



Sponsored by: **Riverbed**

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## Business Value Highlights

Average annual benefits (per 100 users):

**\$20,361**

Decrease in productive time lost due to application downtime:

**82.4%**

Increase in IT staff productivity (per 100 users):

**\$8,225**

Increase in IT staff productivity (per organization):

**\$2.79 million**

Three-year ROI:

**521%**

Payback period:

**6.4 months**

# The Business Value and ROI Achieved with Riverbed in Analyzing, Diagnosing, and Resolving Application Performance Issues

## EXECUTIVE SUMMARY

As organizations rely on IT to support critical business processes to an ever-greater degree, the importance of application performance management (APM) is growing. Gone are the days when systems monitoring and management could focus on components in isolation; instead, organizations must ensure that applications are operating at top efficiency from end to end to support critical business processes. This requires a holistic focus on the end user's application experience.

With SteelCentral AppInternals and SteelCentral AppResponse, Riverbed Technology provides products designed to help IT monitor, detect, and diagnose application performance problems, no matter where end users are located or how they access the IT infrastructure. To better understand the business value of Riverbed APM solutions, IDC recently conducted a study of Riverbed customers, examining how they deployed and are using APM tools and the benefits delivered to their IT staff and the broader business.

IDC's analysis showed that these customers are achieving an average payback period of 6.4 months and an average three-year return on investment (ROI) of 521%. These benefits result from improving business and IT productivity, reducing infrastructure costs, and managing risks better. Specific ROI drivers include:

Leveraging its strengths in the traditional network performance management (NPM) market and its 2012 acquisition of OPNET Technologies, Riverbed is taking important steps to credibly reposition itself as a total performance management platform provider

- » Providing greater visibility into business-critical applications, which customers leverage to improve application performance and improve non-IT end-user productivity
- » Minimizing degradation of key business applications
- » Making IT staff more productive by being able to better identify and understand application performance and problem areas
- » Capturing additional revenue by ensuring higher availability of customer-facing applications
- » Reducing datacenter-related costs by eliminating certain costs that are redundant or unnecessary

Leveraging its strengths in the traditional network performance management (NPM) market and its 2012 acquisition of OPNET Technologies, Riverbed is taking important steps to credibly reposition itself as a total performance management platform provider.

## In This White Paper

This white paper contains analysis based on interviews that IDC conducted with six Riverbed APM solution customers from fall 2013 through spring 2014. These organizations are all relatively large, ranging in size from about 7,000 employees to 100,000 employees. The average number of employees is 39,026. Interviewees represented experiences with Riverbed's APM solutions in the higher education, technology, events, healthcare, and insurance industries and came from companies mostly headquartered in the United States. These organizations have used Riverbed's APM solutions for 10 months to 7.5 years, with an average of just under 4.5 years.

IDC designed the interviews to obtain quantitative and qualitative information about how these organizations are using Riverbed APM solutions to the benefit of their IT and business operations. With this information, IDC evaluated the impact of Riverbed APM solutions on the organizations. Table 1 provides an aggregated profile of the organizations surveyed for this white paper.

APM focuses on monitoring, maintaining, and optimizing the performance and health of business applications across development, test, datacenter, and network environments.

**TABLE 1**

Demographics	
Median number of employees	15,000
Median number of IT users of apps covered by Riverbed APM	13,500
Median number of applications	1,000
Median number of applications supported by Riverbed APM solutions	6
Average number of months using Riverbed APM solutions	53
Industry	Higher education, technology, events, healthcare, and insurance
Region	United States and worldwide

Source: IDC, 2014

## Situation Overview

### Meeting Business Requirements with Application Performance Management

APM focuses on monitoring, maintaining, and optimizing the performance and health of business applications across development, test, datacenter, and network environments. APM includes detecting, diagnosing, and repairing performance and availability problems. Packaged software and SaaS solutions marketed as end-user experience monitoring, real user monitoring, and business transaction monitoring are generally included in the APM market. Many APM solutions include some level of IT analytics and correlation as part of the feature set.

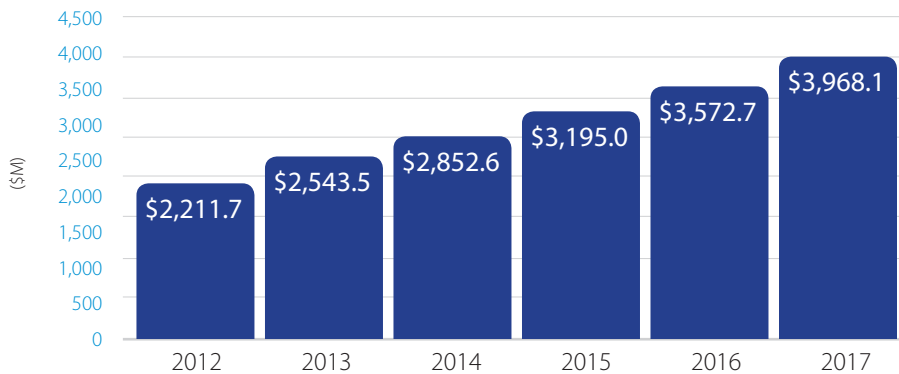
### APM Market and Growth Drivers

The APM market is growing at a much faster rate than most infrastructure software markets as organizations shift from monitoring system-level health and availability to putting greater emphasis on end-to-end application performance and end-user experience monitoring. As traditional infrastructure components like servers and networking become more stable, enterprises find less need to monitor the health of these components and are now investing more in end-to-end application performance, business transaction performance, and end-

user experiences of Web, cloud, and mobile applications. IDC forecasts that the worldwide APM software market will grow to almost \$4 billion worldwide by 2017 at a compound annual rate of 12.4% for the 2012–2017 period (see Figure 1).

**FIGURE 1**

## Worldwide Application Performance Management Software Revenue, 2012–2017



Source: IDC, 2014

APM’s rapid growth rate is fueled by a number of factors. Growth in network complexity is a key driver. Gone are the days when a typical application ran on a single, simple, well-understood server. Instead, applications depend on multiple compute resources interconnected within complex, heterogeneous networks. All this interdependency gives rise to new sources of problems, as does the fact that applications increasingly interconnect with one another and often incorporate custom-developed code.

Another major driver is the rapid growth of what IDC terms *3rd Platform* technologies, notably mobility and the cloud. As applications increasingly embrace these technologies, the potential for new performance and availability problems increases accordingly — heightening the need for APM.

When network managers in a recent IDC survey were asked what will drive network refresh, change, or expansion in their datacenters, the number 1 response was the need to improve application performance.

## Factors Driving IT Infrastructure Management Complexity

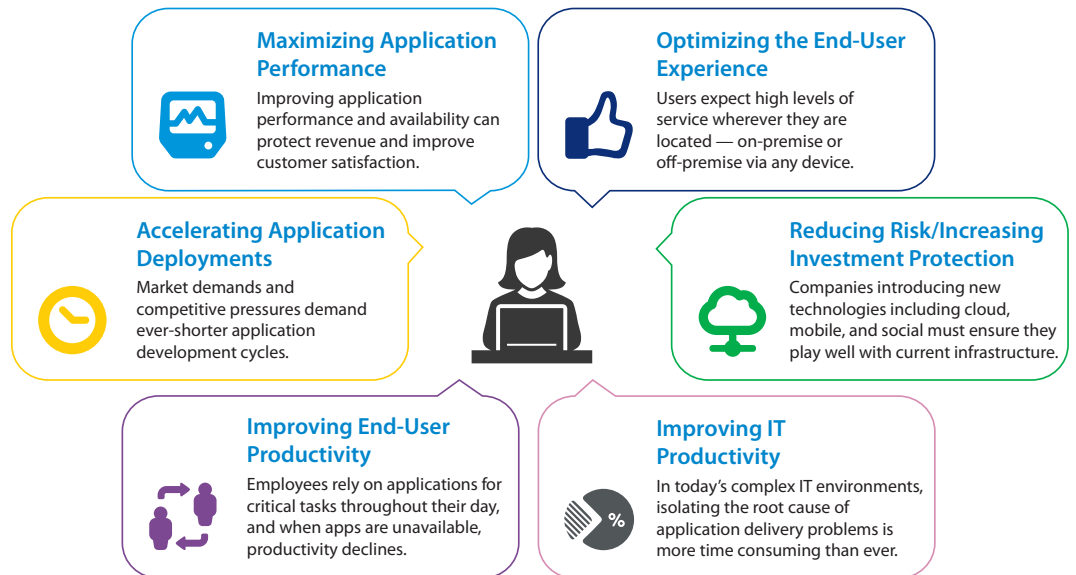
The ability to provision and optimize applications is one of the greatest challenges for the IT department. When network managers in a recent IDC survey were asked what will drive network refresh, change, or expansion in their datacenters, the number 1 response was the need to improve application performance.

## Key Challenges Addressed by APM

IT environments and the applications that run on them are more volatile than ever. Diagnosing, understanding, and fixing today’s performance and availability problems in these applications are critical tasks for IT organizations, and performing these tasks effectively and efficiently can drive significant economic value to an organization. Specific IT challenges addressable by APM are maximizing application performance, optimizing the end-user experience, accelerating application deployments, reducing risk and increasing investment protection, improving end-user productivity, and improving IT productivity (see Figure 2).

FIGURE 2

### IT Challenges Addressed by APM



Source: IDC, 2014

## Riverbed SteelCentral Performance Management Solutions

Riverbed Technology supplies application performance infrastructure solutions to enterprises. Its product line includes applications and appliances that are designed to help IT better serve end users by monitoring networks and applications to detect, diagnose, and repair problems that hinder performance or availability, no matter where users are located and no matter how they access the infrastructure. The company’s primary products for APM are Riverbed SteelCentral AppInternals and Riverbed SteelCentral AppResponse.

With ApplInternals, analytics are employed to detect and correlate anomalies that affect individual transactions to identify patterns that may indicate a problem that is impacting application performance or could in the future.

## SteelCentral AppInternals

AppInternals is an application that equips IT staffers to see inside their applications and diagnose the root causes of performance problems. It combines end-user experience monitoring, code-level transaction tracing, and application component monitoring into a unified product for analyzing performance in today's complex IT environments.

AppInternals performs fine-grained monitoring of hundreds of thousands of performance metrics across application components including Java, .NET, Web servers, databases, operating systems, and storage devices. Rather than requiring organizations to decide in advance what servers in their network need monitoring, AppInternals takes the approach of equipping applications to automatically determine where monitoring is required and how it can be most economically accomplished.

With AppInternals, analytics are employed to detect and correlate anomalies that affect individual transactions to identify patterns that may indicate a problem that is impacting application performance or could in the future. AppInternals is designed to allow IT to capture and index every user transaction and apply big data techniques to extract answers from among stored transactions that can number in the billions. The application supports natural language search for quickly pinpointing meaningful information contained within large quantities of data.

IT can take action at any stage of the process, whether development, QA, or production, and conduct load tests to identify bottlenecks such as slow Java and .NET methods, inefficient SQL, and under-provisioned virtual machines. The always-on, real-time memory monitoring of the solution allows it to identify the lines of code that are the source of memory leaks. It dynamically and automatically sets thresholds based on normal versus abnormal historical performance, thus reducing false alarms and the constant need to reconfigure settings.

AppInternals is designed to integrate bidirectionally with integrated development environments such as Microsoft Visual Studio and Eclipse to streamline application debugging and troubleshooting and collaboration between application support and development teams. It also works with SharePoint, SQL Server, Oracle DB2, WebSphere, WebLogic, VMware, IIS, Apache, and more and can trace the behavior of transactions in packaged applications such as SharePoint, PeopleSoft, and Documentum.

## SteelCentral AppResponse

The AppResponse appliance- and software-based product provides insight into problems harming the performance of Web and non-Web applications. Application and transaction insight, end-user experience monitoring, and network intelligence are combined into a single appliance to provide visibility into application performance problems.

Riverbed's customers reported that they are achieving significant improvements in terms of performance and understanding of key applications by using SteelCentral APM solutions.

AppResponse enables companies to monitor true end-user application experience and not simulated transactions. Alerts are issued when problems threaten key business transactions. Companies can perform root cause diagnosis of application performance problems by breaking down application response time according to contributing sources. AppResponse provides visibility into performance problems rooted in network, server, or application code components.

IT staffers can view response times for all users and transactions by application, user business group, and location and can quantify the impact of infrastructure expansions. They can measure transaction response time at the page level as well as traffic by application, user, business division, and location and can design dashboards for any type of user — detailed statistics for a network manager all the way to high-level overviews for executives.

AppResponse is available as a hardware appliance or a virtual appliance. It is tightly integrated with AppInternals.

## Financial Benefits Analysis

Riverbed's customers reported that they are achieving significant improvements in terms of performance and understanding of key applications by using SteelCentral APM solutions. For these organizations, this has translated into benefits in a variety of business, staff, and IT operations areas. These customers cited the following as among the most significant benefits they are realizing:

- » Improved ability to identify and isolate problems with business-critical applications
- » Faster resolution of problems impacting important applications and the associated higher availability of these applications
- » Better cooperation between IT teams and IT staff time savings as a result of increased visibility surrounding application performance and problem identification
- » Improved performance of key applications, resulting in higher non-IT staff productivity and the ability to better serve end users
- » The elimination of unnecessary or redundant capex as a result of increased visibility into application and network performance

IDC aggregated the results of the interviews with six Riverbed customers and used the resulting data to measure the financial impact of the use of Riverbed APM solutions on the organizations. In total, IDC calculates an average discounted benefit of \$16.1 million per

Riverbed customers' applications are performing better and are experiencing less downtime with APM solutions in place.

organization over three years, or an average three-year discounted benefit of \$47,617 per 100 users of applications covered by Riverbed APM solutions.

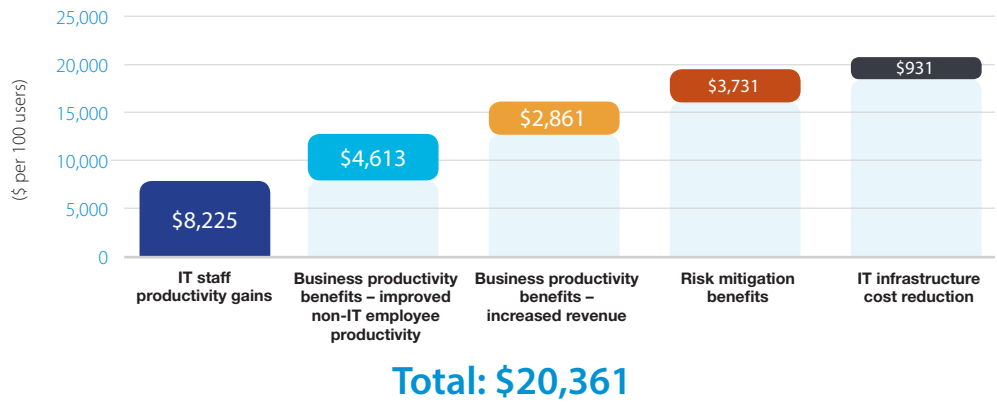
According to Riverbed's customers, they are seeing financial benefits in five primary areas through their use of APM solutions (see Figure 3):

- » **Risk mitigation benefits:** Riverbed customers' applications are performing better and are experiencing less downtime with APM solutions in place. As a result, these organizations' non-IT employees are spending less time dealing with problems related to applications or waiting for applications to come back online. IDC calculates that this results in a productivity gain worth an annual average of \$3,731 per 100 users, or \$1.27 million per organization, over three years.
- » **Business productivity benefits — improved non-IT employee productivity:** Riverbed customers report employee productivity gains as they maintain more robust applications and their business users can better use applications to drive their business. IDC calculates that these organizations are achieving productivity gains worth an average of \$4,613 per 100 users, or \$1.56 million per organization, over three years.
- » **Business productivity benefits — increased revenue:** Riverbed customers are capturing more revenue as a result of reduced downtime of customer-facing applications and portals. IDC projects that these organizations are increasing their operating margins by an average of \$2,861 per 100 users per year over three years, or \$970,000 per company.
- » **IT staff productivity gains:** Riverbed customers have leveraged their use of APM solutions to save significant amounts of IT staff time and to avoid having to hire additional IT staff resources. With Riverbed APM solutions, these organizations are achieving levels of application performance that would require more IT staff time or resources. IDC projects that these organizations are realizing average annual time savings and productivity increases for their IT teams worth \$8,225 per 100 users, or \$2.79 million per organization, over three years.
- » **IT infrastructure cost reduction:** Riverbed customers report that they are avoiding certain datacenter-related costs because of much improved application and network visibility. IDC calculates that the interviewed organizations are saving an annual average of \$931 in costs per 100 users over three years, or \$316,000 per organization.



**FIGURE 3**

## Average Annual Benefits



Note: Benefits are measured per 100 users of applications covered by Riverbed APM solutions.

Source: IDC, 2014

## Risk Mitigation Benefits: Improving Application Performance and Understanding of Applications

The financial benefits being realized by Riverbed APM customers all flow to some extent from improvements in the performance and availability of their applications. Riverbed’s APM solutions have provided these organizations with a tool to understand the performance of their applications, identify issues and potential problems, and then take remedial actions quickly and effectively.

In their interviews, Riverbed customers consistently referred to how the SteelCentral APM solutions had provided them with the visibility and insight they needed to improve the performance of their applications, which they leverage to reduce the impact of downtime on their businesses:

“The top benefit for us is being able to monitor, which allows us to gauge performance and then make significant improvements in performance. We are able to isolate problems faster, and fewer people are impacted by problems.”

- » “The top benefit for us is being able to monitor, which allows us to gauge performance and then make significant improvements in performance. We are able to isolate problems faster, and fewer people are impacted by problems.”
- » “The key benefit for us is basically measured response time. When there is a problem, we can go in there, and we can find out where the problem is and conduct triage.”
- » “The problem was that before Riverbed, we had nothing like it. We had very poor monitoring that was doing just up/down monitoring, and we had no processes in place for people to do discovery. We use Riverbed to fix issues, including systematic issues, crashes, exceptions, and slowness, associated with our thousands of applications.”

Thus, by using Riverbed SteelCentral solutions, these organizations are experiencing fewer downtime instances and resolving downtime faster, as shown in Table 2. The average user of applications covered by Riverbed SteelCentral solutions at these organizations has seen a decrease of 82.4% in productive time lost due to application downtime. IDC calculates that this translates to an average non-IT end-user productivity benefit worth \$3,731 per 100 users per year, or \$1.27 million per organization, over three years.

Feedback from interviewed organizations highlighted the impact that their use of Riverbed SteelCentral APM solutions has had on application downtime. As one customer explained, “Our applications are not down as much with Riverbed. Before [Riverbed SteelCentral], we would have half-day outages, probably once a month, with every user’s productivity reduced by up to 90%.” [After Riverbed SteelCentral], with the applications I work with, I would say that we experienced unplanned downtime maybe once every six months for half an hour.”

**TABLE 2**

Downtime KPIs				
Average	Before Riverbed APM Solutions	With Riverbed APM Solutions	Change	Advantage with Riverbed APM Solutions (%)
Downtime incidents per year	38.8	14.4	24.4	63.0
Downtime hours per incident	8.8	3.7	5.1	58.2
Annual downtime hours per user	10.7	1.9	8.8	82.4

Source: IDC, 2014

### Business Productivity Benefits

Riverbed customers are also benefiting from improved IT user productivity and are capturing more revenue by using Riverbed’s SteelCentral solutions. These benefits stem from improved performance of key applications and networks with the AppInternals and AppResponse solutions in place, which are making the employees of these organizations more productive. These organizations are also leveraging reduced downtime of key customer-facing applications to minimize revenue losses. IDC calculates that these organizations are obtaining benefits worth an average of \$7,474 per 100 users of applications covered by Riverbed SteelCentral APM solutions, or \$2.53 million per organization, over three years.

Interviewed organizations say that their IT teams are better able to serve their business end users with Riverbed SteelCentral solutions in place. Thanks to improved visibility into application performance and problem areas, their IT teams can develop and maintain more robust

“We have increased revenue with Riverbed because there’s a direct correlation to lost customers; by meeting our SLAs and meeting customer demands coming in and signing up new accounts, we are definitely gaining revenue.”

“Look at it this way — imagine that we’re doctors, and there’s no such thing as an x-ray — we’d have no way to see inside the patient and see what’s going on.”

applications, which business end users can leverage to maximize their productivity. In addition, improved application and network performance saves employee time that can be reinvested to drive business. As one customer explained, “Overall, our networks are running better with Riverbed, which is saving all of our employees time. I think that most people are more productive.”

Interviewed organizations are also benefiting from faster delivery of applications through their use of Riverbed SteelCentral solutions. With important applications and upgrades in their hands earlier, non-IT end users gain productivity. A Riverbed APM customer explained this benefit as follows: “Our time to market is improved because one of the biggest bangs for our buck with Riverbed is having a better understanding of dependencies. So our time to market is better with making changes or bringing new features to customers because we’re better at understanding the impact of a change now.”

Riverbed SteelCentral customers also say that they are capturing additional revenue because of greater application availability and performance. For one customer, the link between its use of Riverbed SteelCentral solutions and higher revenue is clear cut: “We have increased revenue with Riverbed because there’s a direct correlation to lost customers; by meeting our SLAs and meeting customer demands coming in and signing up new accounts, we are definitely gaining revenue.”

Another customer noted the significant positive impact that Riverbed ApplInternals has had on its most important customer-facing application: “There’s one important application used by tens of thousands of people where we lose millions of dollars when it’s down for extended periods of time. We’ve seen a massive improvement using SteelCentral ApplInternals on that application.”

## IT Staff Productivity Gains

Interviewed organizations say that Riverbed APM solutions are having a very positive impact on their IT staff by saving time and by markedly increasing productivity. Riverbed SteelCentral solutions provide the IT teams of these organizations with greater visibility into and control over application performance, helping them achieve a variety of staff efficiencies and productivity gains. IDC calculates that surveyed organizations are achieving benefits worth an average of \$8,225 per 100 users of applications covered by Riverbed APM solutions in time savings and productivity gains per year, or \$2.79 million per organization, over three years (see Figure 4).

Riverbed APM solutions are changing how the IT staff of these organizations handle issues surrounding critical business applications by bringing visibility and clarity into understanding the performance of these applications. One Riverbed customer likened its application management efforts before deploying Riverbed APM solutions to a doctor without modern medical equipment: “Look at it this way — imagine that we’re doctors, and there’s no such thing as an x-ray — we’d have no way to see inside the patient and see what’s going on. That’s where we were before having Riverbed.” However, with Riverbed SteelCentral solutions in place, IT teams can monitor and quickly

“Riverbed has helped us remove the blame game because we can pinpoint things. We used to have to bring 10–15 people in to bring an app back up, and the discussion was ‘Whose issue is this?’ Now, when we have a problem, it’s only 2–3 people helping solve the problem.”

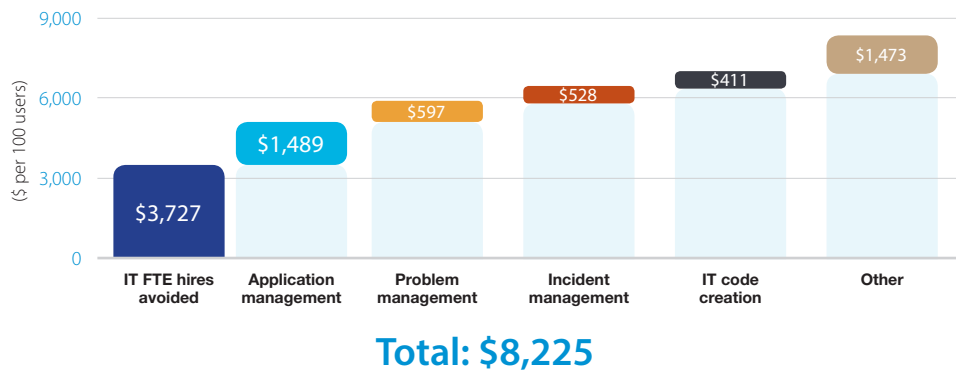
address potential problems in business-critical applications, which is making their IT teams much more effective and positively impacting all of the activities surrounding application management.

The benefits begin with application management. One Riverbed customer with a sizable application management team explained that “the impact on application management is huge. I think we’re looking at 10% growth on that team if we didn’t have Riverbed, or a reduction, depending on how you’re looking at it.” In addition, organizations report time savings or productivity gains in terms of:

- » **Problem and incident management:** Because Riverbed APM solutions offer greater visibility into and understanding of application performance, IT spends less time responding to and managing problems. As one customer explained, “Riverbed has helped us reduce the number of incidents and the time it takes to fix them.”
- » **Code creation and management:** Better understanding of application code allows IT staff to spend less time creating and managing it. As one customer explained, “With Riverbed AppInternals, we’re actually able to see what’s going on in the developer’s code as it executes. That’s amazing. That’s like slap-your-buddy amazing.”
- » **Overall productivity:** Clarity in application management achieved with Riverbed APM is having positive downstream benefits on IT staff productivity and efficiency. According to one customer, “Riverbed has helped us remove the blame game because we can pinpoint things. We used to have to bring 10–15 people in to bring an app back up, and the discussion was ‘Whose issue is this?’ Now, when we have a problem, it’s only 2–3 people helping solve the problem.”

FIGURE 4

### Average Annual IT Staff Productivity and Cost-Savings Benefits



Notes:

Benefits are measured per 100 users of applications covered by Riverbed APM solutions.

The “other” category includes IT planning, IT application and platform testing, software change, application integration and deployment, server administration, storage administration, network administration, testing cycle, and developer and application security testing.

Source: IDC, 2014

“Riverbed is helping us control our capex because, by identifying issues quickly, we don’t need to expand our environment because we have performance issues. So we’re avoiding about \$150,000 per year in expenses.”

“It’s very easy with Riverbed to look at infrastructure utilization”

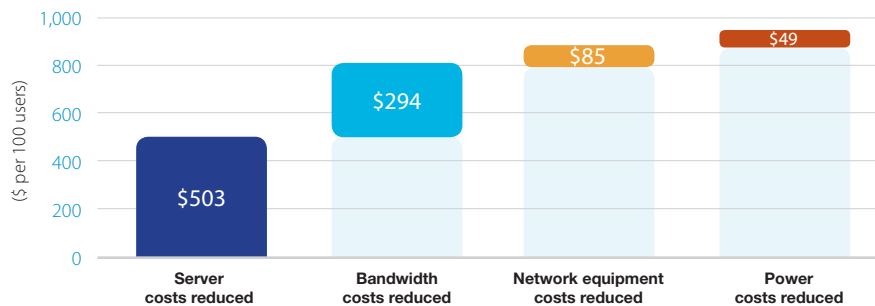
## IT Infrastructure Cost Reduction

Riverbed SteelCentral customers report that they are also leveraging increased visibility into and understanding of application performance to achieve datacenter-related cost savings. IDC calculates that the organizations interviewed for this white paper are realizing average cost savings of \$931 per 100 users per year, or \$316,000 per organization, over three years (see Figure 5).

Riverbed SteelCentral benefits these organizations by helping them better understand the causes of application-related problems, which makes them better able to target spending. As one customer explained, “Riverbed is helping us control our capex because, by identifying issues quickly, we don’t need to expand our environment because we have performance issues. So we’re avoiding about \$150,000 per year in expenses.” Another customer explained that it was leveraging increased visibility to avoid unnecessary expenditures: “It’s very easy with Riverbed to look at infrastructure utilization. On a number of occasions, people have over-ordered, and I’ve said no. That’s servers, network, everything. I would say that we’re saving at least \$3 million every five years on hardware with Riverbed.”

**FIGURE 5**

### Average Annual IT Infrastructure Cost Reduction Benefits



**Total: \$931**

Note: Benefits are measured per 100 users of applications covered by Riverbed APM solutions.

Source: IDC, 2014

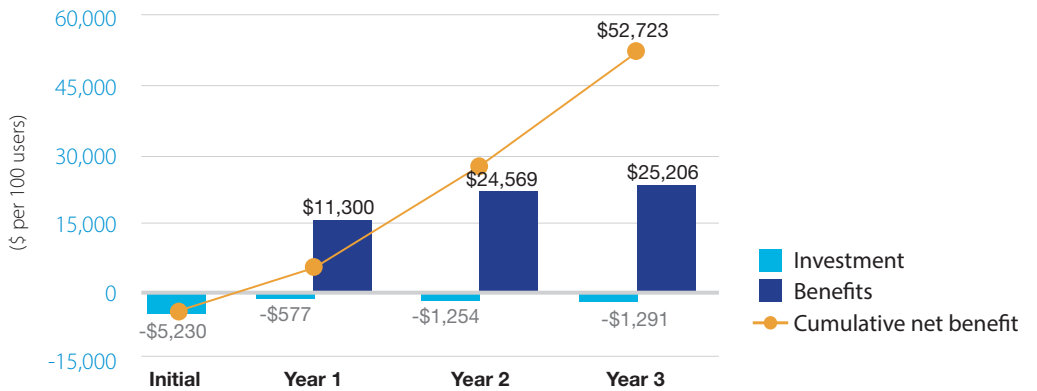
## ROI Analysis

IDC uses a discounted cash flow methodology to calculate the return on investment and payback period. ROI is the ratio of the net present value (NPV) and discounted investment. The payback period is the point at which cumulative benefits equal the initial investment.

IDC assessed the cost, benefits, and value of the use of Riverbed APM solutions to the six organizations over a three-year period (see Figure 6). These organizations are spending an average of \$2,784 per 100 users each year over three years, including initial costs. These investments will result in average annual benefits of \$20,361 per 100 users over three years for the surveyed organizations. IDC projects that as a result, these organizations will realize a cumulative net gain of \$52,723 per 100 users over three years.

**FIGURE 6**

### Cost Benefit Analysis



Note: Benefits are measured per 100 users of applications covered by Riverbed APM solutions.

Source: IDC, 2014

Table 3 presents IDC’s ROI analysis for the organizations’ use of Riverbed SteelCentral APM solutions. This ROI analysis is a three-year view of the financial impact of the use of Riverbed APM solutions on the six organizations.

The three-year ROI analysis shows that on average, the organizations in this white paper will spend \$7,663 per 100 users (\$2.6 million per organization) on Riverbed APM solutions and achieve \$47,617 in benefits per 100 users (\$16.1 million per organization). This results in an NPV of \$39,953 per 100 users (\$13.5 million per organization). Based on these results, surveyed organizations have an average payback period of 6.4 months after beginning their deployments of Riverbed APM solutions and are seeing an ROI of 521%.

TABLE 3

Three-Year ROI Analysis		
	Average per Organization	Average per 100 Users
Benefit (discounted)	\$16.1 million	\$47,617
Investment (discounted)	\$2.6 million	\$7,663
Net present value (NPV)	\$13.5 million	\$39,953
Return on investment (ROI)	521%	521%
Payback period	6.4 months	6.4 months
Discount rate	12%	12%

Note: Benefits are measured per 100 users of applications covered by Riverbed APM solutions.

Source: IDC, 2014

## Challenges/Opportunities

The rapid growth of the APM market clearly presents significant business opportunities for Riverbed, but IDC sees challenges it must overcome to take full advantage of these opportunities. The legacy of the company is squarely in the network performance management market, where it is one of the leading vendors, with a product line dominated more by appliances than by applications.

However, NPM is a subset of the broader APM market, and Riverbed is looking to leverage its strengths in NPM as a springboard for serving other aspects of APM, including performance management, event management, and automated software quality. There are clearly some merits to this approach; IDC research shows that network performance is high on the list of IT priorities, and keeping networks performing well is clearly a critical issue for IT. However, Riverbed is likely to encounter challenges as it extends beyond NPM and appliances into full-fledged APM and positions itself as a provider of a complete platform for performance management, if for no other reason than communicating its broader portfolio to the market and convincing customers of its capabilities across all areas of APM.

Riverbed has already taken key steps in this direction, notably by acquiring OPNET Technologies and its AppInternals and AppResponse products. The OPNET acquisition adds credibility in the broader APM market to Riverbed's already strong NPM and positions Riverbed as more of a total performance management provider. With this acquisition, Riverbed has taken a large step in the direction of providing a total application performance platform.

IDC believes that Riverbed, already well positioned in NPM, has accomplished an important expansion of its scope by acquiring OPNET and integrating its APM solutions into the product line.

## Conclusion

APM is a vital technology to enterprises, and its importance will only grow as infrastructures become increasingly complex. IDC's interviews with Riverbed customers and analysis demonstrate that Riverbed's APM solutions address the challenges that IT staff face in delivering a high-quality end-user experience while delivering a strong ROI.

IDC believes that Riverbed, already well positioned in NPM, has accomplished an important expansion of its scope by acquiring OPNET and integrating its APM solutions into the product line. Now the company's challenge is to flesh out this product line and turn it into a total platform for performance management. If Riverbed does this successfully, it stands to expand its share of the overall APM market.

## Appendix: Research Methodology

IDC utilized its standard ROI methodology for this project. This methodology is based on gathering data from current users of the technology as the foundation for the model. Based on these interviews, IDC performs a three-step process to calculate the ROI and payback period:

- » Measure the savings from reduced IT costs (staff, hardware, software, maintenance, and IT support), increased user productivity, and improved revenue over the term of the deployment.
- » Ascertain the investment made in deploying the solution and the associated training and support costs.
- » Project the costs and savings over a three-year period and calculate the ROI and payback for the deployed solution.

IDC bases the payback period and ROI calculations on a number of assumptions, which are summarized as follows:

- » Time values are multiplied by burdened salary (salary + 28% for benefits and overhead) to quantify efficiency and manager productivity savings.
- » Downtime values are a product of the number of hours of downtime multiplied by the number of users affected.
- » The impact of unplanned downtime is quantified in terms of impaired end-user productivity and lost revenue.



- » Lost productivity is a product of downtime multiplied by burdened salary.
- » Lost revenue is a product of downtime multiplied by the average revenue generated per hour.
- » The net present value of the three-year savings is calculated by subtracting the amount that would have been realized by investing the original sum in an instrument yielding a 12% return to allow for the missed opportunity cost. This accounts for both the assumed cost of money and the assumed rate of return.

Because every hour of downtime does not equate to a lost hour of productivity or revenue generation, IDC attributes only a fraction of the result to savings. As part of our assessment, we asked each company what fraction of downtime hours to use in calculating productivity savings and the reduction in lost revenue. IDC then taxes the revenue at that rate.

Further, because IT solutions require a deployment period, the full benefits of the solution are not available during deployment. To capture this reality, IDC prorates the benefits on a monthly basis and then subtracts the deployment time from the first-year savings.

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