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Ensuring Global Workforce Productivity with SaaS Applications

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 increasingly complex 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, 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 user consumption back to the Cloud. And ideally, IT also needs the means to accelerate applications when and where performance is lacking.

Enablers of workforce productivity

Business & IT Execs App Owners End User Services Network Team

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.

Visibilitv

Access

Provide simple, secure, and reliable SaaS application access for all users anytime, and from any location. Ready in minutes-easy to purchase, spin up, and manage.

Visibility

Monitor performance from the end-user perspective for every application the end. Proactively identify issues via automatic baselines for normal performance and the option to set thresholds. Quickly isolate issues to the client device, network, or SaaS Application.

Acceleration

Acceleration

Boost SaaS performance up to 10x for any user, anywhere by mitigating latency and reducing bandwidth consumption up to 99%, improving user productivity and satisfaction.

Unleash the global workforce

Today's workforces are mobile. In a given day, a single employee can hey access apps on the go on a laptop from a home office, a coffee shop, an airport, or client sites halfway around the world, and no matter where they are, they expect apps to respond quickly. The Riverbed SaaS Accelerator solution provides leading-edge application acceleration to remote workers wherever they are located. Delivered as a software-defined, cloud-based service, the solution is purpose-built for today's dynamic workforce. Regardless of network latency, bandwidth constraints, or application contention the solution ensures consistent performance of leading SaaS applications for anyone, anywhere.

Operationally, the solution ensures predictable performance for business-critical and productivity applications—even on congested networks—with the ability to schedule policies to prioritize, block, or 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, Box 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.

SaaS Accel	erator		
SaaS Application	Number of Users	Service Endpoint	Service Status
Microsoft Office 365	200	20.37.140.214:7810 Copy	• 📀

Figure 2

Simple software-based service to enable acceleration of leading SaaS applications.

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												• •	↑ ≎ ⊥
Monito	er: SLA						Timeframe (GMT-5) Last 30 Days	Application (Multiple value	is) v (All)	Status	Sorting Compliance	Threshold	Red 96 Yellow ✓ 80 90
Activities	5								Departments				Departments
Application	Activity	Average	Threshold	Max Value	Total Activities	Breached Threshold			Name	Total Activities	Breached Threshold		
Skype for Bu	Launch	5.59s	6s	8.31s	281	159	43.4%	A	Sales	103,545	10,342		90.0%
Microsoft On	Launch	4.63s	6s	12.99s	12,255	4,006	67.3%		Support	13,358	709		94.7%
Order Execut	Map view	4.88s	1.5s	5.41s	4,524	4,408	2.6%		Not Mapped	3,985	24		99.4%
	Login	3.73s	1.5s	5.49s	3,480	2,436	30.0%		Management	21,706	39		99.8%
	Complete Work Or	0.36s	1.5s	0.38s	1,160	0		100.0%	Marketing	32,000	48		99.9%
	Order Execution	0.44s	1.5s	0.52s	9,918	0		100.0%	IT	127	0		100.09
	Start Work Order	0.115	1.5s	1.25s	2,320	0		100.0%					
Microsoft Ou	Open Mail	2.84s	6s	6.235	4,263	74		98.3%					
	Preview Mail	2.20s	6s	6.23\$	18,640	79		99.6%					
	New Mail	2.01s	6s	5.88s	14,376	0		100.0%	Device Types				Device Types
	Open Calendar	2.02s	6s	4.13s	14,379	0		100.0%	Name	Total	Breached		
	Open Inbox	1.015	6s	1.50s	9,856	0		100.0%		Activities	Threshold		67.8%
	Send Mail To Outb	0.68s	6s	1.60s	62,959	0		100.0%	Smartphone	21,286	6,844		
Microsoft Ex	Create	1.95s	6s	35	5,555	0		100.096	Laptop	50,254	3,403		93.2%
	Launch	1.16s	6s	4.27s	1,073	0		100.0%	Virtual Desktop Desktop	1,679	33		98.0%
	Open	1.17s	6s	4.94s	1,098	0		100.0%	Tablet	70,135	77		98.9%
Point of Sale	Login	0.21s	1.5s	0.23s	696	0		100.0%		20,858	0		99.6%
	Search Customer	0.28s	1.5s	0.31s	1,566	0		100.0%	Virtual App Server	10,509	U		100.09
	Submit Order	0.83s	1.5s	0.85s	1,218	0		100.0%					
	Update Customer	0.37s	1.55	0.39s	1,392	0		100.0%					

Figure 3

Hold SaaS vendors accountable by monitoring the response time of individual activities performed by users relative to service thresholds.

Validate the results of deploying SaaS apps

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.

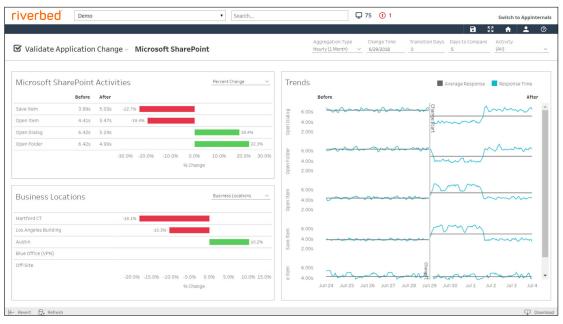


Figure 4

Verify the outcomes of changes to applications, infrastructure and devices by comparing the response times for application activities before and after a change.

Proactively identify and isolate end user performance issues

Get ahead of performance issues by automatically generating a baseline for SaaS application activity for all users. Set custom thresholds as needed for user groups and applications to align with internal service objectives. When performance deviates from the acceptable range, Riverbed's EUEM (End User Experience Management) platform 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 from a financial perspective.

Departments	Departments			
Breakdown	Lost Hours	Departments Business Locations		
Sales	41,297.88		Device Types	
Marketing	9,487.19	\$493,334	Servers	
Support	4,675.15	\$243,108	Countries States	
Management	4,486.86	\$233,317	Cities	
IT	897.40	\$46,665		

Figure 5

The cost of slow application can be substantial. This graphic shows the productivity view per department.

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 leveraging SaaS acceleration for SaaS-based apps, and Cloud acceleration for IaaS workloads 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 application performance to users wherever and however they connect by accelerating cloud-based traffic with Riverbed's best of breed Acceleration solutions.

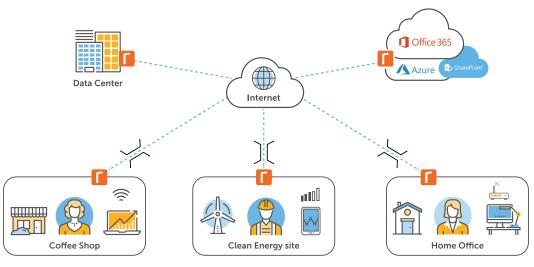


Figure 6

Last-mile network bottlenecks degrade application performance for mobile workers. Riverbed SaaS Accelerator speeds traffic through bottlenecks using techniques that streamline data transfers.

Get Started Now

Greater 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 SaaS provider, and improve the performance of networks and applications.

For more information, visit riverbed.com/products/steelhead/saas-accelerator.

About Riverbed

Riverbed enables organizations to maximize performance and visibility for networks and applications, so they can overcome complexity and fully capitalize on their digital and cloud investments. The Riverbed Network and Application Performance Platform enables organizations to visualize, optimize, remediate and accelerate the performance of any network for any application. The platform addresses performance and visibility holistically with best-in-class WAN optimization, network performance management (NPM), application acceleration (including Office 365, SaaS, client and cloud acceleration), and enterprise-grade SD-WAN. Riverbed's 30,000+ customers include 99% of the *Fortune* 100. Learn more at riverbed.com.

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