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WHITE PAPER

How to Solve IT Problems Faster with Unified Observability

Today's IT environments are more distributed and dynamic than ever before, and many IT teams are finding it challenging to deliver seamless digital experiences to customers and employees. Often, IT teams turn to monitoring tools in the hopes of making their job easier, but end up creating unforeseen challenges.

Most monitoring tools overwhelm teams with data and alerts that provide little context about the problem and how to resolve it. These disparate solutions are usually dedicated to just one piece of the tech puzzle – either applications, devices, or networks – rather than the whole picture. Without a holistic monitoring solution, IT experts spend a considerable amount of time manually correlating data in hopes of solving the problem. Often, tech issues are escalated to senior colleagues, pulling them away from forward-looking initiative.

In this white paper, we explore the challenges modern IT teams encounter in delivering great digital experiences and demonstrate how they can be solved with Riverbed's unified observability service: Riverbed IQ.

The Growing Complexity of IT Environments

Modern app architectures, SaaS products, and shadow IT (i.e., apps not approved by IT) are just a few of the growing number of technologies that IT teams are tasked with supporting. The tech stack is also becoming more dynamic as they move from on-premises to the cloud (or a combination of both). This shift often leads to greater complexity for IT teams that now need to manage distributed environments.

The move toward hybrid workplaces compounds these challenges. Employees are distributed across a range of locations, yet IT is still responsible for ensuring they all have a digital experience conducive to maximum productivity.

According to our Hybrid Work Global Survey, 95% percent of IT development leaders report their organizations face visibility and monitoring challenges in their current IT environment, and 57% agree that gaining end-to-end visibility in a hybrid work environment is even more challenging.

Cybersecurity Risks

In addition to visibility and monitoring challenges, the growth of distributed environments has triggered a concurrent growth in cybersecurity risks. According to one recent report, the shift toward remote work has led many companies to introduce Remote Desktop Protocol solutions (RDP) leading to a 7% increase on RDP attacks in the United States from 2021 to 2022.

And in 2020, the Justice Department warned of a Russian ransomware group that was deliberately targeting remote workers accessing corporate and government networks. The risk of these cybersecurity incidents is only growing, forcing IT teams to dedicate time and resources to improving their security posture and defending against malicious actors.

Awash in Data

Finally, there's the continuing problem of data. The era of big data is ballooning out of control, with 181 zettabytes of data expected to be produced in 2025 (more than double the 79 zettabytes produced in 2021). IT is drowning in data and it's hard to make sense of it all. Consequently, teams are turning to monitoring tools for help interpreting their data, but not getting the comprehensive assistance they need to turn that data into actionable insights.

Key Terms Defined:

MTTR: Mean time to resolution is a maintenance metric that measures the average time required to resolve a tech issue.

Shift left: In service management, a shift-left approach involves shifting incidents and requests to the lowest support tier possible.

Shortcomings of Current Monitoring Tools

IT relies on a host of monitoring and management tools to keep their organization's technology up and running smoothly. But as anyone in IT can tell you, these tools have shortcomings that often complicate their job. The most common complaints of these tools include:

- **Lack of integration:** tools are siloed and separate, working individually rather than together as a cohesive solution, which means IT needs to manually correlate across domain data to troubleshoot.
- **Additional data creation:** the tools produce their own data, which adds to the influx of data IT teams already handle.
- **Little (or no) context:** alerts provide no context or few insights, forcing team members to create war rooms to try to make sense of the "noise," which frequently ends in finger pointing.
- **Inefficiencies in workflow:** the lack of context forces junior IT professionals to frequently turn to senior professionals for answers as well as manual correlation, an inefficient use of skill and labor.

Systemic Issues Related to Monitoring Tools

The complaints above often grow into larger, systemic issues in an organization. These include:

- **Long MTTR:** tech issues take too long to resolve, reducing overall productivity and impacting the bottom line.
- **Limited visibility:** current tools often sample data that make it harder to identify and resolve problems. Incomplete or missing data limits visibility, which is terrible for performance monitoring and catastrophic for security.
- **Hybrid work environments:** with employees logging in from a range of locations, it becomes difficult to achieve complete visibility into all the networks, prohibiting IT from delivering the best digital experiences.

Monitoring vs Observability

Monitoring provides visibility or transparency into the customer and employee journey from start to finish – a prerequisite for observability. The difference between monitoring and observability is that monitoring tools provide, capture, and examine pre-determined metrics and thresholds. Observability turns monitoring data into actionable insights through the use of AI, ML and correlation, and then acts on those insights through automation.

Observability vs Unified Observability

Observability measures the internal states of a system by examining its outputs. It provides actionable insights by correlating information across disparate tools, providing appropriate context around why things are happening. In theory, observability would bring together the benefits of monitoring, visibility, and automation to give IT teams the power to dig into "unknown unknowns" on the fly. But in practice, this isn't the case.

Unified observability leverages artificial intelligence (AI) and machine learning (ML) to provide a holistic solution to IT challenges. By uniting data, insights, and actions within a single platform, observability can finally expand beyond DevOps and Site Reliability Engineer teams to include all aspects of IT from the network to the end user experience. With unified observability and the context-rich intelligence it provides, IT can eliminate data silos, war rooms, and alert fatigue for faster, more effective decision-making across domains.

Traditional Observability Solutions Fail to Deliver

The IT community once believed in the promise of observability – a panacea that would cure every IT ailment. Ideally, DevOps-focused observability solutions would deliver intelligence and insights within an organization's cloud infrastructure and SRE environment, helping IT quickly identify and remediate tech issues. However, most observability tools have failed to deliver the insights that they've promised. Users often report issues with the following:

- **Limited granularity of data:** most observability solutions rely on data sampling rather than full-fidelity data, resulting in data falling through the cracks. Without a complete picture of their environment's health, organizations can't make accurate decisions.
- **Span of data:** MELT (metrics, events, logs, and traces) comprises the four pillars of observability, but current tools are limited and fail to cover all domains. End user experience data, network data, and device data all factor into the overall quality of the digital experience. Failing to capture a complete view of and application path ultimately yields performance issues among users.
- **Limited use cases:** Many observability tools are created with DevOps and SREs in mind, ignoring the needs of other domains, like the network and end user services teams, who are also responsible for identifying and resolving issues.
- **Alert Fatigue:** IT teams frequently suffer from alert fatigue as they receive thousands of alerts per hour. Without proper context it's impossible to extract actionable insights from the noise.
- **Skilled Resources:** Most current observability solutions offer nothing beyond an alert. Consequently, troubleshooting still requires the expertise of highly skilled IT staff to manually interpret data for resolution.

It's clear the observability tools on the market are failing to make all IT professionals' jobs easier. A better approach is needed – and it's here.

Riverbed IQ: Succeeds Where Other Solutions Fail

Finally, the long-sought-after unified observability tool has arrived in a cloud-native, SaaS-delivered open and programmed solution – Riverbed IQ. The technology reduces alert fatigue by leveraging AI and ML to correlate network performance monitoring (NPM) and digital experience monitoring (DEM) data, to provide actionable insights about business-impacting events. With intelligent correlation and workflow automation, problems get the context they need to be resolved by junior-level IT professionals quickly and easily.

The context provided by Riverbed IQ filters out the noise and fatigue of too many alarms, making the work of IT more enjoyable. Here's how:

Full-Fidelity Telemetry

While data sampling can be useful, it still is no match for Riverbed IQ's full-fidelity telemetry and the comprehensive visibility provided by assessing all data points. Riverbed's approach to unified observability leverages full-fidelity telemetry across networks, infrastructure, and end-user experience metrics. It analyzes 10+ million data points per minute for complete visibility, even into remote work environments.

What this means for you: A clear, in-depth, and accurate view into your entire IT ecosystem that ensures you will never miss an important performance problem again.

Smart Problem Detection

Riverbed leverages AI and ML-based correlation to identify business-impacting problems, while the runbooks gather evidence, build context, and set priorities to deliver actionable insights for rapid problem detection and resolution. As an intelligent unified observability platform, Riverbed IQ performs over 10,000 correlations per minute across a variety of metrics using AI-powered baselining, thresholds, and change detection.

What this means for you: With multi-factor correlation, IT can reduce MTTR and become more proactive in fixing issues before users even notice a problem.

Democratized Knowledge Using Runbooks

Instead of relying on experts to solve every issue, Riverbed IQ enables them to codify their knowledge into (low code) automated investigative workflows or runbooks that replicate and automate the organization's best practices.

What this means for you: With easy-to-use, drag & drop interfaces, these pre-built functions enable everyone in IT (even Level 1 and 2 staff) to troubleshoot and resolve issues, freeing up Level 3 and 4 personnel to focus on revenue-producing tasks.

> "Observability tools enable a skilled observer to more effectively explain unexpected system behavior, provided enough instrumentation is available."

P. Byrne, G. Siegfried

Gartner, Hype Cycle for Monitoring, Observability and Cloud Operations, July 2021.

How Will Your Team Benefit from Riverbed IQ?

Riverbed IQ empowers all IT skill levels with context-rich insights and intelligent automation to reduce alert fatigue and resolve problems faster than ever. Some use cases include:

- **Incident Response:** Surface only high-priority events with the context necessary to troubleshoot quickly and improve business continuity.
- **Shift Left:** Leverage scripted investigations to empower more junior teams to do the job of your more experienced IT experts, enabling senior staff members to focus on strategic business initiatives.
- **Remote work:** Whether employees are logging in from the office, home, or even the beach, Riverbed surfaces network and transport-related issues that are impacting remote users to ensure knowledge workers enjoy a productive digital experience.

Riverbed IQ Makes IT Easier

Riverbed IQ uses AI and ML-based correlations and scripted investigations to automate many of the most tedious IT tasks. The solution monitors and manages networks, devices, and applications, and user experience to pinpoint impactful tech issues quickly so employees and users can both enjoy frustration-free digital experiences.

Contact us to schedule your Riverbed Platform Demo.

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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 a nd AI-powered observability platform and solutions optimize digital experiences and greatly improve IT efficiency. Riverbed also offers industryleading 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.