

# Business Impact of Application Performance Problems

White Paper from ManageEngine

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## Introduction

Issues with the performance of business-critical applications can cause deterioration of an organization's business performance. Slow or not readily available applications that support key business processes can cause revenue loss, and decline in customer satisfaction, employee productivity or brand reputation.

Organizations in certain industry sectors are leveraging applications as revenue generating tools and experiencing more impact from problems with application performance than organizations from other industry sectors. Issues with the performance of applications in business-to-customer (B2C) environments could have more significant impact on business performance, as these applications are being used as revenue generating tools. Additionally, organizations are using these applications to communicate their value proposition to their customers and prospects, and issues with the performance of these applications could create problems with brand reputation.

## Challenges

### **Organizations in B2B and B2E environments find it difficult to calculate the business impact of performance issues**

An organization's ability to calculate the impact of issues with application performance is directly affected by the proximity of the users of the application to the revenue source. Typically, organizations are more likely to have the ability to understand the business impact of applications

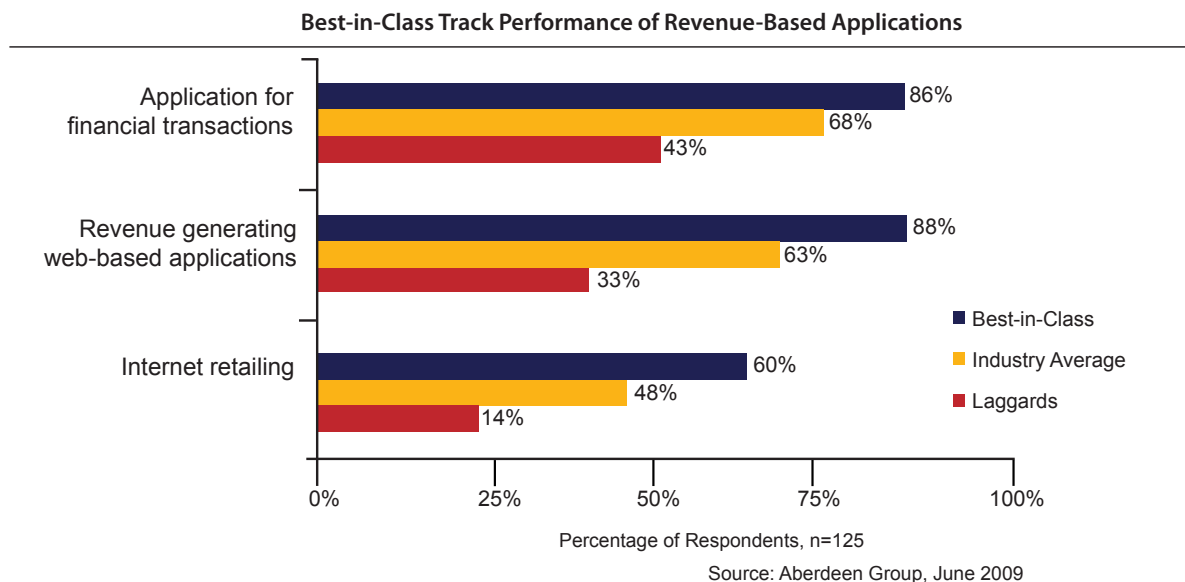
that are being used in business-to-customer (B2C) environments. These applications are used as revenue generating tools, so organizations are more likely to invest resources in monitoring the performance of these applications as well as in performance optimization.

### Organizations in B2C environments are experiencing revenue loss for each second of delay in application response times

Recent research studies indicated that organizations could lose significant part of their revenues due to only one additional second of delay beyond defined baselines for performance of their Web applications. The research shows that end-users would typically wait between 4 and 6 seconds for a page to open before they abandon a session and move on to the next website in their search. This impacts not only the organization's ability to sign up new customers, but also causes damage to how their current customers perceive their brand. Even if end-users do not abandon a session before a page opens, they are less likely to move closer to a check-out or registration page if the website is slower than what they expected.

*“Organizations that have capabilities for measuring quality of end user experience are twice as likely as other companies to improve their brand reputation and 75% more likely to improve employee productivity”*

-Hyoun Park, Research Analyst,  
Aberdeen Group



Many organizations still experience problems with application performance, mainly because they are not able to conduct cost-benefit analyses for investing in technology solutions that would allow them to resolve these issues. For these organizations it is clear what type of investments they need to make to optimize application performance, but they are not able to calculate lost opportunity cost from not making these investments. More importantly, they are struggling to come up with calculations of how much these investments would impact their bottom lines. For that reason, these organizations are not able to gather all the information that they need to understand what the return on investment in these solutions would be. As a result, they typically delay taking actions to improve application performance, which could cause deterioration of business metrics such as revenue growth, cost savings, and brand reputation.

## **Usage scenario:**

An organization in a service industry heavily depends on their contact center employees to generate revenues and communicate with current customers. The contact center employees are using a Customer Relationship Management (CRM) application that is readily available to business users (98.9% average availability), but the application speed is not at the optimal level (average page load times are well beyond 30 seconds). Employees complained to their IT team about this problem, and the IT team determined that they need to take several actions in order to improve application performance both on the server and the network side. In order to make these improvements, the organization needed to make significant investments in application performance management technology solutions, and the Director of IT submitted a proposal to the CFO for approval. At the same time, the organization's customer retention rate was declining as well as the ability to up-sell services to current customers. The proposal was rejected for being too costly, and the IT team was asked to determine if problems with customer retention were related to the (lack of) speed of this application. The company had a solution in place for monitoring availability and speed of this application, and they had a sophisticated process in place for tracking customer satisfaction metrics, but they did not have a solution to help them correlate these two types of metrics. In order to address the issues with customer satisfaction, the organization conducted a series of interviews with their customer-facing employees; that is when they discovered that very often they were not able to complete calls with customers that were seeking support or the purchase of new services in timely manner, because customers couldn't wait several minutes for customer service representatives to retrieve the information necessary to serve them properly. This was anecdotal information, and the IT team still didn't have enough information to create a business case for investing in additional application performance management capabilities. However, this information allowed the organization to create a case for investing in additional capabilities to allow them to correlate application performance and business metrics.

## **Inability to map application usage to supported business processes**

Many application performance management tools in use are successful in monitoring uptime and speed of applications, but they are typically ineffective in tying the performance of these applications into the business processes they are supporting. That is to say that organizations that are trying to improve the workflow of their business processes and to achieve operational efficiencies are not able to discover which of the inefficiencies they are experiencing are related to slow or not readily available applications being used to support these processes. One of the main goals of business process management is to improve employee productivity and accelerate workflows, but due to the inability to measure the business impact of application performance issues on these processes, organizations are often forced to make decisions about streamlining key business processes without being in possession of all necessary data.

## **Lack of visibility into quality of end-user experience**

Organizations often evaluate the performance of business critical applications solely on the uptime and the average speed. However, these metrics do not paint an accurate picture of how applications are truly performing, because they report on the performance as measured from the perspective of IT departments as opposed to the perspective of business users. For example, the IT team may have compiled information showing that an application is performing with an average of 6.7-second response times and, therefore draw a conclusion that there is no problem with this application's performance. However, end-users might be experiencing only 2 seconds of delay during certain times of the day but more than 15 seconds of delay during a peak times for using this application. Even though this type of performance during a peak time is not satisfactory for end-users and negatively impacts their productivity, their IT team is not aware of this problem. In order to resolve this

disconnect between the IT department and business users, organizations need to deploy capabilities that allow them to measure application performance from the perspective of the end-user.

### **Inability to repair application performance issues in a timely manner**

Recent research indicates that even though the majority of organizations have improved their ability to collect more network and application performance data, many of them are still not able to improve their ability to identify and resolve performance problems in a timely manner. Organizations increasingly understand that they need to improve visibility into network and application performance, and they are deploying solutions that are designed to help them gather different types of performance data. However, even though many of these solutions allow them to collect large amounts of performance information, not all of these products collect information that is truly actionable. In order to be able to resolve performance issues in a timely manner, organizations need to deploy solutions that will allow them to gather the performance information that they truly need and to deliver this information to the right people at the time when they need it.

## **Capabilities needed to effectively address the top challenges**

### **Ability to segment the delay in application response times into server, network, and application delay**

Many organizations still do not have capabilities that will allow them to determine if their issues with application performance are caused by network, server or application related problems. Organizations are increasingly seeking to improve the quality of the end-user experience, but many of them are still unable to understand how issues with the speed of business-critical applications could be attributed to different parts of enterprise infrastructure. When IT teams deal with end-user complaints about application performance issues, they need to know what parts of the enterprise infrastructure are causing these problems. Having this information would allow them to identify the root causes of performance issues and make educated decisions about actions required to resolve performance problems in a timely manner.

### **Ability to translate application performance metrics into business metrics such as page views, conversions, employee productivity, and customer satisfaction**

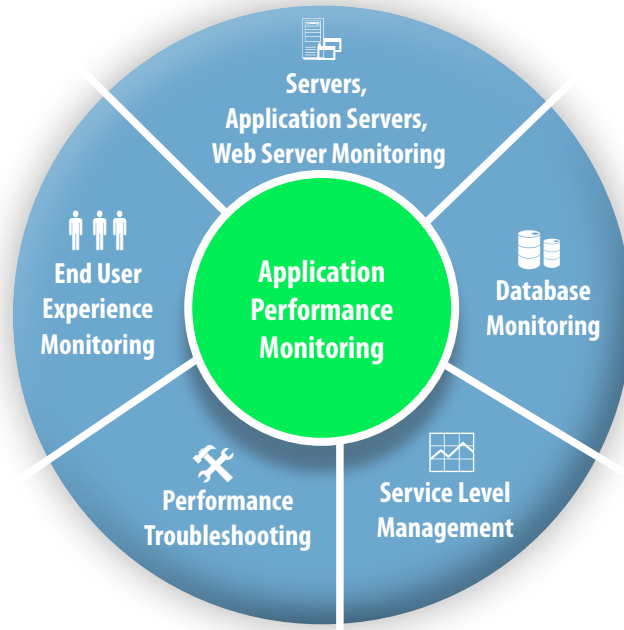
Organizations need to bridge the gap between IT and the business metrics they are monitoring in evaluating application performance. Deploying executive dashboards that allow business executives to correlate IT metrics such as application availability, page load times, and application response times to business metrics such as revenue generation, conversion rates, page views, and customer satisfaction would enable organizations to calculate ROI from deploying application performance management solutions and make more educated decisions about investments that they need to make in optimizing key business processes.

### **Ability to measure application performance from a business user's perspective**

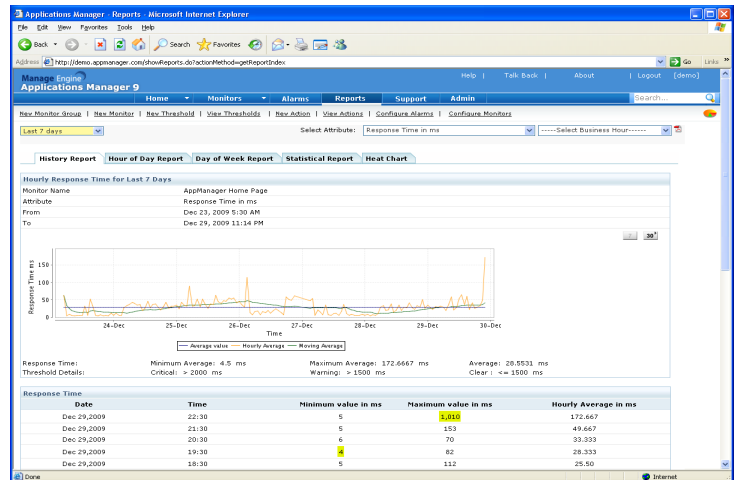
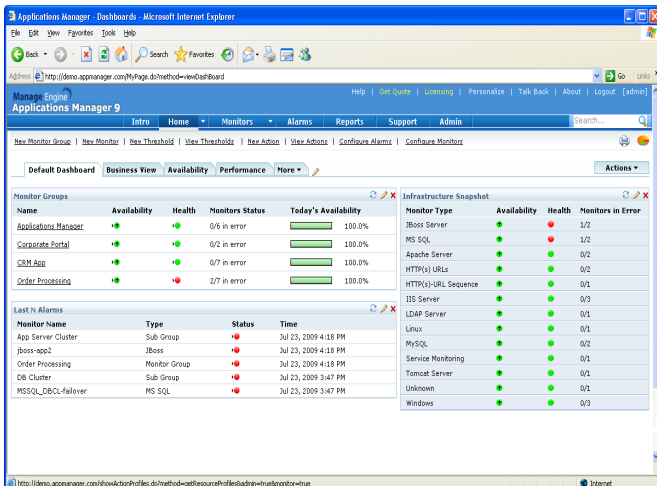
Deploying this capability allows organizations to determine the business impact of application performance issues. Monitoring performance from the end-user's perspective allows organizations to determine the number of users that are being impacted by performance problems as well as to understand what locations and departments are being negatively impacted by the performance of business critical applications.

# ManageEngine Applications Manager's capabilities for addressing top challenges

ManageEngine Applications Manager's capabilities allow organizations to monitor the quality of the end-user experience by creating synthetic transactions and measuring application response times and end-user experience for each of these transactions. This along with the capability to monitor different parts of their infrastructure (servers, databases, applications and network services) through a single platform, makes it easier for organizations to identify the root causes of application performance issues and prevent problems before they impact business users.



ManageEngine Applications Manager allows organizations to group different parts of the enterprise infrastructure into monitoring categories and to map the infrastructure to supported business processes.



## About ManageEngine

ManageEngine offers simple, easy-to-use IT Management products at a price that every business can afford. It is thoughtfully built with SMBs in mind and eventually scales for large businesses. The ManageEngine 90-10 promise gets you 90% of the features of the Big 4 at 10% of the price

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