

# Maximize Performance and Visibility in Hybrid Cloud Environments

Digitization has caused explosive growth in applications, connected devices, and data—all of which place tremendous strain on traditional networks. As a result, organizations are shifting toward hybrid cloud architectures that combine on-premises and off-premises infrastructure. While this shift enables organizations to benefit from the public cloud and MPLS alternatives, it also introduces complexity for IT teams who must maximize network and application performance and visibility in these environments.

There is no denying that the way we live, interact, and conduct business is increasingly digital and that organizations that fail to respond to this new paradigm risk becoming obsolete. That's why organizations are leveraging disruptive technologies to accelerate innovation of new software applications, create better customer experiences, and improve employee productivity.

However, the explosive growth of applications, changing data traffic patterns caused by cloud and mobile, and the increasing volume, variety and variability of data, applications, and connected devices has placed tremendous strain on traditional networks.

Indeed, as organizations become more distributed and as they increasingly place mission-critical workloads and processes in the cloud, there is mounting pressure to modernize networks and improve the way applications are delivered to and consumed by corporate offices, branches, and mobile users.

## The Challenges of Hybrid Cloud Networks

To meet the needs of today's digital enterprise, IT leaders are deploying hybrid network topologies that combine on-premises and off-premises infrastructure, connected by private and public transport types.

According to industry experts, hybrid cloud architectures will be the standard for years to come, enabling organizations to keep established IT in place, while also benefiting from a broader range of connectivity options and the added capacity, flexibility, and agility of the cloud.

While hybrid architectures are here to stay, getting diverse and disparate on-premises infrastructure, clouds, and third-party services to operate efficiently and effectively is extraordinarily difficult. There are four reasons why:

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## 1. Unpredictable Application Performance

In hybrid cloud architectures, the application delivery chain is distributed, reliant on third parties, and increasingly fragile and complex. The quality, reliability, and performance of MPLS alternatives and cloud services can vary greatly and distance makes cloud applications susceptible to network performance issues of latency, chatty protocols, and bandwidth constraints.

## 2. Insufficient Visibility

Extending applications and data to the cloud creates performance blind spots that impact IT's ability to quickly detect and remediate performance issues and security threats. Metrics provided by cloud vendors are often limited in scope, stop at the cloud edge, and require validation by the enterprise. This lack of visibility also makes it difficult to substantiate consumption and network traffic costs associated with cloud-based applications and to enforce service level agreements. Complicating matters further, gaps between monitoring tools and lack of integration between multiple classes of network data makes it near impossible to get a consolidated view of overall performance.

## 3. Lack of Agility

Hybrid networks, cloud computing, and enterprise mobility are increasing network management complexity. It's difficult to keep up when using legacy tools and processes that require considerable effort and expertise to configure, deploy, and modify network services. IT teams are struggling to deliver seamless services to all users and are often unable to meet timelines for network expansion, application deployment, and even routine configuration changes.

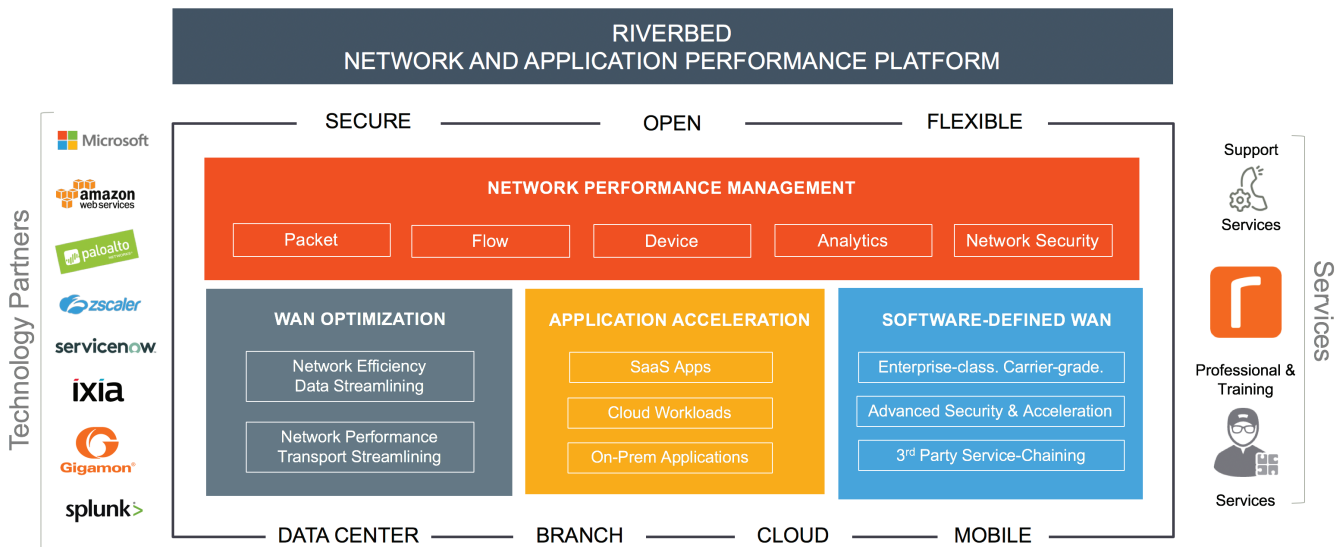
## 4. Expanded Security Risks

Multi-vendor environments make it difficult to consistently uphold security policies across diverse applications and end points. For cloud-based applications, SaaS vendors recommend using Internet breakout points close to end users to minimize latency. But, in order to support branch-direct Internet access, IT teams must extend the security perimeter to every remote site. This creates appliance sprawl, extra costs, and increased management complexity that may compromise security measures. And, even with direct Internet access, remote and mobile users are still subject to the inherently unreliable and unpredictable performance of the Internet.

## Achieving Exceptional Network and Application Performance

To deliver exceptional network and application performance across complex hybrid IT environments, organizations need to be able to visualize, optimize, accelerate, and remediate the performance of any network for every type of enterprise application.

The Riverbed Network and Application Performance Platform enables organizations to do just that. Our secure, open, and flexible platform addresses performance holistically with best-in-class network performance management, WAN optimization, application acceleration, and enterprise-grade SD-WAN solutions.



## Network Performance Management

Fully optimize hybrid IT resources and ensure service quality and network security with a unified performance management solution that provides deep and broad visibility and analytics.

- Correlate multiple classes of network data with an integrated, cross-domain network performance management solution
- Continuously monitor dynamic networks and infrastructure to ensure network and application availability and performance
- Proactively identify and resolve performance issues before users and the business are impacted
- Understand resource utilization to better manage vendor costs and right-size resources based on performance requirements
- Provide essential visibility and forensics for broad threat detection, investigation, and mitigation

## WAN Optimization

Maximize network efficiency and expand network capacity with market-leading WAN optimization technology.

- Increase network performance by up to 100x while reducing bandwidth utilization across hybrid and software-defined networks
- Achieve more cost-effective data migration, disaster recovery, replication, and backup with exponentially more efficient WAN operations
- Maximize the efficiency of data flow across hybrid WAN architectures

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## Application Acceleration

Ensure the fastest, most reliable delivery of SaaS, cloud, and on-premises applications to any user, regardless of location or network type.

- Increase workforce productivity and user satisfaction by accelerating the performance of enterprise SaaS, cloud, and on-premises applications
- Maximize an enterprise-wide investment in Office 365 with 8x faster performance for mobile and office users anywhere
- Reduce latency and achieve up to 33x faster migration and acceleration for both on-premises and cloud-based workloads

## Software-Defined WAN

Modernize your network with a software-defined architecture that delivers cloud-ready agility and cost savings without compromising user experience or security.

- Simplify and automate the provisioning and management of network resources
- Accelerate the roll-out of new sites, applications and network services
- Cost-effectively increase WAN capacity by seamlessly integrating Internet Broadband to augment or replace MPLS
- Increase network security at branch offices, especially those with direct Internet access
- Accelerate application performance and optimize WAN resource utilization

## Partner with Riverbed

Riverbed understands that every organization is on a digital journey and that every journey is unique. With a proud heritage of technology leadership and proven expertise maximizing performance and visibility for the world's largest organizations, we can help you reach the full potential of your network and application investments today and in the future. Learn more at [www.riverbed.com](http://www.riverbed.com).

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### About Riverbed

Riverbed enables the world's largest organizations to maximize network performance and visibility, allowing them to fully capitalize on their cloud and digital 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 holistically with best-in-class WAN optimization, network performance management (NPM), application acceleration and enterprise-grade SD-WAN. Riverbed's 30,000+ customers include 100% of the Forbes Global 100. Learn more at [riverbed.com](http://riverbed.com).

The Riverbed logo consists of the word "riverbed" in a lowercase, sans-serif font. The letters "river" are in a dark orange color, and the letters "bed" are in a lighter, peach-colored orange. A registered trademark symbol (®) is located at the top right of the letter "d".