the top reasons why more than a half of the organizations are not satisfied with the performance of enterprise applications.

Fast Facts

- √ 58% of organizations are not satisfied with performance of business critical applications
- √ Issues with application performance are impacting overall corporate revenues by up to 9%

Figure 1: Top Challenges for Application Performance Management



Source: Aberdeen Group, June 2008

Aberdeen's research shows that the top pressures driving the adoption of application performance management solutions are:

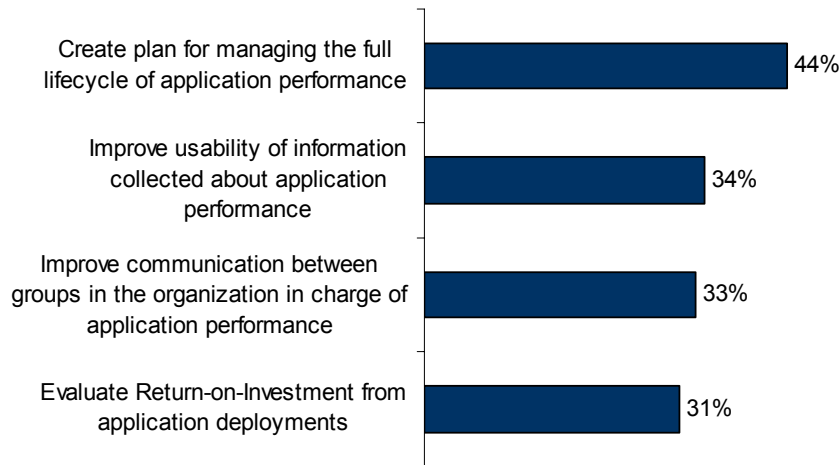
- The need to improve employee productivity (54% of all survey respondents)
- The need to improve responsiveness to external customers (53%)
- Effectively support plans for business growth (42%)

The research also shows that issues with application performance are impacting overall corporate revenues by up to 9%. This impact is not only related to the customer facing web based applications in Business-to-Customer (B2C) environments, but also to issues with applications that are being used by customer-facing employees such as CRM or ERP. Issues with these applications are impacting the effectiveness of these employees and

their ability to communicate their organization's value proposition to customers and prospects and generate revenues.

In order to improve employee productivity, customer satisfaction, brand image and to mitigate risk from lost revenue opportunities, end-user organizations are taking the following strategic actions shown in Figure 2.

Figure 2: Top Strategic Actions Taken



Source: Aberdeen Group, June 2008

As organizations rollout out more applications and performance of these applications becomes increasingly important for achieving their business goals, they are taking the lifecycle approach for managing application performance. This approach starts with predicting application performance in development and pre-deployment stages and eliminating performance bottlenecks before applications are rolled out. The lifecycle approach includes development of capabilities for monitoring, analyzing, and optimizing application performance in production.

Additionally, organizations are looking to improve visibility into application performance as well as develop formal communication channels between different groups in organizations that are in charge of application performance, such as application development, network management, systems management, application QA, and the business side of the organization.

The Maturity Class Framework

Aberdeen used three key performance criteria to distinguish the Best-in-Class from Industry Average and Laggard organizations. These Key Performance Indicators (KPIs) are:

- Average improvements in application availability
- Average improvements in application response times
- Improvements in success rate in preventing issues with application performance before end-users are impacted

Table 1: Top Performers Earn Best-in-Class Status

Definition of Maturity Class	Mean Class Performance
Best-in-Class: Top 20% of aggregate performance scorers	<ul style="list-style-type: none"> ▪ 106% average improvement in application availability ▪ 1144% average improvement in response times for business critical applications ▪ 85% improved success rate in preventing issues with application performance before end-users are impacted
Industry Average: Middle 50% of aggregate performance scorers	<ul style="list-style-type: none"> ▪ 49% average improvement in application availability ▪ 391% average improvement in response times for business critical applications ▪ 33% improved success rate in preventing issues with application performance before end-users are impacted
Laggard: Bottom 30% of aggregate performance scorers	<ul style="list-style-type: none"> ▪ 2% average improvement in application availability ▪ 2% average improvement in response times for business critical applications ▪ 0% improved success rate in preventing issues with application performance before end-users are impacted

Source: Aberdeen Group, June 2008

The Best-in-Class PACE Model

Using application performance management solutions to achieve corporate goals requires a combination of strategic actions, organizational capabilities, and enabling technologies that can be summarized as shown in Table 2.

Table 2: The Best-in-Class PACE Framework

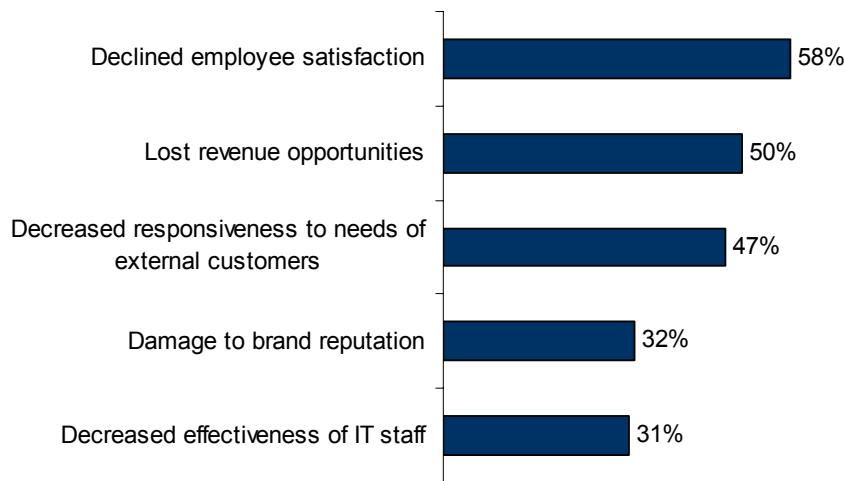
Pressures	Actions	Capabilities	Enablers
<ul style="list-style-type: none"> ▪ Need to improve employee productivity ▪ The need to improve responsiveness to external customers 	<ul style="list-style-type: none"> ▪ Create a plan for managing the full lifecycle of application performance (development, pre-deployment, production) ▪ Improve usability of information collected about application performance 	<ul style="list-style-type: none"> ▪ Ability to measure quality of end-user experience ▪ Ability to identify the source of delay in response times ▪ Ability to analyze application performance for each transaction ▪ Ability to predict application response times prior to deployment ▪ Job role based access to application performance data 	<ul style="list-style-type: none"> ▪ Tools for monitoring web applications ▪ Tools for optimizing performance of web applications in real-time ▪ Tools for load testing of web application ▪ Tools for protocol-specific optimization of application performance ▪ Unified platform for monitoring all aspects of application performance ▪ Tools for deep packet inspection ▪ Simulated network environment for testing application performance

Source: Aberdeen Group, June 2008

Issues with Application Performance are Impacting Top Business Goals

Aberdeen's February 2008 Benchmark Report, *The Roadmap to the Next Generation Branch Office Networks*, revealed that even though organizations reported that they are, on average, spending \$2.1 million annually on rollouts on new applications, one of the top challenges for improving application performance is the inability to create a business case for investing in new solutions. Interestingly, Figure 3 shows that 50% of organizations are reporting that issues with application performance are causing lost revenue opportunities and nearly half of organizations are reporting that these issues are causing declines in customer satisfaction.

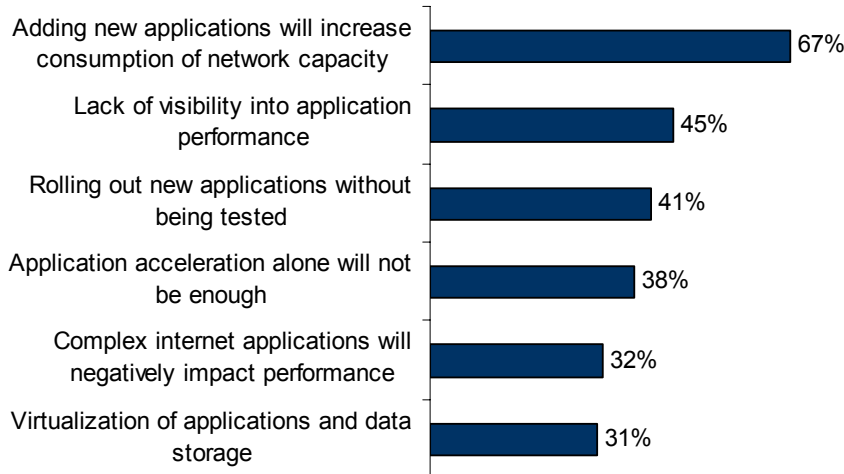
Figure 3: Business Impact of Issues with Application Performance



Source: Aberdeen Group, June 2008

It should be noted that *The 2008 Aberdeen Report* revealed that organic revenue growth is the top strategic goal for end-user organizations in 2008. It is apparent that application performance issues are already having a significant impact on the top business goals, but it also should be noted that dealing with these issues will not get any easier for these organizations. As end-users are reporting that they are planning to increase the number of business-critical applications by 67% over the next two years (from six to 10) and they are already not satisfied with current performance levels, they also have some major concerns about challenges they might be facing over the next 12 months, as shown in Figure 4.

Figure 4: Top Concerns for Application Performance Management in the Next 12 Months



Source: Aberdeen Group, June 2008

All of the top concerns surrounding application performance could be summarized as: lack of network capacity, lack of visibility into network and application performance visibility into quality of end-user experience, and an increase in the complexity of enterprise applications. In order to effectively deal with all these concerns, Best-in-Class organizations have developed a mix of capabilities and have deployed technology enablers to support their strategic plans for managing the full lifecycle of application performance.

Aberdeen Insights — Strategy

Aberdeen's December 2007 Benchmark Report, [The Real Value of Network Visibility](#), revealed that organizations that are taking a proactive approach to managing network and application performance are able to achieve measurable business benefits such as mitigating revenues lost due to unplanned downtime and productivity improvement on the part of the IT staff. However, the report also showed that the majority of end-users are still waiting for the network to go down or for end-users to call the help-desk before they start addressing performance issues.

Six months after that study was conducted the majority of end-users are adjusting their approach and trying to become more proactive. Figure 1 shows that the majority of organizations are realizing the importance of being able to prevent issues with application performance.

So, it looks like end-users are doing all the right things and, therefore, the gap between Best-in-Class and all others should be closing, right?

continued

Aberdeen Insights — Strategy

Not really. More than a half of the organizations are dissatisfied with the performance of business critical applications and Laggard organizations are experiencing just 2% average improvements in application response times. So what is that's that these organizations are doing wrong?

The majority of end-users in Aberdeen's survey are still trying to understand how rapidly the complexity of managing application performance is increasing, and more importantly, how seriously these performance issues could impact their businesses. As organizations plan to increase the number of applications over the next two years, being "proactive" is starting to translate into "managing every aspect of application performance."

In the next chapter, we will see what the top performers are doing to achieve these gains.

Chapter Two: Benchmarking Requirements for Success

The selection of application performance management solutions and integration with business intelligence and business process management systems plays a crucial role in the ability to turn these strategies into profit.

Case Study — A Large Retail Company

A large retail company offers a variety of entertainment items such as music, DVDs, movies, books, games, apparel and electronics. During peak retail seasons, these stores see volumes of up to 800,000 credit transactions per month, heavily relying on the company's IT team to ensure that the back-end process, customer purchase process and end-to-end payments network are running smoothly.

Increasingly complex network infrastructures involving virtualization, SOA, SaaS, and converged networks are presenting the IT team with a new set of challenges. A lack of end-to-end network visibility is making it tough to isolate whether issues are occurring at the client, terminal, network, switch or host level. With the rapid expansion of customer facing touch points, such as kiosks, digital signage, and advanced POS terminals, it is also becoming more difficult for the IT team to confidently monitor and guarantee the performance of all in-store applications.

Faced with a growing disconnect between back-end service performance metrics and the front-end customer experience, the IT team deployed a software solution that provides a unique window into transaction anomalies such as high purchase amounts, multiple card swipes, slowdowns, failures, and reversal patterns. Additionally, real-time, 24x7 event monitoring and threshold alerting capabilities helps the IT team efficiently manage by exception and proactively solve issues before they affect the end customer purchase experience and revenue stream.

Visualization of the end-to-end transaction flow enables the IT team to quickly isolate and fix the root cause of network and application issues, decreasing the number of store system outages and help desk calls, while expediting the mean time to repair.

According to the company's CIO, the company gained a several benefits from the deployment of this. Some of the key benefits include: a consistent customer purchase experience across all in-store customer touch points, productivity gains through exception based alerting and less crisis escalation, end-to-end network visibility to quickly isolate root causes of problems and expedite their correction, significantly fewer outages and credit issues that negatively impact revenue streams and customer retention, 24x7 persistent transaction monitoring and predictive threshold alerting, without incurring the cost of extra employment resources.

Fast Facts

- √ Best-in-Class organizations are five-times more likely to report improvements in preventing application performance issues before end-users are impacted as compared to all others
- √ Best-in-Class organizations are five-times more likely to report improvements in the quality of end-user experience as compared to all others

Competitive Assessment

Aberdeen Group analyzed the aggregated metrics of surveyed companies to determine whether their performance ranked as Best-in-Class, Industry

Average, or Laggard. In addition to having common performance levels, each class also shared characteristics in five key categories: (1) **process** (ability to identify the source of delay in response times; ability to predict application response times prior to deployment); (2) **organization** (job role based access to application performance data); (3) **knowledge management** (ability to analyze application performance for each transaction); (4) **technology** (the selection of appropriate tools and effective deployment of those tools); and (5) **performance management** (ability to measure quality of end-user experience). These characteristics (identified in Table 3) serve as a guideline for best practices, and correlate directly with Best-in-Class performance across the key metrics.

Table 3: The Competitive Framework

	Best-in-Class	Average	Laggards
Process	Ability to identify the source of delay in response times		
	67%	31%	23%
Process	Ability to predict application response times prior to deployment		
	54%	37%	14%
Organization	Job role based access to application performance data		
	46%	15%	11%
Knowledge	Ability to analyze application performance for each transaction		
	67%	33%	30%
Technology	Application performance management technology currently in use:		
	<ul style="list-style-type: none"> ▪ 48% tools for optimizing performance of web applications in real-time ▪ 46% tools for protocol-specific optimization of application performance ▪ 44% unified platform for monitoring all aspects of application performance ▪ 42% tools for deep packet inspection ▪ 41% simulated network environment for testing application performance 	<ul style="list-style-type: none"> ▪ 31% tools for optimizing performance of web applications in real-time ▪ 33% tools for protocol-specific optimization of application performance ▪ 22% unified platform for monitoring all aspects of application performance ▪ 34% tools for deep packet inspection ▪ 24% simulated network environment for testing application performance 	<ul style="list-style-type: none"> ▪ 10% tools for optimizing performance of web applications in real-time ▪ 7% tools for protocol-specific optimization of application performance ▪ 7% unified platform for monitoring all aspects of application performance ▪ 16% tools for deep packet inspection ▪ 16% simulated network environment for testing application performance
Performance	Ability to measure quality of end-user experience		
	67%	32%	20%

"Originally we thought that we didn't have enough bandwidth to run an ERP application and were thinking about adding an additional T1 line. However, a technology solution that we had in place helped us realize that the root-cause of the problem was on the application side - not the network. This allowed us to avoid adding more bandwidth, but it also allowed us to be able to effectively manage application performance on an ongoing basis and address potential problems before they could impact end-users."

~ IT Director,
Manufacturing Company

Source: Aberdeen Group, June 2008

Capabilities and Enablers

In this study, end-users were asked about the impact of 36 capabilities and technology enablers on the effectiveness of their application performance management strategies. After comparing adoption rates of these capabilities between Best-in-Class, Industry Average, and Laggards, Aberdeen identified 10 capabilities that when compared to their peers, Best-in-Class organizations are from nearly two- to six-times more likely to have in place.

Process

Ninety percent (90%) of organizations in Aberdeen's survey reported that they are aware of what is causing application performance problems. However, more than 60% of these organizations reported that they actually do not have capabilities for analyzing application response times in pre-production and production stages. Best-in-Class organizations are nearly four-times more likely to have the ability to predict application response times prior to the deployment as compared to all other companies. Additionally, these organizations are nearly three-times more likely to be able to identify the source of response time delays in production as compared to Laggards. Best-in-Class organizations are also twice as likely to have the ability to perform this type of analysis for each transaction. Having these capabilities in place allows Best-in-Class organizations to effectively identify and resolve issues before, and make better decisions about, new application rollouts. As a result, Best-in-Class organizations are five-times more likely to report improvements in preventing application performance issues before end-users are impacted as compared to all others.

Organization

One of the top strategic actions organizations are taking to optimize application performance is to improve the usability of collected performance information. To achieve this, Best-in-Class organizations are combining the deployment of technology tools with the development of organizational capabilities in order to improve the effectiveness of these investments. Best-in-Class organizations are six-times more likely to be using a single platform for monitoring all aspects of application performance as compared to Laggards. This approach allows them to collect in-depth information about interdependencies between applications on the network, interdependencies between applications, the network itself, and other parts of enterprise infrastructure including information about application availability and response times.

Collecting large amounts of data about different aspects of application performance leads to the challenge of navigating through all this data and getting to the right piece of information in order to identify and resolve problems. Best-in-Class organizations are four-times more likely to have job-role based custom access to application performance data compared to all others. This capability allows them to access actionable performance data and resolve performance issues in a timely manner. As a result, Best-in-Class organizations are three-times more likely to reduce the time to

"The network emulation solution allowed us to identify performance bottlenecks in the pre-production stage and resolve them before they cause any disruptions for end-users. We conducted an internal ROI assessment for this solution and we found that network emulation solution paid for itself five-times just in the reduction in labor costs to manage network and application performance"

~ IT Manager, Food and Beverage Company

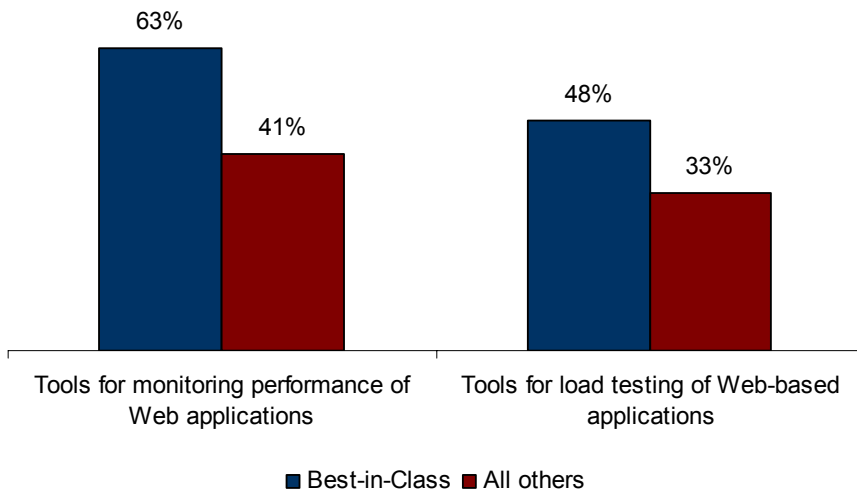
troubleshoot application performance issues as compared to Laggards and four-times more likely to reduce Mean Time to Repair (MTTR).

Technology

Sixty-two percent (62%) of organizations in Aberdeen's survey report that they use web applications to support their employees, and 45% of organizations are using these applications as revenue generating tools. However, more than a half of these organizations are not satisfied with the performance of these applications.

Best-in-Class companies are nearly five-times more likely to have tools for optimizing web application performance in real-time as compared to Laggards. Figure 5 shows that the Best-in-Class are also more likely utilize tools for ongoing monitoring and load-testing of these applications as compared to all others. This approach allows Best-in-Class organizations to outperform their peers by significant margins. Aberdeen's research shows that Best-in-Class organizations are five times more likely to reduce the occurrence of web browser timeouts as compared to Laggards. Additionally, the Best-in-Class report an average of 106% improvement in application availability as compared to only 23% improvement for all others.

Figure 5: Best-in-Class Capabilities for Optimizing Web Applications



Source: Aberdeen Group, June 2008

Figure 2 shows that the top strategic action organizations take to manage application performance is a focus on managing the full lifecycle of application performance. It should be noted that this is the top strategic action for all Best-in-Class, Industry Average, and Laggard companies. But the difference between the three groups is that Best-in-Class companies are two- to six-times more likely to be deploying technology solutions for managing application performance in pre-production and for monitoring,

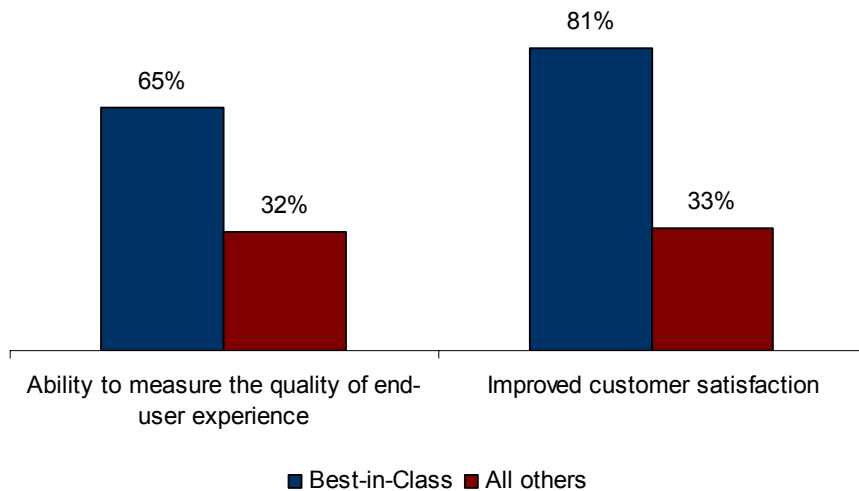
analyzing, and optimizing applications in production stages. Table 3 shows that Best-in-Class organizations are nearly four-times more likely to be using a simulated network environment for testing application performance in pre-production stage as compared to all others.

Additionally, these organizations are twice as likely to be using tools for deep packet inspection as compared to Laggards and six-times more likely to be using tools for protocol-specific optimization of application performance. The combination of these tools, coupled with other capabilities presented in Table 3, contributed to Best-in-Class organizations being five-times more likely to report improvements in the quality of end-user experience as compared to all others.

Performance Management

Best-in-Class organizations are nearly twice as likely to be able to measure the quality of the end-user experience as compared to Laggards.

Figure 6: Business Impact of Performance Management Capabilities



Source: Aberdeen Group, June 2008

It should be noted that employee productivity and customer responsiveness are the top two pressures driving organizations to invest resources in application performance management solutions. Table 1 and Table 3 show that Best-in-Class organizations achieve superior performance in metrics such as application availability, response times, and the ability to prevent application performance issues due to the mix of capabilities they have implemented to manage the full lifecycle of application performance. Figure 6 shows that these organizations are taking an additional step and are measuring application performance not only from the perspective of their IT departments, but also from the end-user perspective. These organizations are ensuring that improvements in application availability and response times

are translating into improved employee satisfaction and productivity, and ultimately, improved customer satisfaction, mitigation of lost revenue opportunities and avoiding damages to brand image.

Aberdeen's research shows that Best-in-Class organizations are nearly twice as likely to be "satisfied" or "very satisfied" with the performance of business critical applications as compared to Laggards. As a result, these organizations are twice as likely to report improvement in customer satisfaction and employee productivity.

Figure 3 shows that application performance issues have a significant impact on customer satisfaction, employee satisfaction, and brand recognition. Organizations also report that these issues could impact corporate revenues by up to 9%. Average annual revenues for organizations that participated in Aberdeen's survey are \$1.3 billion; this shows that application performance issues could impact revenues by an average of \$117 million annually. The research also shows that Best-in-Class organizations enjoy a significantly higher level of application performance resulting in performance improvements related to some of their top business pressures (customer satisfaction and employee productivity) due to developing the right set of capabilities for managing application performance. Interestingly, the research shows that on annual basis, Best-in-Class companies spend an average of \$96,000 more on application performance management solutions as compared to Laggards (\$325,000 for Best-in-Class ac compared to \$229,000 for Laggards). This is a significant investment and when making decisions about investments in application performance management solutions, Industry Average and Laggards should considers following factors:

- Application performance issues could impact their annual revenues by an average of \$117 million
- Planned rollouts of new applications will likely even further increase the impact on corporate revenues
- The effectiveness of application performance management solutions currently in place

A thorough assessment of the effectiveness of currently implemented solutions, a breakdown of the impact that Best-in-Class capabilities and technology enablers would have on application performance, and an ROI analysis comparing the amount of investment and considering the estimated impact of application performance on corporate revenues - all these actions would help to ensure that their business benefits from these decisions.

Aberdeen Insights — Technology

It should be noted that every end-user organization that is included in either the Best-in-Class, Industry Average, or Laggard category has some type of technology solution in place for managing application performance. Managing application performance is becoming increasingly complex and, therefore, it is becoming more difficult to select the right technology solutions for these initiatives. What is making this selection even more complex is an opportunity cost of making the wrong decision. Organizations that select technology solutions that are not the right fit for their needs could experience decline in their revenues up to 9%.

It also should be noted that Table 3 highlights 11 capabilities and technology enablers that are helping Best-in-Class organizations to achieve superior performance. Each of these capabilities are being implemented by at least 7% of Laggard organizations. However, not a single Laggard organization that participated in Aberdeen's survey reported improvements in response times of more than 25%. That speaks to the fact that the recipe for achieving Best-in-Class performance is not selecting a few capabilities that are having the strongest impact on application performance, but instead selecting a mix of capabilities that would allow organizations to manage the full lifecycle of application performance management.

Chapter Three: Required Actions

Whether a company is trying to move its performance in application performance management from Laggard to Industry Average, or Industry Average to Best-in-Class, the following actions will help spur the necessary performance improvements:

Laggard Steps to Success

- **Develop capabilities for predicting and analyzing application response times prior to the deployment.** Eighty-six percent (86%) of Laggard organizations currently do not have the ability to predict application performance prior to the deployment. And only 16% of these organizations test applications in a simulated network environment. The research shows that only 34% of Laggard organizations are satisfied with the current level of application performance while they plan to increase the number of business critical applications by 67% in the next two years. Therefore, unless these organizations develop capabilities to identify and eliminate potential performance bottlenecks before new applications are rolled out, it will be very difficult for them to achieve any significant improvements in application performance.
- **Develop capabilities for measuring and analyzing application response times for each transaction.** Seventy-three percent (73%) of Laggard organizations do not have the ability to identify the source of delay in application response times. As a result, these organizations report only a 2% average improvement in response times of business critical applications. The majority of these organizations have reported that increasing complexity of enterprise applications and network traffic are two of their top challenges, and the ability to prevent application performance issues is their top goal. Developing the ability to segment application response times into application, network, server, and end-user platform delay is critical in order for them to identify the root causes of issues they are experiencing.
- **Deploy an application acceleration solution that is integrated with robust capabilities for visibility into application performance.** Aberdeen's research shows that 45% of Laggard organizations plan to implement tools for load balancing over the next two years and 37% plan to implement tools for network compression. However, only 26% of these organizations currently have defined baselines for normal application performance and only 23% have the ability to identify the source of the delay in application response times. Making investments in technology solutions for optimizing application performance while not being able to identify the root cause of the problem could be a costly and

Fast Facts

- √ 86% of Laggard organizations currently do not have the ability to predict application performance prior to the deployment
- √ 68% Industry Average organizations do not have the ability to measure the quality of the end-user experience

ineffective strategy. This type of approach is dealing with consequences instead of a root cause and it is not sustainable in the long run.

Industry Average Steps to Success

- **Develop capabilities for measuring the quality of the end-user experience.** As issues with application performance are increasingly impacting top business goals, organizations need to measure application performance, not only from IT perspective (availability, response times), but also from end-user perspective. Aberdeen's research shows that 68% of Industry Average organizations do not have the ability to measure the quality of the end-user experience. Having this capability in place is important for closing the gap between IT goals and execution of overall business strategies and can improve effectiveness of IT departments in supporting business growth. [The 2008 Aberdeen Report: The State of the Market](#) shows that CIOs and IT decision makers are 75% more likely to report that revenue growth is their top goal for 2008 as compared to cost reduction. As IT departments are moving from cost centers to profit centers, the need to align IT with the business side of organizations is becoming increasingly important.
- **Develop tools for testing, monitoring, and optimizing the performance of web applications.** The majority of organizations in Aberdeen's survey reported that they are using web applications to support their employees; communicate with customers, prospects, and partners; and generate revenues. However, more than half of the Industry Average do not have tools in place for monitoring and load testing of web applications. As organizations are using web applications to address all the top pressures for application performance management, they need to implement tools for testing, monitoring, and optimizing the performance of these applications.
- **Deploy a unified platform for monitoring all aspects of application performance.** Best-in-Class organizations are twice as likely to be using a single platform for monitoring all aspects of application performance. This capability allows them to be more effective when preventing, identifying, and resolving issues with application performance before end-users are impacted. However, 78% of Industry Average currently do not have this capability in place. As organizations are rolling out more applications and the complexity of these applications and network traffic is increasing, having this capability in place is ever more important.

“With respect to network performance and troubleshooting, I would recommend the selection of one of the tools that provides visibility of traffic by protocol and by well known application. The best tool is one that will graphically indicate transaction times divided into network time, platform (server) time, and application time. If such a tool is adopted by the support teams responsible for these different areas, incident and problem related downtime can be reduced. Such tools are, of course, expensive. A business case needs to be built.”

~ Network Manager,
Professional Services

Best-in-Class Steps to Success

- **Incorporate all aspects of the lifecycle of application performance management into the overall IT strategy.** The

lifecycle approach for managing application performance requires involvement and collaboration of several different groups in an organization, such as application development teams, network and systems management teams, application QA teams, as well as the business side of organizations. In order to effectively execute this approach, organizations need to include initiatives for testing, monitoring, analyzing, and optimizing application performance into their overall IT strategies. This is the best way to guarantee that different organizational groups concerned with application performance are on the same page and working together.

- **Further improve usability of information of application performance to prepare for the future.** Best-in-Class organizations currently have the right mix of capabilities that allows them to achieve superior performance. A part of the reason the Best-in-Class are able to outperform 80% of their peers is that they develop capabilities for collecting and analyzing actionable information about application performance.

As organizations are looking to add, on average, four new business critical applications over the next two years, this significantly increases the amount and complexity of application performance data. Also, the complexity of network traffic and overall enterprise infrastructure is increasing, as are the end-users expectations for application performance. That drives the need for additional data about application performance, but more importantly, that could create the new challenges for end-user organizations: how to deliver the right data to the right people, how to deliver only the data that they need, and how to deliver it exactly when they need it.

The 2008 Aberdeen Report: The State of the Market shows that organizations are dealing with similar issues when trying to achieve their strategic business goals and, as a result, a majority of the more than 4,600 decision-makers worldwide participating in that study reported that Business Intelligence (BI) is the technology that will have the biggest impact on their business over the next two to five years. It is expected that some of the Best-in-Class BI capabilities will become new features of solutions for visibility into application performance. Best-in-Class organizations should be looking into these solutions to prepare for the future.

Aberdeen Insights — Summary

Being proactive about managing application performance is no longer optional. Organizations can ignore their IT departments when they are talking about what needs to be done to improve application response times, availability, and mean time to repair; but, what can no longer be ignored is the impact that application performance is having on some of the key metrics such as revenue growth, customer satisfaction, employee productivity, brand image and profitability.

continued

Aberdeen Insights — Summary

In Aberdeen's February 2008 study for [*The Roadmap to the Next Generation Branch Office Networks*](#), IT and network managers reported that one of the top obstacles for optimizing application performance is the inability to create a business case for optimization projects. With organizations reporting that issues with application performance could impact corporate revenues by an average of \$117 million annually, creating a business case for application performance management projects is no longer a problem for IT management only. Rolling out new applications is the top IT investment for 2008 and issues with performance of these applications are significantly impacting some of the metrics that CEOs and CFOs care about the most. Therefore, IT will no longer be alone when worrying about application performance.

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Appendix A: Research Methodology

Between May and June 2008, Aberdeen examined the use, the experiences, and the intentions of more than 200 enterprises using application performance management solutions in a diverse set of enterprises.

Aberdeen supplemented this online survey effort with interviews with select survey respondents, gathering additional information on application performance management strategies, experiences, and results.

Responding enterprises included the following:

- *Job title / function:* The research sample included respondents with the following job titles: manager (31%); senior management (26%); director (17%); IT or business staff (11%); other (line of business owner, application development, application Q&A, etc.) (15%).
- *Industry:* The research sample included respondents from 18 industries. Some of the largest industry segments were: high technology / software (15%); finance (11%); manufacturing (10%); and telecommunications (9%).
- *Geography:* The majority of respondents (51%) were from North America. Remaining respondents were from Europe (22%) the Asia-Pacific region (17%), and the rest of the world (10%).
- *Company size:* Thirty-one percent (31%) of respondents were from large enterprises (annual revenues above US \$1 billion); 32% were from midsize enterprises (annual revenues between \$50 million and \$1 billion); and 37% of respondents were from small businesses (annual revenues of \$50 million or less).
- *Headcount:* Forty-seven percent (47%) of respondents were from large enterprises (headcount greater than 1,000 employees); 20% were from midsize enterprises (headcount between 100 and 999 employees); and 33% of respondents were from small businesses headcount between 1 and 99 employees).

Solution providers recognized as sponsors were solicited after the fact and had no substantive influence on the direction of this report. Their sponsorship has made it possible for Aberdeen Group to make these findings available to readers at no charge.

Study Focus

Responding executives completed an online survey that included questions designed to determine the following:

- √ The degree to which application performance management solutions are deployed in their operations and the financial implications of the technology
- √ The structure and effectiveness of existing implementations of application performance management solutions
- √ Current and planned use of application performance management solutions to aid operational and promotional activities
- √ The benefits, if any, that have been derived from application performance management initiatives

The study aimed to identify emerging best practices for application performance management, and to provide a framework by which readers could assess their own management capabilities.

Table 4: The PACE Framework Key

Overview
<p>Aberdeen applies a methodology to benchmark research that evaluates the business pressures, actions, capabilities, and enablers (PACE) that indicate corporate behavior in specific business processes. These terms are defined as follows:</p> <p>Pressures — external forces that impact an organization’s market position, competitiveness, or business operations (e.g., economic, political and regulatory, technology, changing customer preferences, competitive)</p> <p>Actions — the strategic approaches that an organization takes in response to industry pressures (e.g., align the corporate business model to leverage industry opportunities, such as product / service strategy, target markets, financial strategy, go-to-market, and sales strategy)</p> <p>Capabilities — the business process competencies required to execute corporate strategy (e.g., skilled people, brand, market positioning, viable products / services, ecosystem partners, financing)</p> <p>Enablers — the key functionality of technology solutions required to support the organization’s enabling business practices (e.g., development platform, applications, network connectivity, user interface, training and support, partner interfaces, data cleansing, and management)</p>

Source: Aberdeen Group, June 2008

Table 5: The Competitive Framework Key

Overview	
<p>The Aberdeen Competitive Framework defines enterprises as falling into one of the following three levels of practices and performance:</p> <p>Best-in-Class (20%) — Practices that are the best currently being employed and are significantly superior to the Industry Average, and result in the top industry performance.</p> <p>Industry Average (50%) — Practices that represent the average or norm, and result in average industry performance.</p> <p>Laggards (30%) — Practices that are significantly behind the average of the industry, and result in below average performance.</p>	<p>In the following categories:</p> <p>Process — What is the scope of process standardization? What is the efficiency and effectiveness of this process?</p> <p>Organization — How is your company currently organized to manage and optimize this particular process?</p> <p>Knowledge — What visibility do you have into key data and intelligence required to manage this process?</p> <p>Technology — What level of automation have you used to support this process? How is this automation integrated and aligned?</p> <p>Performance — What do you measure? How frequently? What’s your actual performance?</p>

Source: Aberdeen Group, June 2008

Table 6: The Relationship Between PACE and the Competitive Framework

PACE and the Competitive Framework – How They Interact
<p>Aberdeen research indicates that companies that identify the most influential pressures and take the most transformational and effective actions are most likely to achieve superior performance. The level of competitive performance that a company achieves is strongly determined by the PACE choices that they make and how well they execute those decisions.</p>

Source: Aberdeen Group, June 2008

Appendix B: Related Aberdeen Research

Related Aberdeen research that forms a companion or reference to this report include:

- [*Managed Network Services: Beyond Cost Savings and Uptime*](#); June 2008
- [*The Roadmap to the Next Generation Branch Office Networks*](#); February 2008
- [*The Real Value of Network Visibility*](#); December 2007
- [*Optimizing WAN for Application Acceleration*](#); October 2007

Information on these and any other Aberdeen publications can be found at www.Aberdeen.com.

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