Solutions for Hybrid Cloud

Stay in control of hybrid cloud deployments to deliver unprecedented levels of performance, agility, and security for today's digital business

Applications sit at the center of today's digital culture. To help reduce costs and gain greater levels of agility and efficiency when delivering new apps or updates to existing services, many businesses are embarking on cloud-first strategies.

The state of cloud adoption underscores the criticality of such strategies. As of 2018, 96% of enterprises are using some form of cloud services[1], while 99% of executives consider the cloud to be vital to their ongoing digital strategies[2].

Business Challenges

Regardless of whether companies are moving to SaaS- or IaaS-hosted apps, developing new services natively in the cloud, or exploring ways to drive more efficiency in their private cloud, they need to ensure all applications remain highly performant and secure. However, IT organizations tasked with executing today's cloud strategies often encounter unanticipated challenges. Central to these issues is a loss of control over the hosting infrastructure. So, while the cloud was supposed to make IT more efficient, flexible, or agile, the opposite is often true, as teams face:

Hybrid IT complexity: Managing a mixture of hybrid apps, networks, and other infrastructure makes it increasingly difficult for IT to ensure performance. Cloud-native technologies such as containers and microservices compound this complexity by creating tens of thousands of highly distributed application components. All of this can negatively impact the end-user experience.

Lack of agility: Legacy networking infrastructure and management tools weren't designed to support cloud-era requirements and can delay the delivery of new services to the business.

Increased data risk: IT must maintain data and security controls when moving apps to the cloud, yet shadow IT and the resulting misuse of cloud services can lead to breaches, data loss, and compliance issues.

Unpredictable performance: Applications are often slower in the cloud due to increases in latency and the number of tiers traffic must cross. Another issue stems from visibility blind spots due to snapshotting or sampling-based data collection. Traditional monitoring tools fail to deliver sufficient diagnostic data for troubleshooting.

Higher-than-expected costs: Hybrid cloud environments create chatty apps and pose challenges for managing costs. In fact, enterprises are wasting 35% of their cloud spend[3].

[1] RightScale, 2018 State of the Cloud Report
[2] Riverbed, Digital Performance Global Survey 2018
[3] RightScale, 2018 State of the Cloud Report

A consequence of these challenges is that businesses often pull critical applications back from the cloud. In fact, 41% of IT organizations have pulled at least one workl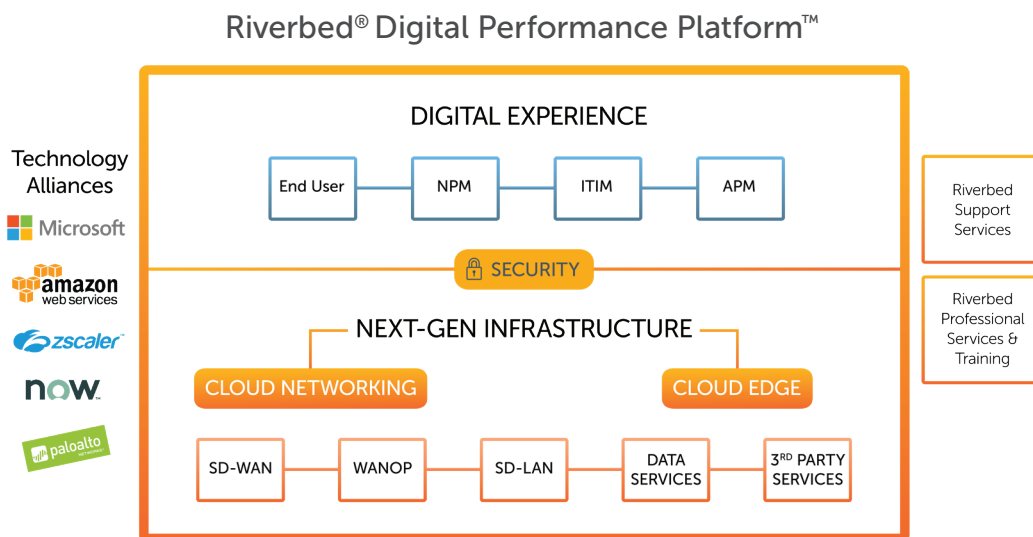oad back to on-premises infrastructure, with 77% doing so multiple times for the same application[4]. Clearly, organizations need to remove these barriers to adopting cloud services.

Solution

Riverbed uniquely provides a unified, integrated platform that gives CIOs and their teams complete visibility into and tighter control over any cloud deployment. The platform consists of:

Digital Experience Management: Provides a holistic view into a user's digital experience by unifying end-user, application, network, and infrastructure monitoring, helping executives understand how cloud apps are being consumed and what the relative impacts are in terms of revenue, productivity, and user satisfaction.

Next-Generation Infrastructure: Modernizes IT systems and the way cloud-based apps are delivered—spanning the edge, data center, and cloud—to accelerate and simplify operations, minimize risk, and ensure application availability, no matter where or when business happens.

Riverbed® Digital Performance Platform™

Technology Alliances

Microsoft

amazon web services

zscaler

now

paloalto

DIGITAL EXPERIENCE

End User — NPM — ITIM — APM

SECURITY

NEXT-GEN INFRASTRUCTURE

CLOUD NETWORKING

CLOUD EDGE

SD-WAN — WANOP — SD-LAN — DATA SERVICES — 3RD PARTY SERVICES

Riverbed Support Services

Riverbed Professional Services & Training

Move to the cloud with greater agility and confidence

Riverbed gives IT the agility to keep up with business demands for new cloud services. For cloud migrations, the Riverbed solution automatically discovers and maps application dependencies and provides "what-if" analyses to understand bandwidth requirements and how certain applications will perform in the cloud. Such insights help IT identify which apps are best suited for the cloud, while also right-sizing for capacity to ensure acceptable performance prior to the migration.
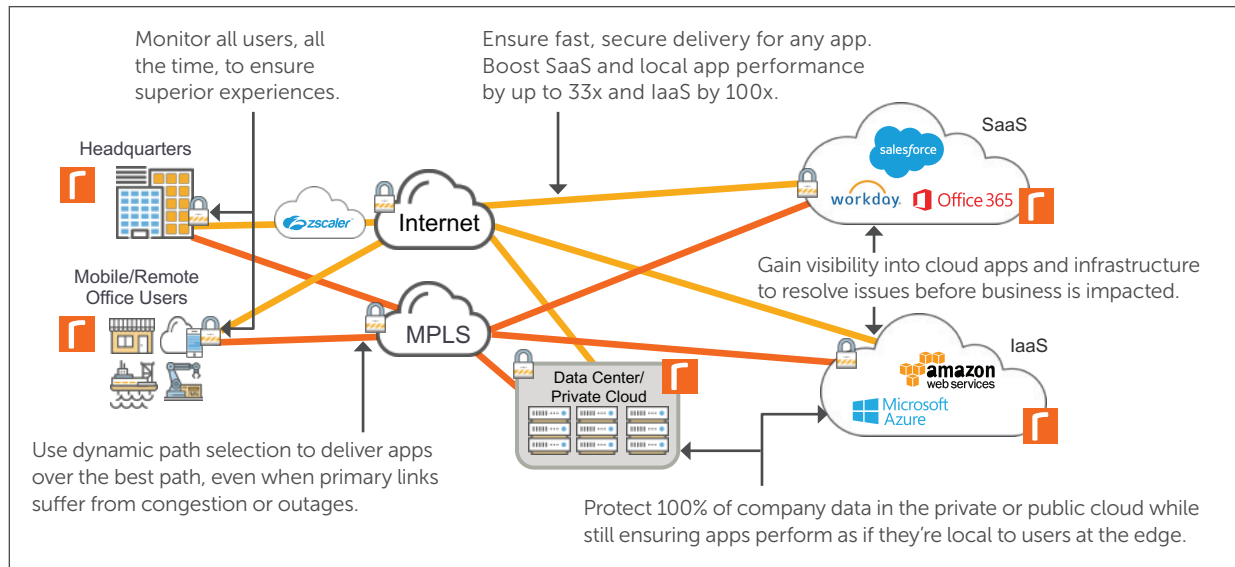
Application teams tasked with building new services natively in the cloud need to do so swiftly without impacting system performance or stability. Riverbed helps accelerate the development of cloud-native apps with real-time performance diagnostics that developers and QA/testing teams can use to ensure releases are optimized for production. This includes deep and granular visibility into containers and microservices, along with powerful insights into the end-user experience that help quantify the business impact of existing features, so teams can better prioritize troubleshooting and development efforts.

[4] ESG, "Hybrid Cloud Tipping Point," July 2018

Lastly, for infrastructure teams tasked with supporting frequent application releases, Riverbed's SD-WAN technology accelerates new service roll-outs. Secure connectivity between all business locations and IaaS providers can be established with a single click—including support for multi-cloud architectures—which reduces

provisioning time for architects. Policies for new apps are automatically set and applied across the network through a simple-to-use, centralized management console, thereby ensuring apps are continuously steered over the optimal path to satisfy performance and security requirements.

How Riverbed helps IT deliver high-performing applications, on and off the cloud

Monitor all users, all the time, to ensure superior experiences.

Ensure fast, secure delivery for any app. Boost SaaS and local app performance by up to 33x and IaaS by 100x.

Headquarters

Mobile/Remote Office Users

Internet

MPLS

SaaS

Data Center/ Private Cloud

IaaS

Gain visibility into cloud apps and infrastructure to resolve issues before business is impacted.

Use dynamic path selection to deliver apps over the best path, even when primary links suffer from congestion or outages.

Protect 100% of company data in the private or public cloud while still ensuring apps perform as if they're local to users at the edge.

Deliver high-performing cloud apps and superior user experiences

Users expect apps to perform the same, if not better, when moved to the cloud. Riverbed provides a set of capabilities to help IT deliver on these lofty expectations.

During and after cloud migrations, Riverbed provides IT operations with end-to-end visibility across the entire application environment. Through a single pane of glass, IT can monitor how any SaaS, web, or mobile app is performing and quickly identify and resolve issues before they impact the business. This includes the ability to dig into network flows and packets, diagnose code-level defects, and measure the user experience at the point of application consumption—users' devices. Having this level of visibility helps reduce technical costs tied to supporting apps while also holding cloud providers accountable for agreed-upon SLAs.

As enterprises adopt the cloud, network architectures need to be redesigned to eliminate performance bottlenecks. The path steering intelligence in Riverbed's SD-WAN technology reliably directs selected SaaS- or

IaaS-hosted apps directly to the cloud over the public Internet—conserving MPLS bandwidth, reducing latency, and creating a better user experience. Applying WAN acceleration further reduces bandwidth consumption and the amount of data sent over distributed networks, improving performance by up to 33x for SaaS apps and 100x for IaaS-hosted apps. These capabilities can also be extended to mobile workers, ensuring users have fast, secure access to apps, no matter where they need access.

For IT and business leaders who want to validate the impact of newly deployed cloud applications, Riverbed's monitoring tools unify performance data into easy-to-consume dashboards. Views can be tailored to each stakeholder's role, giving them the information they need to continuously improve performance for every cloud app in use.

Stay in control and ensure tighter security

Security teams need to ensure applications and data remain protected on and off the cloud without compromising access or performance for approved users. Riverbed helps companies achieve both of these often competing goals without the tradeoffs.

If a breach does occur, Riverbed's monitoring solutions transform network data into cybersecurity intelligence. We help you baseline traffic and identify suspicious patterns associated with threats that have bypassed typical preventative measures. Moreover, security practitioners are automatically alerted when systems communicate with blacklisted sites or other malicious actors so you can quickly investigate incidents using complete forensics that assist with remediation and containment efforts.

Of course, protecting data is another critical security measure. Due to data availability or residency requirements, some applications remain locally hosted at various remote offices. But this puts data at risk for theft or loss. Riverbed helps you protect data—without compromising its availability—by centralizing it in a data center or cloud, while instantly projecting working volumes of data to the edge when and where needed. New data is continuously backed up to the central storage location in near real-time, reducing loss of data if a breach occurs. This helps companies achieve compliance measures, near real-time recovery point objectives (RPO), and satisfy business continuity/disaster recovery targets.

In terms of controlling access to networks, Riverbed SD-WAN provides comprehensive security via a native perimeter firewall, automated VPN connectivity, and segmentation policies to ensure apps are routed and accessed according to corporate-approved security policies. Moreover, the solution enables these policies to be managed centrally—ensuring rules governing usage are easily set, enforced, and maintained.

For locations requiring advanced security, Riverbed offers tight integration with the Zscaler Cloud Security Platform, in addition to other cloud security providers. Secure tunnels between branches and the Zscaler cloud are automatically created, and all cloud-destined traffic is steered to the nearest Zscaler node for advanced inspection—minimizing latency, maximizing security, and ensuring better application performance.

> "...Riverbed has helped us feel bigger, move faster, and be more agile. We find using the cloud for access anywhere, anytime better fits our model."

Beverly Maestas, VP of Technology Operations, CenterPoint Properties

Let Riverbed Help You Remain in Control of the Cloud

Moving applications and data to the cloud is fraught with risk, but Riverbed is here to help you navigate the uncertainties. With Riverbed, you can accelerate your cloud transformation while preempting the pitfalls of moving to the cloud, gaining the levels of performance, agility, and security needed to thrive in today's digital age.

To learn more, refer to the following resources:

- De-risk your move to the cloud
- Riverbed solutions for Amazon Web Services
- Riverbed solutions for Microsoft Azure
- Riverbed solutions for Cloud Edge

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