Go cloud-first
with unified visibility across
networks and apps

Microsoft Azure

Accelerate your journey to Microsoft Azure

To remain resilient and adapt to an evolving market climate, organizations are reimagining their digital technologies and investing more than ever in modernizing their IT environment. Cloud demand is growing at an 18% CAGR and is projected to reach $450B by 2024.[1] Nearly half of organizations now have a cloud first strategy.[2]

Microsoft Azure is the home for cloud apps and services to bring new ideas to market. Azure helps organizations scale on-demand, reduce CAPEX costs, and gain agility by rapidly adopting innovations and responding more quickly to customer demands. According to Goldman Sachs, Azure is the most popular cloud service for big businesses.[2]

Digital initiatives have propelled SaaS adoption, with consumption increasing sharply to $200B.[3] IoT devices and edge computing expand the IT perimeter, and remote work has become the new norm. Organizations expect remote/hybrid work to continue–reaching 600M by 2024 – a roughly 60% higher level than the pre-COVID era.[4]

Microsoft 365 and Teams collaboration tools that helped organizations survive the pandemic are crucial to work-from-anywhere, a trend that is here to stay. Microsoft 365 ballooned to 297M monthly users and Teams up 53% to 115M daily users with 30B minutes in a single day.[5]

Digital transformation is essential for survival moving forward. With the right technology and partners, you can get up and running on Azure quickly and securely while optimizing the performance of your apps and collaboration tools. This eBook will guide you through the steps to accelerate your cloud journey to Azure and deliver a better user experience, keep your business protected and available for your employees and customers.

[1] Gartner WW IT Spending Report 2020, Riverbed.
[2] ESG, 2021 Data Center Infrastructure Spending Change.
[3] Riverbed corporate overview deck – need exact source.
[4] Gartner, August 2020.
[5] Microsoft quarterly report.

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The three M's to digital transformation success

Together, Microsoft and Riverbed will get you to Azure and help you execute your critical digital initiatives to ensure performance and security for all your data and apps. Riverbed's visibility solutions help you migrate and monitor your Azure migrations and adoption of Microsoft 365 most efficiently. The performance solutions offered by Riverbed accelerate the process, reduce expenses, and ensure the highest quality of experience for your customers and employees alike for optimal performance and the best end-user experience.

Reach the full potential of your digital transformation efforts with Microsoft and Riverbed's approach—

Migrate
Modernize
Manage

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Migrate to Azure

Digital initiatives that were once nice to have are now fundamental for survival, accelerating Azure migration projects. Organizations turn to Azure to tap into innovation and scale on-demand and stay resilient and responsive to evolving market conditions.

Migrate to Microsoft Azure with ease

The amount of data moving to the cloud has exploded. IDC predicts that by 2025, worldwide data will grow 61% to 175 zettabytes and that 49% of the world's stored data will reside in public cloud environments.[6] Migrating workloads to Azure quickly and without disruption is a struggle for every IT department.

To accelerate data migration to Azure, organizations turn to Riverbed and **migrate on-prem workloads to Microsoft Azure or Microsoft Azure Government up to 99% faster**.

• Up to 99% faster Azure migration

• Reduce bandwidth by up to 99%

• Eliminate 70% of initial replication of VMware traffic

"Cloud underpins the push to digital business, which remains top of the CIO's agenda. "

—Gartner

[6] "IDC: Expect 175 zettabytes of data worldwide by 2025," Network World, December 23, 2018.

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Perform app baselining to accelerate migration schedule

Riverbed and its partners offer an [Application Performance Baseline (APB) service](#) to measure the current performance and throughput of your application(s) to generate a baseline for comparison after your Azure migration. Riverbed provides an analysis of how the transaction will perform after changing network characteristics such as latency, bandwidth, and WAN optimization techniques to match the network characteristics of the destination. Organizations can identify and resolve high-risk components to ensure optimal post-migration performance and ensure migration schedule stays on track. The APB deliverables are a baseline performance report, and the advance service offering provides organizations with risk mitigation recommendations.

According to the [Flexera report](#), Mapping all the relationships across apps, hardware and networking devices for each IT-delivered service is notoriously difficult to do, especially in a rapidly evolving environment. It's therefore no surprise that 51% of organizations reported understanding app dependencies as the top cloud migration challenge.

NetProfiler can map network and application dependencies prior to the migration and afterwards. This is a important capability to call out in this section.

Migrate to Azure faster with Riverbed

- NetProfiler provides insight to traffic patterns and map application dependencies pre- and post-migration

- Cloud Accelerator and SteelHead (in datacenter) to accelerate migration

- AppResponse Cloud to diagnose and monitor app performance in the cloud

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Create secure, private connections between cloud data centers and company infrastructure

Many organizations chose private connections to avoid compromising performance, data and authenticated customers to public cloud vulnerabilities. Today's distributed environment is jeopardizing the performance of their applications for their customers and employees.

Azure ExpressRoute provides fast and reliable connections to Azure with bandwidths up to 100 Gbps to cost-effectively transferring large amounts of data. Adding Riverbed solutions provides insights into application traffic patterns, application dependencies, and infrastructure dependencies. Seamless optimization of application traffic with Riverbed gives your network setup speed and security and keeps your network performant. With Riverbed, organizations **detect and resolve performance issues and security threats up to 90% faster,** along with the intel for application acceleration. Traffic optimizing with Riverbed enables organizations to add additional workloads with the recovered bandwidth bringing more value to Azure ExpressRoute.

- Slash MTTR by 63% and set proactive alerts

- Reduce blind spots by 58%

- Improved user experience 58%

- Improve overall network performance 53%

- Reduce the bandwidth used to transmit data by up to 99%

Optimize Azure ExpressRoute traffic and improve uptime with Riverbed

- NetProfiler provides insight to traffic patterns

- Cloud Accelerator (for each cloud datacenter) to accelerate replication traffic

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Modernize the enterprise

The new ways of working from remote, hybrid, and work-from-anywhere are here to stay. It's a chore to keep distributed employees fully productive in remote work locations hampered by latency, last-mile issues, and local network congestion. Many SaaS apps, like Microsoft 365 and enterprise video, suffer under compromised network conditions as well. 80% of organizations report that mission-critical apps fail a few times a month.[7] Additionally, almost 40% of their remote workers say slow file downloads, while 39% of global organizations cite the need for technology to "optimize remote performance" (50% in the US).[8]

Deliver flexible work environments with Riverbed

- Client Accelerator (on user devices) with Cloud Accelerator to accelerate and optimize IaaS apps

- Client Accelerator (on user devices) with SaaS Accelerator to accelerate and optimize SaaS apps

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Secure and optimize for remote and multi-session work scenarios

Azure Virtual Desktop (AVD) provides the end-user a complete Windows 10 experience, proactively detects threats and takes remedial actions against security threats to support remote workers. Riverbed secures AVD traffic with SD-WAN firewalls for AVD and transforms network data into cybersecurity intelligence for broad threat detection, investigation, and migration. With Riverbed, AVD business-critical network traffic is prioritized and optimized for Windows 10 and Microsoft 365

- **Microsoft 365 deployments – 10x acceleration for Office 365.**

  - Up to 10x better performance

  - Complete visibility of end-user experience

  - 67% faster issue resolution

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Run Microsoft 365, SaaS apps and build cloud-native apps

Ensure cloud applications perform fast and consistently for all users, whether at home, in the office, or on the go. Riverbed streamlines data transmission to improve the quality of service and mitigate delays due to physical distance or network congestion. You can deploy Riverbed in Microsoft Azure and on client devices to accelerate all types of workloads, especially data-heavy applications and large file downloads. **Identify and resolve network performance issues 67% faster** to deliver better experiences on Microsoft 365.

- Downloads from SharePoint are up to 75X faster

- Microsoft 365 up to 10x faster performance

- Up to 99% reduction in video data for Teams and Stream

Work consistenly anywhere with Riverbed

- Client Accelerator (on user devices) with Cloud Accelerator to accelerate and optimize IaaS apps

- Client Accelerator (on user devices) with SaaS Accelerator to accelerate and optimize SaaS apps

297M
Monthly Microsoft 365 Users[9]

145M
Teams Daily Active Users, up 53%[6]

30B
Collaboration Minutes in a single day (MSFT Quarterly Report)

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Manage your operations

Digital transformation has caused explosive growth in applications, connected devices, and data – all of which puts tremendous strain on enterprise networks and the IT professionals who operate them. Users are globally spread out and are use different devices with different capabilities. The applications can be located anywhere from your on-premises data center to multiple cloud providers. And, there are many other SaaS applications hosted by the vendor somewhere in the cloud.

As a result of this complexity, enterprise IT teams are experiencing significant gaps in tool kit resulting in significant impact to business and users. Point solutions fall short in providing holistic visibility consistently across the infrastructure. End users are detecting problems before NetOps 39% of the time.[10] Then, troubleshooting is taking too long. The average MTTR is 224 minutes, not nearly fast enough for today's digital business.[11]

Network visibility is crucial

The Riverbed Unified Network Performance Monitoring (NPM) solution is designed to help organizations obtain comprehensive visibility across their IT environments, combining network forensics, application analytics, and end-user experience monitoring. With Riverbed NPM, organizations can improve their visibility by collecting, storing, and intelligently analyzing packet, flow, and network device data traversing on-premises, cloud, hybrid, and multi-cloud environments via an integrated set of tools.

By continuously collecting, synthesizing, and analyzing all packet, flow, and device data throughout the IT network, Riverbed's Unified NPM solution can improve an organization's ability to detect and resolve network and security issues in a timely and proactive manner. IT teams responsible for network and application performance and availability can work from a common set of data to derive root causes of issues impacting end-users.

Riverbed's NPM helps organizations detect and respond to quickly troubleshoot and resolve performance and availability issues. According to a recent survey[11], Riverbed customers achieved:

- 70% reduction in MTTR

- 60% boost in efficiency

- 60% improvement in user experience

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Security in the modern environment

More applications and data move off-prem to public and private clouds every day, and the work-from-anywhere is the new norm adding to the securitychallenge for IT.The lack of network visibility has a negative impact on identifying performance and detecting security threats. The threat plane has expanded with IoT and Edge devices opening the door for cyberattacks. Phishing of websites jumped 350% in the early monthsof Covid, and security breaches like the recent SUNBURST cyberattack are growing in frequency and sophistication as well.[12] 68% feel the cyber risk is increasing, and 54% of Industry Leaders cite that detecting and responding to security threats are in their Top 3 concerns.[13]

Visibility and security in a distributed IT environment

Visibility across clouds, apps, IoT devices, and the edge is crucial to identify performance issues and detect security threats. It is not easy to measure, monitor, and ensure application performance and security. The average time to identify and contain a breach is 280 days, and the average total cost of a breach is $3.86 million[14] (Ponemon, Cost of a Breach, 2020). The distributed and complex IT environment creates risk, and you can't manage what you can't see.Riverbed helpsorganizations maximize visibility & performance for networks and applications —anywhere users reside and everywhere applicationsare served.

Use Riverbed's Unified Network Performance Management solution to easily monitor, analyze and troubleshoot what is happening across your IT environment. IT teams can quickly and proactively resolve any network performance or security issue with end-to-end visibility and actionable insights.Riverbed bridges the gap between NetOps and SecOps with integrated shared tools that provide a single source of truth.

• 58% improved userexperience

• Nearly 60% eliminated network blind spots

• 63% reduction inMTTR forthreat detectionand incident response

Go cloud-first with Azure and reduce your risk with Riverbed

- Quickly triage application performance issues with APP 911

- AppResponse Cloud streamlines network and app troubleshooting in Azure and hybrid cloud deployments

- NetProfiler Cloud analyzes flow traffic across the enterprise for rich visibility

[12] Google Transparency Report
[13] The State of Remote Working, Riverbed.
[14]

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Unified visibility across packet, flow and device metrics

Riverbed collects data across on-premises, virtual private cloud, hybrid cloud, and multi-cloud environments. And we collect all packet data, all flow data, and all device metrics, all the time so the data you need is always available when you need it. We integrate this cross-domain data into a single, unified Portal for a cohesive view of enterprise performance by diverse IT, line of business, and C-level audiences.
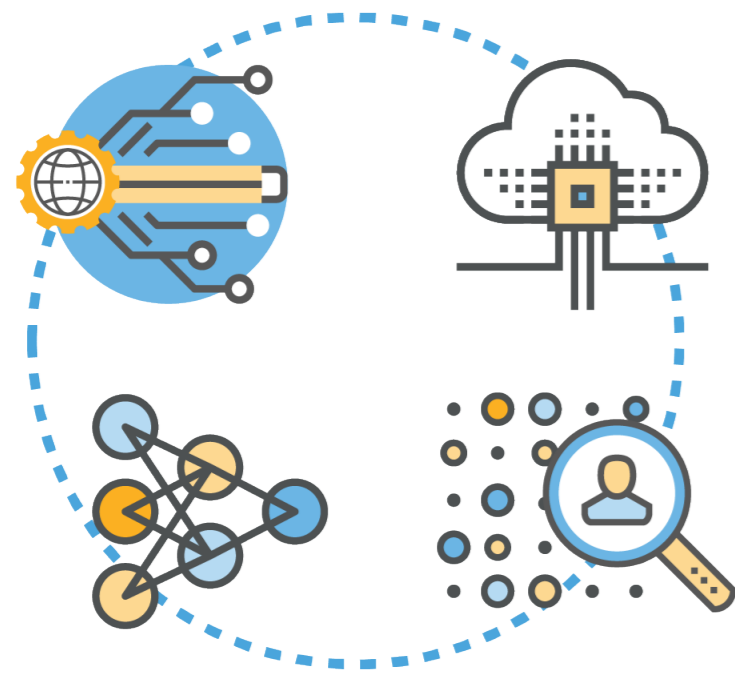
Depth, Breadth & Scale of Telemetry

Integrates flow, packet, and device monitoring for a one-stop solution for monitoring enterprise-wide network and application performance

Hybrid & Multi-Cloud Support

See everything across your infrastructure—data centers, branch offices, the cloud, and multi-clouds— to gain greater control over performance and costs

Integrated Analytics & Machine Learning

Provides actionable insights to accelerate root cause analysis & automate remediation to drive better business outcomes for NetOps and SecOps

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Oil & Gas Leader

Company

60,000 employees able to work consistently anywhere

Riverbed and Microsoft worked with this customer towards realizing their next-generation connection and IT infrastructure to support their cloud-first approach for all office and campus sites, including Microsoft 365, Azure, and Teams. In 2020 this project accelerated, moving rapidly to home working. Now, in 2021, this way of working is becoming the norm, with office-based staff working from home two days a week to create a more flexible and engaging hybrid work environment.

Solution

- Riverbed Cloud Accelerator to optimize the performance of data held in Microsoft Azure across 8 instances in 16 locations

- Riverbed SaaS Accelerator to enhance Teams and Microsoft 365 user experience and address email latency, mainly because of backhaul traffic from the US, especially in India and EMEA

- Riverbed Client Accelerator rolled out to 60,000 staff globally, further driving Teams and Microsoft 365 and performance

Benefits

- Global scale with the ability to roll out quickly and easily without the need for a lot of extra infrastructure

- Productivity by significantly improving user experience for Teams and Microsoft 365

- Single solution and easy to manage and supports customer's cloud-first ambition and hybrid workforce strategy

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ELARABY Group

Company

50% increase in Microsoft 365 data transfer between sites with no cost increase

A leader in developing and manufacturing consumer electronics, ELARABY desired a cloud-first strategy that entailed all locations and employees migrate to Microsoft 365. But the project was having a huge impact on data moving between sites. They needed to reduce bandwidth to support a move to more SaaS applications and improve the performance of Microsoft 365 for 6,000 employees.

Solution

- Riverbed SaaS Accelerator to accelerate Microsoft 365

- Riverbed Cloud Accelerator to speed migration and access to workloads on Microsoft Azure

- Riverbed SteelHead to optimize and accelerate traffic and increase productivity

Benefits

- Underpins a connected, data-led regional business

- Delivers a faster, more responsive users experience on Microsoft 365

- Optimizes data transfer by 60% on average, 900GB less data per day

- Enables a 50% increase in data transfer between sites with no cost increase

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Why Riverbed and Microsoft?

Together, Riverbed and Microsoft are helping organizations to increase productivity, speed cloud migration, maximize investments, and enable users to work from anywhere with exceptional network and application performance.

Migrate data from on-premises to Microsoft Azure faster

Using Riverbed solutions, you can gain insight into application traffic patterns, map application and infrastructure dependencies, and migrate on-prem data to Microsoft Azure faster.

Ensure cloud apps perform as well or better than on-premises

Riverbed streamlines data transmission to improve quality of service, mitigate delays due to physical distance or network congestion, and accelerate all types of workloads, especially data-heavy applications and large
file downloads.

Accelerate and secure AVD

Deliver better user experiences with AVD by streamlining data transmission and prioritizing business-critical network traffic. Secure AVD traffic with SD-WAN firewalls for AVD and transform network data into cybersecurity intelligence for broad threat detection, investigation,
and mitigation.

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How it works

End-to-end visibility with a single portal

The Riverbed Unified Network Performance Management (NPM) delivers full-fidelity visibility and insights, capturing 100% of all flows, packets, and device telemetry – 100% of the time. Our visibility solutions integrate horizontally to speed and simplify analysis and forensics between multiple data sources and vertically to provide unified insights **into a single portal** for visual representation via pre-configured and custom dashboards.

Embedded AI delivers value-add insights, including dynamic threshold setting, outlier identification, and threat detection. Riverbed associates network data from IP addresses to individual names and locations for faster decision-making and enhanced forensics and remediation when dealing with cyber threats.

With virtual software variants and appliance options, our Unified NPM solution can be deployed in the cloud, virtual, or on-prem with visibility across all environments regardless of deployment option.

End-to-end visibility

Portal
Visibility and Analytics for Performance, Threat Detection, and Remediation

Packets	**Flows**	**Device telemetry**
Real-time and Historical Packet Capture & Analysis	Full-fidelity Flow Analysis and Security Insights	Infrastructure Monitoring and Management

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Depth, Breadth & Scale of Telemetry

Riverbed integrates 100% flow, packet, and device telemetry for unified monitoring of enterprise-wide network and application performance.

Rich Application Visibility

Deep visibility into apps across your hybrid infrastructure—cloud, multi-cloud, branch offices, and data center—to ensure user experience & business performance.

Integrated Security Analytics & Threat Intel

Quickly detect and mitigate threats that bypass your defenses using intelligent security analytics, threat intel, and deep incident forensics.

Benefits to Riverbed customers

- 58% of them report improvements in the quality of their users' experiences

- Nearly 60% of them eliminated network blind spots

- While 63% report reduction in MTTR when dealing with threat detection, network performance issues, and their remediation

End-to-end performance

Application acceleration

SaaS Apps

Client Applications

Cloud Workloads

Wan optimization

Latency Mitigation
Application Streaming

Network Efficiency
Data Streamlining

Network Performance Transport
Streamlining

Software-defined wan

Network Agility

Application Performance

Network Edge Security

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Reliable and consistent performance from users to their apps

Riverbed's performance portfolio accelerates applications for all users, everywhere – regardless of where there are – or where the apps are hosted. The application acceleration software overcomes the potentially catastrophic effects of latency, network congestion, and last-mile issues to speed SaaS apps, such as Microsoft 365 and Teams, as well as the other workloads migrated to Azure.

Riverbed SteelHead WANOP appliances work in conjunction with our acceleration software to speed the delivery of on-prem apps while optimizing overall network performance and efficiency. The Riverbed enterprise-grade SD-WAN solution simplifies and automates network functions to deliver cloud-ready agility and cost savings without compromising user experience or security.

From any user to any app
Deliver fast, secure access to any user, anywhere to ensure the productivity of your work-from-home and disparate workforce. Accelerate Microsoft 365, Teams, SaaS, and on-premises applications to provide superior user experiences & productivity.

WAN optimization to maximize network performance
Riverbed WAN Optimization increases the performance of any network by up to 100x while reducing bandwidth utilization by up to 99%. It dramatically reduces the amount of data sent over the WAN, which can lower operational costs associated with Azure data migration, ASR, and Azure Express Route and help meet SLAs

High performance for work-from-anywhere, Azure, and hybrid digital age
Slash rollout time to connect new apps and sites with zero-touch provisioning, policy-based orchestration, and a robust routing stack that seamlessly integrates into your existing network with Riverbed. Expand WAN capacity via the Internet to augment or replace MPLS, utilizing Dynamic Traffic Conditioning, Advanced Load Balancing, and VPNs to maintain secure, reliable service quality. Use Riverbed to leverage industry-leading app acceleration, integrated advanced network security services, and flexible 3rd party service chaining to boost app performance and future proof your security strategy.

Benefits to Riverbed customers

- Microsoft 365 see 10X faster performance

- Data traffic is slashed by 99% or more

- And downloads from SharePoint are 75X faster

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Innovate without tradeoffs with unified visibility

With Riverbed and Microsoft, organizations can innovate and accelerate digital initiatives without compromising network visibility, performance, and security. No matter where you are on your digital transformation journey, whether you are migrating to Azure, modernizing your enterprise, or managing your Azure or hybrid environment, the performance of your applications and the security of your network are vital for success.

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