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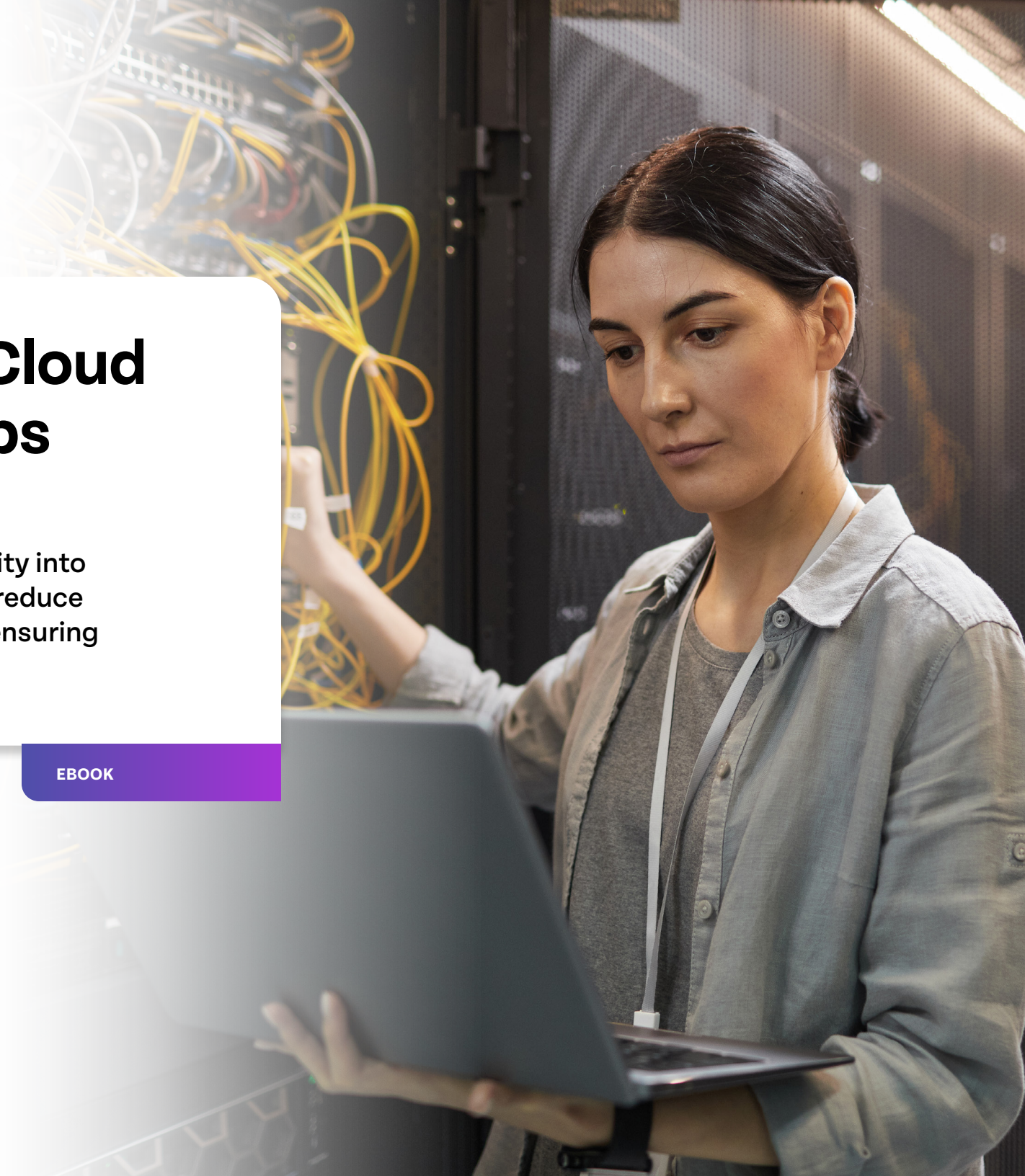
Closing the Cloud Visibility Gaps

Riverbed provides full visibility into cloud environments to help reduce cost and complexity, while ensuring overall network security

EBOOK



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Cloud Usage Continues to Grow

Cloud adoption has been on the rise for years, but the pace of cloud migrations has skyrocketed in recent years due to the increase in hybrid work, the advancement of AI, and increasing pressure to modernize IT infrastructure.

Multi-cloud, the use of more than one infrastructure as a service (IaaS) provider, continues to be the dominant strategy, adopted by 78% of organizations.[1]

94% of organizations currently use public cloud services (SaaS, IaaS). In fact, the use of infrastructure as a service (IaaS) has almost doubled in the last five years, from 42% in 2017 to 78% in 2021.[2]

Nearly half (45%) of organizations now have a cloud-first strategy.[3] And, according to Flexera, 55% of enterprise workloads are expected to be in a public cloud within twelve months.[4] This grows to nearly 80% of remaining on-prem workloads over the next 5 years.[5]

All this bubbles up to say, cloud is mission critical for today's organizations.

Cloud Challenges

Cloud Migrations

51% of organizations report understanding app dependencies as the top cloud migration challenge.[6]

Mapping all the relationships across apps, hardware and networking devices for each service is notoriously difficult to do, especially in a rapidly evolving cloud environment.

Cloud Costs

Organizations estimate **30%** of cloud spend is wasted, although this estimate is probably low.[7]

Organizations also struggle to track and control growing cloud costs. Public cloud spend is over budget by an average of 24%. Despite this, organizations expect their cloud spend to further increase by 39% in the next 12 months.[8] This means it's more critical than ever to get a handle on accurate forecasting and cost optimization.

End User Experience

34% of IT operations say end user experience is the most important means for measuring success.[9]

With cloud, IT no longer controls the IT infrastructure on which business critical apps run. Your cloud vendor's SLA doesn't really balance that risk. End User Experience Monitoring helps hold cloud vendors accountable to eXperience Level Agreements (XLAs) that reflect what users see and feel when they interact with cloud apps.

Cybersecurity

95% of cybersecurity professionals confirm they are extremely to moderately concerned about public cloud security – up from 91% in last year's survey.[10]

The top security concerns include the risk of data loss and leakage (63%), threats to data privacy (63%), and dealing with legal and regulatory challenges (40%).

Visibility Gap

Like the majority of enterprises, there is a critical gap in your hybrid cloud infrastructure—a visibility gap. This gap makes it difficult to see what's going on in your network because many existing tools don't have the full-fidelity visibility collection or the breadth of telemetry to span your entire hybrid cloud infrastructure.

The majority (61%) of enterprises say their ability to manage public cloud networks is inferior to their management of internal network assets.[11]

> "Knowledge without visibility is useless. With the Riverbed solution, we were able to identify issues immediately. We have the visibility, the detail, and the technical insight necessary to address the problem."
>
> **Alper Umit Yilmaz, IT Operations Director, n11.com**

Cloud Visibility

The Riverbed Observability and Optimization Platform provides full-fidelity, end-to-end visibility, including rich and diverse hybrid cloud visibility along with the ability to collate and apply analytics to derive meaningful and actionable insights.

Understanding what constitutes normal traffic patterns, detecting anomalies, accurately identifying correlations versus causations, and being able to quickly respond to performance problems and cybersecurity threats – all of this depends on your ability to see and analyze what is happening across your distributed network – in the cloud, virtual and on-premises.

The Riverbed Platform provides the critical visibility necessary to support core cloud visibility use cases: enabling cloud migrations, monitoring cloud network and application workloads, end user experience monitoring, reducing cost and complexity, and ensuring security.

> “By pinpointing the reasons behind slow (SaaS-delivered EHR application) logins, Riverbed helped us save 14 seconds on each of 300 logins a day. That's 70 extra minutes a day for patient care—300 hours a year—for the listening and caring we're known for.”
>
> **Robert Dulak, Chief Information Officer, Lighthouse Guild**

Wide Variety of Cloud Data Sources

Here are some of the ways Riverbed provides visibility into cloud environments:

Synthetic Transaction Monitoring allows proactive monitoring of network paths between disparate locations, including SaaS solutions like M365. Automated scripts are used to analyze the performance of your website or application. Scripts are coded to mimic how a user interacts with their applications. The response time, lag, and various other interactions are logged and measured using the script.

End User Experience solutions provide visibility into the end user experience of every cloud, SaaS, thick client, or enterprise mobile app in your portfolio, running on any device. It enables teams to monitor the impact of application and device performance from the end user's point of view.

Cloud Native APM takes a scalable big data approach to monitoring cloud-native applications that deliver unified visibility across the modern application ecosystem, is easy to deploy and manage, and results in faster troubleshooting for even the toughest performance problems.

Flow Logs (i.e., AWS VPC Flow Logs, Azure NSG Flow Logs and Google Cloud (GCP) VPC Flow Logs) provide similar information to traditional on-premises flow standards such as NetFlow or sFlow. Flow telemetry provides insight into which devices and applications are consuming bandwidth, how long the conversations last and who participates in them. It can also be used for application discovery and cost analysis.

Virtual Network Terminal Access Points (VTAP) solutions provide packet-level details from public cloud (IaaS/PaaS) providers such as Amazon and Microsoft. VTAPs allow customers to gain native insight and access to network traffic across their cloud infrastructure for network and application performance analysis and threat monitoring.

Riverbed Observability and Optimization Platform

1. Accelerate Cloud Migration

The Riverbed Platform solutions provide complete lifecycle support for cloud migrations by helping to identify hidden risks and constraints that can lead to performance issues, unexpected delays, and unplanned costs.

2. Monitor End User Experience

End User Experience monitoring enables IT to monitor users' interactions with applications in the context of a business workflow. It works for **any type of application**—local, cloud, web, or mobile.

Our EUE automatically sets baselines for normal performance of cloud workloads. Use the baselines to establish performance SLA thresholds for each business process and it will alert you if any thresholds are exceeded. This lets you receive notification the instant your cloud user experience starts to go bad. Armed with this information, you can hold your cloud vendor accountable!

3. Optimize Costs

Our cloud flow solution offers reports that help you understand where your cloud costs are occurring so you can make better plans and decisions to help minimize them. It lets you know how much traffic is exiting the cloud, the most expensive type of cloud data, versus how much is traversing VNets, the next tier of pricing. Knowing this type of information helps you better plan where your data and applications should reside to gain efficiencies.

4. Ensure Security

The Riverbed Platform provides always-on, full-fidelity capture of network traffic to deliver the total visibility necessary for network defense in depth for hybrid environments. SecOps teams leverage this visibility to support three core security management use cases: threat hunting, incident response, and deep forensics analysis.

Figure 1: Riverbed complete cloud migration solution from planning to executing to sustaining.

1 ESG, Data Center Infrastructure Spending Change, 2021
2 ESG, Technology Spending Intentions Survey, Dec 2020
3 ESG, Data Center Infrastructure Spending Change, 2021
4 Flexera, State of The Cloud Report, 2021
5 ESG, 2021 Technology Spending Intentions Survey, Dec 2020
6 ESG, 2021 Technology Spending Intentions Survey, Dec 2020
7 Flexera, State of The Cloud Report, 2021
8 Ibid
9 EMA, Network Management Megatrends, 2020
10 AWS Cloud Security Report, 2020
11 EMA, Network Management Megatrends, 2020

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Riverbed – Empower the Experience

Riverbed, the leader in AI observability, helps organizations optimize their users' experiences by leveraging AI automation for the prevention, identification, and resolution of IT issues. With over 20 years of experience in data collection and AI and machine learning, Riverbed's open and AI-powered observability platform and solutions optimize digital experiences and greatly improve IT efficiency. Riverbed also offers industry-leading Acceleration solutions that provide fast, agile, secure acceleration of any app, over any network, to users anywhere. Together with our thousands of market-leading customers globally – including 95% of the *FORTUNE* 100 – we are empowering next-generation digital experiences. Learn more at riverbed.com.

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