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Solution Brief

Enabling Greater Workforce Productivity

The productivity of modern workforces depends on access to, and the performance of, business-critical applications. Increased dependence on SaaS and the Internet has reduced IT control but not accountability.

IT needs the ability to monitor performance end-to-end, to hold SaaS vendors accountable, and to improve network performance between users and the Cloud.

Modern Workforces are Cloud-connected and Mobile

The global economy is more services-oriented and reliant upon knowledge workers than ever before. A growing number are mobile—accessing hosted applications from their offices, homes, and on the road. Many more are untethered workers, who require continuous network access as they move about offices, retail stores, and other places of business. Most rely on SaaS applications, such as Office 365, and other software that runs in public or hybrid clouds to do their jobs.

The productivity of modern workforces depends on the performance of cloud-based applications, a multitude of user devices, and the networks between them.

Challenges to Productivity

Changes in the way applications are delivered, and how people work, are making it difficult for IT to enable productivity. When critical applications perform poorly, more than workforce productivity is affected. Customer service suffers, decisions are delayed, projects slip, and revenue is lost.

Networks with unreliable access and unpredictable performance impact productivity. Wi-Fi capacity is strained as more people unplug from the LAN. Mobile workers are hindered by last-mile bottlenecks on cellular data networks, at public Wi-Fi hot spots, and on home DSL/cable connections.

IT is held responsible for the performance of SaaS applications but exercises no control over and has no visibility into the service provider's cloud. Moreover, the Internet—a best effort service—is the primary means of connectivity from enterprises to SaaS applications and from mobile workers to any hosted application.

These issues are compounded by the difficulty of identifying, isolating, and resolving performance problems. Is the cause in the Cloud, somewhere in a long and complicated network path, or in the end-user device? Without a clear answer to this question, much time and effort can be wasted debating who bears responsibility to fix the problem.

Riverbed Solution for Workforce Productivity

Enabling workforce productivity with high-performing applications is a responsibility shared by business and IT executives, application owners, end user services, and the network team. Setting up a SaaS application or deploying a more custom application is just the beginning.

An ongoing effort is needed to ensure that critical applications perform well for every end user. It starts with providing reliable network access. Another essential is end-to-end visibility—the capacity to monitor application performance from the point of consumption back to the Cloud. IT also needs the means to accelerate applications when performance is lacking.

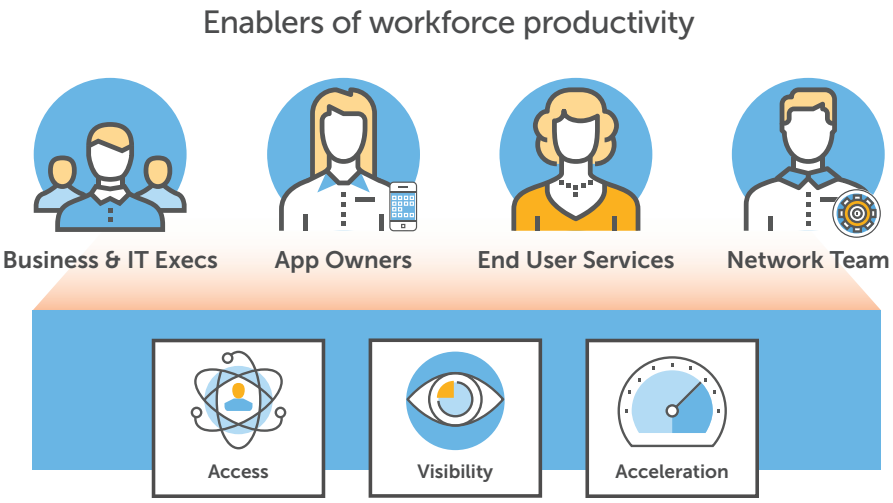

Figure 1

Enabling workforce productivity is a shared responsibility that requires simple and secure access to the network, end-to-end visibility, and the means to accelerate applications.

Access

Provide simple and secure network access for all users, with any device, from any location. Simplify access with single sign-on and federated ID management. Improve security with policies that follow users across locations. Deliver wireless service as fast as if not faster than wired connectivity.

Visibility

Monitor performance from the end-user perspective for every application on the user device. Proactively identify issues via automatic baselines for normal performance and the option to set thresholds on a per activity basis. Quickly isolate issues to the client device, network, or back-end.

Acceleration

Improve application performance with better network performance. Reduce the effects of high latency due to longer network paths between clients and application servers. Speed network traffic through bottlenecks with streamlining techniques that minimize data transfers.

Untether office workers

Give employees easy access to high-speed, wireless LAN at their desks, in meeting rooms, and other on-premises locations. Single sign-on with federated ID management provides simple, secure access no matter what type of mobile device is used.

Deliver Wi-Fi performance that is faster than wired connectivity and supports four times more users per access point with Riverbed. Maximize reliability with a distributed architecture that eliminates single points of failure.

Ensure predictable performance for business-critical and productivity applications—even on congested networks—with the ability to identify over 2,200 applications and schedule policies to prioritize, block, and rate limit traffic.

Hold SaaS vendors accountable

The SLAs of SaaS vendors typically guarantee uptime and may include metrics like email delivery time as with Microsoft Exchange. An SLA effectively ends, however, at the edge of the vendor cloud. Consequently, customers may need to prove the cause of a SaaS performance issue is in the Cloud to get it corrected.

Whether using Office 365, Salesforce, Workday, or another service, you can easily collect the evidence needed to hold SaaS vendors accountable.

Monitor application response times from the user perspective, where it really matters. Measure against internal service objectives to identify performance issues. Then quickly isolate a problem to the Cloud, network, or an end-user device.

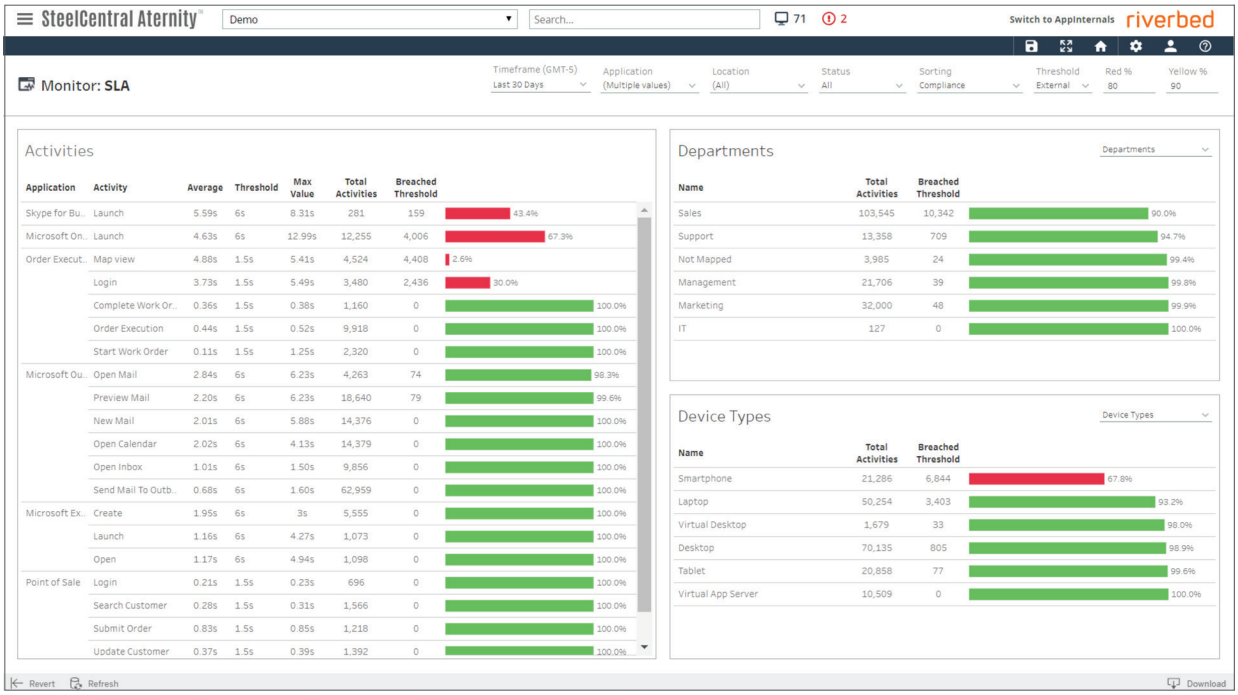

Figure 2

Hold SaaS vendors accountable by monitoring the response time of individual activities performed by users relative to service thresholds. In this example the launch times for Skype for Business and Microsoft OneNote are not meeting targets.

Validate the results of IT change

Did moving an application to the Cloud improve or worsen performance? How can you be sure a change to infrastructure or a device had the positive impact you intended?

Monitor the click-to-render response times of applications at the point of consumption before and after changes. Then compare performance for key activities to determine whether changes had the intended effect on workforce productivity.

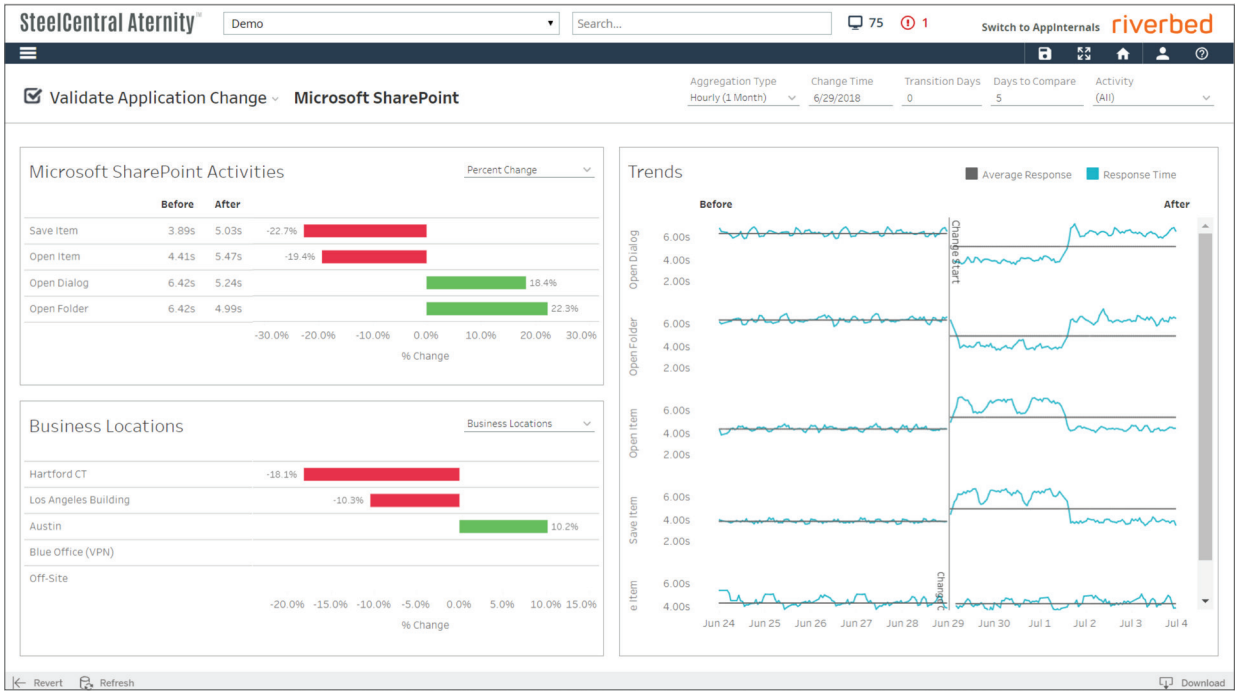

Figure 3

Verify the outcomes of changes to applications, infrastructure and devices by comparing the response times for application activities before and after a change. In this case, the change to Microsoft SharePoint is inconclusive, since two activities are slower and two are faster. .

Proactively identify and isolate end user performance issues

Get ahead of performance issues by automatically generating a baseline for every application activity on every device. Set custom thresholds as needed for user groups and applications to align with internal service objectives.

When performance deviates from the acceptable range, our monitoring tool generates an alert and opens a support ticket. Then it speeds resolution by identifying the probable cause.

Riverbed also helps you prioritize issues by determining which groups are affected, and analyzing the business impact.

Application:	Microsoft Outlook
Activity / Event:	Preview Mail
Page:	-
Recorded At:	Jan 01, 2019 4:39:03 PM
Device Name:	Adam_Covert_VDI
User Name:	adam_covert
Status:	Major
IP Address:	193.1.0.58
Activity Response:	5.86s
Backend Time:	0.02s
Network Time:	2.65s
Client Time:	3.19s
Incoming Traffic:	16KB
Outgoing Traffic:	17KB
Baseline:	2.44s
Baseline Major:	4.67s
Baseline Minor:	3.96s
Percentile:	99%
External Threshold:	6s
Internal Threshold:	3s

Figure 4

The client device is primary contributor to delay in Adam Covert's "send mail to outbox" activity.

Make the cloud feel closer

The network path from an end user to the Cloud is typically longer than for applications running on-premises, especially when traffic is routed through a central point of Internet access.

Improve the performance of cloud-based applications by using WAN optimization to mitigate the adverse effects of high-latency network paths.

Mobile workers face another challenge: last-mile bottlenecks when connecting to the Internet from public Wi-Fi access points, cellular data networks, and DSL or cable at home. Provide consistently good network performance to application users wherever and however they connect by accelerating traffic through bottlenecks with WAN optimization.

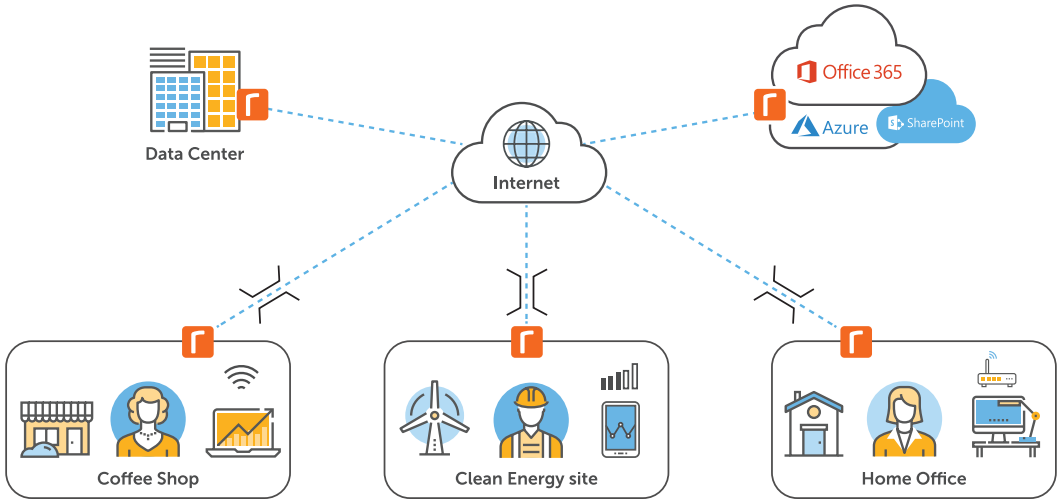

Figure 5
Last-mile network bottlenecks degrade application performance for mobile workers. Riverbed WAN optimization speeds traffic through bottlenecks using techniques that streamline data transfers.

Get Started Now

Workforce productivity depends on the accessibility and performance of business-critical applications. Riverbed can help you provide reliable network access, monitor performance from the end user to the Cloud, and improve the performance of networks and applications.

For more information, visit riverbed.com/workforce-productivity.

About Riverbed

Riverbed®, The Digital Performance Company™, enables organizations to maximize digital performance across every aspect of their business, allowing customers to rethink possible. Riverbed's unified and integrated Digital Performance Platform™ brings together a powerful combination of Digital Experience, Cloud Networking and Cloud Edge solutions that provides a modern IT architecture for the digital enterprise, delivering new levels of operational agility and dramatically accelerating business performance and outcomes. At more than $1 billion in annual revenue, Riverbed's 30,000+ customers include 98% of the *Fortune* 100 and 100% of the *Forbes* Global 100. Learn more at riverbed.com.

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