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Quantifying the Business Value of End-User Experience Monitoring

Financial savings based on Riverbed Aternity customer results

Contents

Executive Summary

This paper reviews the quantifiable business value achieved by customers of Riverbed Aternity End-User Experience Monitoring (EUEM) so that you can better understand potential savings in your environment. It summarizes the results of a 2019 third-party survey of Riverbed Aternity customers conducted by TechValidate, in which 54% of Riverbed Aternity customers reported a payback period of less than twelve months. This paper uses TechValidate survey results along with other third-party data to identify and quantify the specific areas of financial value driving these returns and is designed for IT leaders who are actively considering investment in end-user experience monitoring tools.

Increased Demand for End-User Experience Monitoring

Companies are spending millions to transform their businesses in order to serve customers better, get to market faster, and compete more effectively. But to ensure these investments pay off, companies need to measure the human experience. They need a way of ensuring that digital transformation initiatives actually make things better. That's where End-User Experience Monitoring (EUEM) comes in to play. Companies are investing in EUEM not only to ensure IT delivers a superior digital experience and to help identify and resolve issues quickly, but also to verify that digital transformation investments actually make things better. These market dynamics have led to increased demand for products such as Riverbed Aternity.

Riverbed Aternity End-User Experience Monitoring Overview

Riverbed Aternity takes a unique approach to EUEM. Riverbed Aternity automatically monitors and correlates together the three streams of data that constitute true user experience—user interactions, device health and performance, and application performance, as seen by the end-user.

Riverbed Aternity monitors the performance of applications **as they render on the screens** of the user's device. Further, Riverbed Aternity monitors the performance of **business activities** performed by the end-user. These are company-defined user interactions with applications in the context of a business process, such as "look up a patient record," or "process a claim," or "check inventory."

Other EUEM products emulate, extrapolate, or simulate the end-user experience. Riverbed Aternity enables you to monitor the actual experience that users see as they interact with every application in their portfolio.

Unlike traditional Application Performance Monitoring or Device Performance Monitoring products, Riverbed Aternity automatically monitors and correlates together the three streams of data that constitute true user experience.

Quantifying the Business Value of Investing in Riverbed Aternity EUEM

TechValidate surveyed more than 100 users of Riverbed Aternity, asking questions about the top product use cases and the results achieved. Analyzing the responses, together with data from other third party sources, shows that Riverbed Aternity delivers benefits in three key areas:

- Reducing service desk ticket volume

- Reducing MTTR

- Expanding use cases beyond Operations to app teams and business stakeholders

Driver 1: Reducing Service Desk Ticket Volume

TechValidate asked customers how their use of Riverbed Aternity has affected Service Desk trouble ticket volume. The graph below shows a weighted average result of 15% ticket reduction, with 36% reporting a reduction of 15% or more.

Help Desk Ticket Volume

To what extent have you reduced the volume of Help Desk trouble tickets through SteelCentral Aternity's proactive monitoring?

- Reduced ticket volume by greater than 50%: **8%**
- Reduced ticket volume between 25 and 50%: **13%**
- Reduced ticket volume between 15 and 25%: **15%**
- Reduced ticket volume between 5 and 15%: **32%**
- Ticket volumes about the same as before: **32%**

Source: TechValidate survey of 62 users of SteelCentral Aternity. Sample comprised of customers who selected improve customer experience.

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✓ Validated   Published: Mar. 22, 2019   TVID: E27-049-9BD

Survey respondents report a 15% reduction in Help Desk ticket volume (weighted average.)

How to explain the significant percentage of respondents who reported trouble ticket volume about the same as before? One explanation has to do with the job responsibilities of Riverbed Aternity users. As discussed in section three below, more than 40% of respondents rely on Riverbed Aternity for use cases that may have nothing to do with trouble tickets. Application teams optimizing the performance of their apps, or IT leaders validating the impact of IT change on end-user experience may have no insight into Service Desk ticket volume. It's not a surprise that respondents from these teams would report no change in trouble ticket volume.

To quantify the benefit of the investment in Riverbed Aternity EUEM, combine these results with the cost per Service Desk ticket. The data below come from HDI, from a 2016 survey of North American Service Desk teams.

Service Desk Cost Metrics

Metric Type	Service Desk Cost Metrics	North American Statistics		
		Average	Min	Max
Cost	Cost per Ticket	$15.56	$2.93	$49.69
	Cost per Minute of Handle Time	$1.60	$0.76	$2.50

Service Desk cost per ticket varies by more than a factor of 15 in North America.[1]

Of course, some tickets get escalated to more technical, Level 2 Desktop Support teams. When they do, the cost per ticket rises. Data from HDI's 2016 survey of North American Desktop Services teams show the cost of Desktop Support tickets.

Desktop Support Metrics

Metric Type	Desk top Support KPIs	North American Statistics		
		Average	Min	Max
Cost	Cost per Ticket	$109.15	$21.06	$258.60
	Cost per Incident	$73.62	$22.82	$181.45
	Cost per Service Request	$173.49	$18.51	$404.04

Desktop Support cost per incident varies by a factor of nine across North America.[2]

Here's a table that will help you quantify the value of trouble ticket reduction in your organization:

Calculating the Value of Ticket Reduction

Number of Trouble Tickets per Year	Cost per Ticket	Total Trouble Ticket Cost	Riverbed Aternity Reduction (%)	Benefit
L1	C1	L1 x C1	15%	15% x L1 x C1
L2	C2	L2 x C2	15%	15% x L2 x C2

[1] Metric of the Month: Service Desk Cost per Ticket, Jeff Rumberg, HDI, May 2017.

[2] Metric of the Month: Desktop Support Cost per Ticket, Jeff Rumberg, HDI, October 2017.

Four Steps to Reducing Ticket Volume with Riverbed Aternity

Without visibility into what users actually see when they use their applications, your Service Desk can only hope that IT is delivering an excellent user experience or wait for users to complain when it's not. That's no way to deliver an excellent digital experience.

Riverbed Aternity provides customers with the key capabilities that enable IT to identify and resolve issues proactively, remotely, and non-invasively.

Step 1: Measure ACTUAL end-user experience

Riverbed Aternity monitors user experience as applications render on the screen of the device. Riverbed Aternity does this for:

- ANY type of device: laptops, PCs, virtual desktops, or mobile devices

- ANY type of app: local, web, cloud, or mobile

Step 2: Use baselines to identify when performance deviates from expected levels

When users report trouble, they don't report it in technical terms. They don't say, "I'm experiencing excessively high memory consumption." Or "I have too many bad blocks on my hard drive." They report trouble in **business** terms. Customer service reps will complain that it takes too long to pull up a customer record in the CRM application. Field service agents will report that it takes too long to submit a claim on their tablet when they're out at the customer site.

Riverbed Aternity enables IT to monitor users' interactions with applications in the context of business workflows like these by tracking every instance of every monitored business activity and automatically sets baselines for normal performance.

Because of the correlation described above, these baselines can vary by device type, office location, etc. This makes sense because a variety of factors affect normal performance. Response time in your headquarters building served by high speed data should be much faster than that in a remote home office with limited bandwidth.

Step 3: Identify issues proactively, before users complain

Riverbed Aternity automatically generates an alert when performance exceeds a baseline, or a manually established threshold, for multiple users of the same application. This enables IT to identify performance issues before users complain.
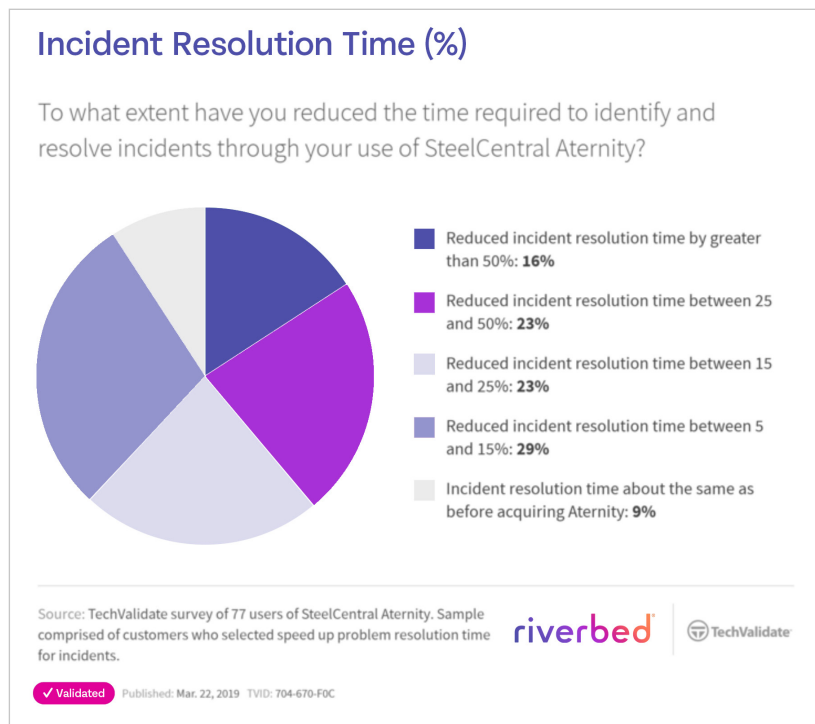
Riverbed Aternity triggers a service desk alert when the same application, hardware, or system problem occurs within a specified period of time. With these alerts, your Service Desk can take action before users generate trouble tickets. The bi-directional integration between Riverbed Aternity and ServiceNow is another way to get a jump on issues before they affect your users.

Step 4: Use automated remediation to reduce calls to the service desk

With Riverbed Aternity, IT can build a library of remediation actions, which can be executed automatically by the system, without the user calling the Service Desk for support. When recurring problems like hard drive failures, app or system crashes, low disk space, etc. occur several times on the same device within a certain timeframe, IT can specify the remediation action to be performed. At IT's discretion, these actions can be run by the system with or without a notification to the end-user.

Driver 2: Reducing Incident Mean Time to Repair (MTTR)

TechValidate asked customers about the extent to which their use of Riverbed Aternity has sped up their ability to identify and resolve incidents. The graph below shows a weighted average result of 24% reduction in Mean Time to Repair (MTTR).

Incident Resolution Time (%)

To what extent have you reduced the time required to identify and resolve incidents through your use of SteelCentral Aternity?

- Reduced incident resolution time by greater than 50%: **16%**
- Reduced incident resolution time between 25 and 50%: **23%**
- Reduced incident resolution time between 15 and 25%: **23%**
- Reduced incident resolution time between 5 and 15%: **29%**
- Incident resolution time about the same as before acquiring Aternity: **9%**

Source: TechValidate survey of 77 users of SteelCentral Aternity. Sample comprised of customers who selected speed up problem resolution time for incidents.

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✓ Validated   Published: Mar. 22, 2019   TVID: 704-670-F0C
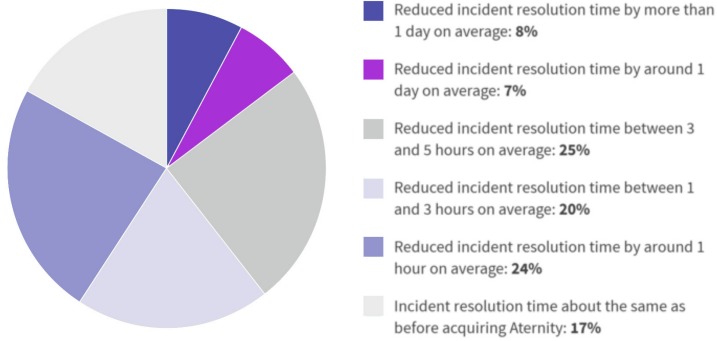
Companies reduced MTTR by a weighted average of 24% with Riverbed Aternity.

TechValidate also asked customers the same question, in terms of actual time. The graph below shows a weighted average reduction of 3.2 hours. Interestingly, this reduction aligns with results from a 2017 survey of 2,500 IT shops published by Digital Enterprise Journal (DEJ)[3]. According to DEJ's survey, the top 20% performing organizations reported a MTTR per incident 206 minutes shorter than that of average organizations.

[3] Digital Enterprise Journal: 17 Areas Shaping the IT Operations Market in 2018, Bojan Simic, 2018, page 7.

Incident Resolution Time

What does the percentage reduction in incident resolution time in the previous question translate to, in terms of hours?

- ■ Reduced incident resolution time by more than 1 day on average: **8%**
- ■ Reduced incident resolution time by around 1 day on average: **7%**
- Reduced incident resolution time between 3 and 5 hours on average: **25%**
- Reduced incident resolution time between 1 and 3 hours on average: **20%**
- Reduced incident resolution time by around 1 hour on average: **24%**
- Incident resolution time about the same as before acquiring Aternity: **17%**

Source: TechValidate survey of 76 users of SteelCentral Aternity. Sample comprised of customers who selected speed up problem resolution time for incidents.

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✓ Validated   Published: Mar. 22, 2019   TVID: C06-E76-117

Companies achieved a weighted average reduction of 3.2 hours in Mean Time to Repair with Riverbed Aternity.

Mean Time to Repair reduction provides another basis for quantifying the benefit of Riverbed Aternity EUEM. Costs will vary according to the complexity of the incident, the number of people involved, and their technical expertise.

To quantify the business benefit of Riverbed Aternity EUEM for your organization, look up the number of incidents your organization had in the last year. Then use the loaded rate of your senior level IT staff to calculate the IT operations cost of those incidents. A potential savings of 3 hours, or 24% of that time, provides a compelling payback. And that doesn't even include the impact of the incidents on your business—the interruption to your workforce and/or your customers.

37% of outages require 6 or more IT Full Time Equivalents to resolve. And average MTTR was 4.2 hours[4].

Calculating MTTR Saving

Number of Incidents	Number of L2/L3 Staff per Incident	Loaded Rate of L2/L3 Staff	Current MTTR of Incidents	Incident Cost	Riverbed Aternity Reduction	Benefit
I	S	$ / hour	T (hours)	I x S x $ x T	24% or 3 hours	24% x I x S x $ x T or I x S x $ x (T-3)

[4] Digital Enterprise Journal: 17 Areas Shaping the IT Operations Market in 2018, Bojan Simic, 2018, pp.7, 10.

Five Ways to Reduce Mean Time to Repair with Riverbed Aternity EUEM

Riverbed Aternity helps our enterprise customers and service providers reduce MTTR by measuring actual end-user experience. The dashboard below illustrates how Riverbed Aternity monitors actual end-user experience.
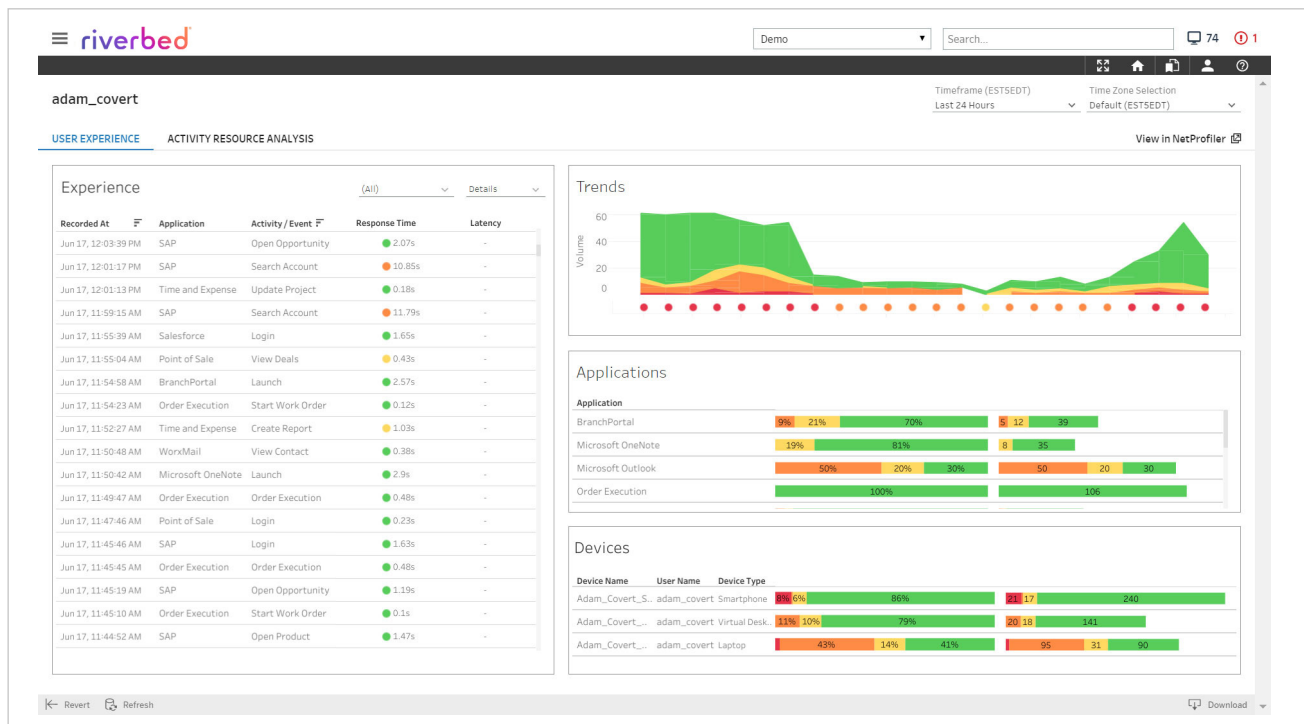
Riverbed Aternity monitors a user's actual end-user experience for 1) every app, 2) running on every device, and 3) shows the response time of business activities relative to performance thresholds.

These product capabilities help customers drive down MTTR in five ways.

1. Identify issues proactively, before users complain

Customers use Riverbed Aternity to identify issues that affect end-user experience **BEFORE** users call to complain. Riverbed Aternity automatically generates an alert when performance exceeds a baseline, or a manually established threshold, for multiple users of the same application.

2. Validate user complaints remotely and non-invasively

Even when end-users do complain about issues, Riverbed Aternity enables your Service Desk team to validate the issue. Without Riverbed Aternity, the Service Desk wastes time interrogating the end-user to determine the scope and severity of the problem. The dashboard's color-coded status provides IT with all of the necessary information, without having to ask the user or obtain remote access to the user's device.

3. Isolate the source of delay

Riverbed Aternity breaks down the overall response time of a business activity to show the contribution by the back end, network, and client device. This enables the Service Desk agent to identify the cause of slow performance so they can rapidly route the ticket to the right team for resolution.

4. Automate recovery actions

With Riverbed Aternity, IT can build a library of automated remediation actions, which can be executed either by the system or by IT, in response to recurring device problems like hard drive failures, app or system crashes, low disk space, etc. When these problems occur several times on the same device within a certain time, IT can specify the remediation action to be performed. This speeds up problem resolution or eliminates issues altogether.

5. Get cross-domain visibility

32% of organizations reported consolidation of monitoring tools as a key goal for IT Operations management in 2018[5]. Unlike stand-alone Device Performance Monitoring vendors, Alluvio Aternity is part of Riverbed's integrated Digital Experience Digital Experience Management solution. An integrated solution of EUEM, Application Performance Monitoring (APM), Network Performance Monitoring (NPM), and IT Infrastructure Monitoring (ITIM) provides customers with visibility and analytics across the entire IT service delivery chain.
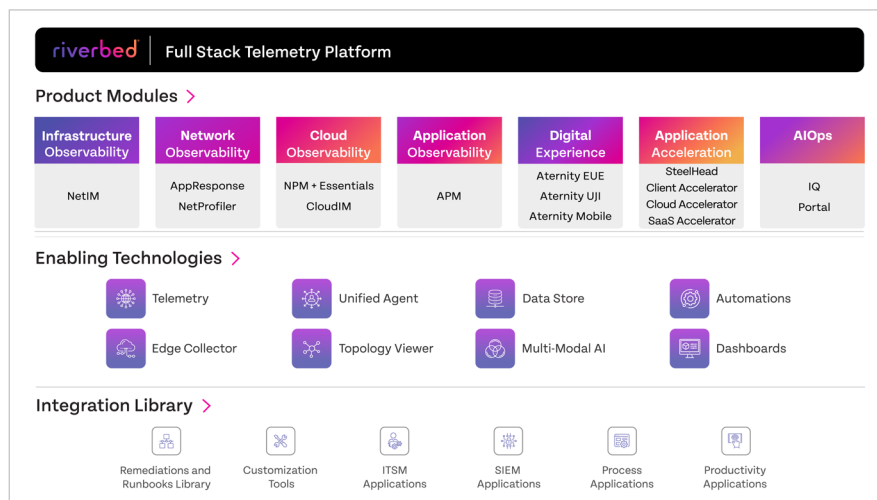
Riverbed Digital Experience Management provides integrated visibility and analytics across end-user devices, applications, networks, and infrastructure.
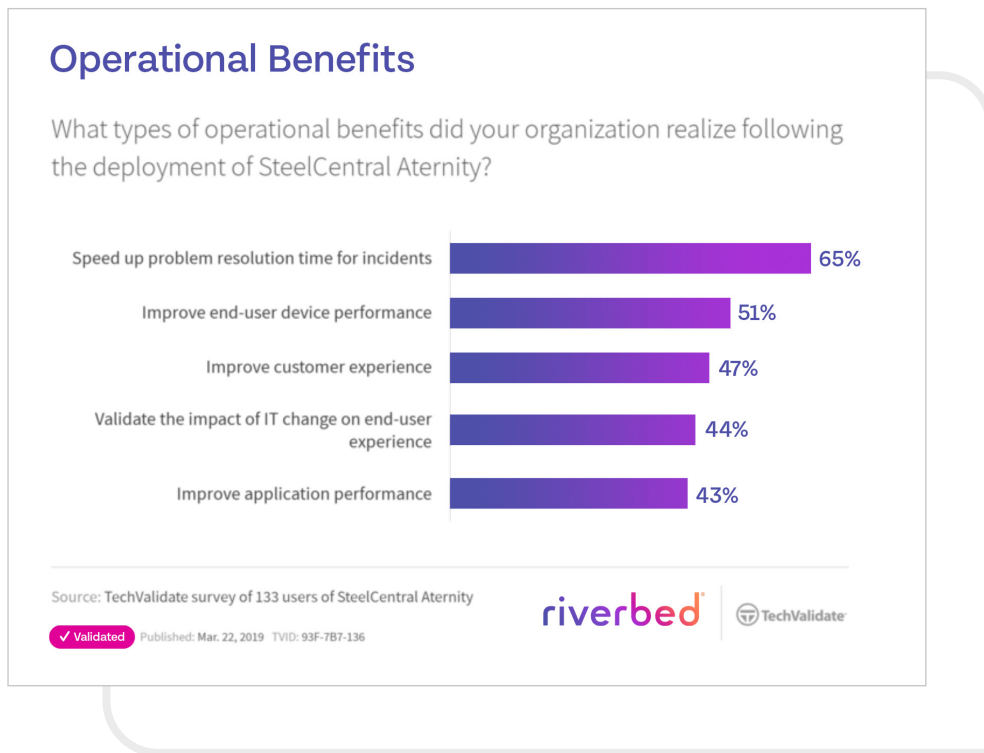
With an integrated DEM solution, IT teams can further reduce MTTR once they've isolated the source of the problem. For example, if the problem is in the application, the one-click integration between EUEM and APM means your App Team can take over the issue and resolve it quickly.

MTTR sometimes suffers because of the "blame game" between the End-User Services team and the Network team. The bi-directional integration between EUEM and NPM provides complete insight between these two domains. Your teams can rapidly determine whether an end-user issue is due to network congestion, traffic mis-classification, or an under-resourced client device. To see this integration in action, watch the short video on integration with NPM.

[5] Digital Enterprise Journal: 17 Areas Shaping the IT Operations Market in 2018, Bojan Simic, 2018, page 15.

Driver 3: Additional Savings Beyond Incident Management

TechValidate also asked Riverbed Aternity customers about the operational benefits they're achieving.

Operational Benefits

What types of operational benefits did your organization realize following the deployment of SteelCentral Aternity?

Benefit	Percentage
Speed up problem resolution time for incidents	65%
Improve end-user device performance	51%
Improve customer experience	47%
Validate the impact of IT change on end-user experience	44%
Improve application performance	43%

Source: TechValidate survey of 133 users of SteelCentral Aternity

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✓ Validated   Published: Mar. 22, 2019   TVID: 93F-7B7-136

Teams such as Service Desk and Desktop Support represent key user groups for Riverbed Aternity. So, the top three operational benefits are no surprise, since they are associated with incident and problem resolution. What stands out in the survey data is the prevalence of two key use cases that deliver benefits **outside** of these teams. **Around 40% of respondents use Riverbed Aternity to validate the impact of IT change and to improve application performance.**

The broad range of use cases Riverbed Aternity addresses is one of the key differentiation points relative to DPM vendors. Unlike DPM vendors who focus primarily on Service Desk and Desktop Support use cases, Riverbed Aternity also addresses a broader range of use cases for other teams in IT and the business.

Quantifying the Value of EUEM for Application Teams

Application teams use Riverbed Aternity to optimize the performance of their apps, hold SaaS vendors accountable to SLAs based on what users see, monitor the performance of mobile apps, and to identify whether poor device performance is affecting app performance.

Unlike stand-alone DPM vendors, Riverbed Aternity has unified EUEM and Application Performance Monitoring (APM). With Riverbed Aternity, IT can monitor the end-user experience of ALL of the business-critical applications on which a user relies. Riverbed Aternity proactively notifies app teams of slow response problems. Then it shows the response time contributed by client device, network, and backend server. App teams can then drill down into Riverbed Aternity APM with a single click to investigate specific application transactions to isolate and resolve the problem.

To see Riverbed Aternity in action, watch this short video on unified EUEM and APM.

Using Riverbed Aternity to Deliver Quantified Value for IT and Business Executives

IT and business leaders invest millions in IT projects to transform their businesses. Migration to Windows 10 can cost between $220 and $450 per user, according to analysts like Forrester[6] and Gartner[7]. Migrating to Office 365 can cost $150-$250 per mailbox[8]. Without actually measuring the impact of these IT changes on end-user experience, IT and business leaders can only guess whether or not these investments are paying off.

Customers use Riverbed Aternity to validate the impact of IT change. Not just for device and OS changes, but also for strategic and tactical application changes, like migrations to cloud and mobile apps, or routine app upgrades. They use Riverbed Aternity to validate the impact of infrastructure changes, such as data center consolidation or WAN acceleration. This video shows how to validate change.

[6] Forrester, The Total Economic Impact™ Of Microsoft Windows 10, December 2016.
https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RWrHjm

[7] Gartner, Optimize Your Cost to Migrate to Windows 10 Using Gartner's Cost Model, October 2016.
https://www.gartner.com/en/documents/3464832

[8] Reddit discussion board.
https://www.reddit.com/r/msp/comments/8nxp85/whats_the_on_going_rate_for_a_office_365_migration/

The Bottom Line

The math is clear. Customers reduced the volume of Service Desk trouble tickets by 15% on average. They've lowered incident Mean Time to Repair by 3 hours, or 24%. The business value of Riverbed Aternity is even greater when you consider additional use cases outside of operations, such as improving application performance and validating the impact of IT change.

Register for instant access to the Riverbed Aternity SaaS environment to understand the key use cases for end-user experience monitoring.

Learn about Riverbed Aternity's unique approach in Not All End-User Experience Monitoring Solutions Are Created Equal.

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Riverbed — Empower the Experience

Riverbed is the only company with the collective richness of telemetry from network to app to end user that illuminates and then accelerates every interaction so that users get the flawless digital experience they expect across the entire digital ecosystem. Riverbed provides two industry-leading solutions: the Riverbed Unified Observability portfolio, which integrates data, insights, and actions across IT to enable customers to deliver seamless digital experiences; and Riverbed Acceleration, which offers fast, agile, and secure acceleration of any application over any network to users, whether they are mobile, remote, or on-premises. Together with our thousands of partners, and market-leading customers across the world, we empower every click, every digital experience. Learn more at riverbed.com.