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SPOTLIGHT

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Saudi Vision 2030 is aimed at revolutionizing Saudi Arabia's socio-economic environment — with a strong emphasis on the digital economy — and cultivating digital leadership by enhancing end customers' digital experiences and building resilience.

Unified Observability: The Journey Toward Proactive, Self-Healing, and Autonomous IT Operations

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Introduction

For over a decade, organizations in Saudi Arabia have been embracing digital transformation at varying paces, reaching different levels of maturity. The pandemic marked a pivotal point in this journey, compelling organizations in all sectors to fundamentally rethink their approaches to product and service delivery, customer engagement, and employee work methods. In the post-pandemic era, these organizations have recognized that customer-centricity, business agility, and resilience are attainable primarily through a digital-first approach. Consequently, an increasing number of regional organizations are now integrating a digital-first strategy into every facet of their business operations.

As reliance on digital technologies increases, organizations are becoming more aware of the crucial yet frequently neglected need to ensure resilience and an optimal digital experience for customers. They started recognizing the potential business consequences and reputational harm that could arise from not adequately addressing these areas.

IDC believes that in the current digital-first landscape, IT teams face more challenging tasks than ever before, including ensuring superior digital experiences and the capability to recover from disruptions with little to no impact on business functions. As organizations increasingly depend on complex, dynamic, distributed, and hybrid IT environments, they encounter an overwhelming influx of metrics, events, logs, and traces from various isolated tools. Extracting timely insights from the deluge of data and taking the necessary actions are extremely challenging for operations teams. However, these actions are crucial for ensuring business operations and enhancing overall customer experience. The complexity and volume of data in these environments often hinder the effectiveness of traditional monitoring and management approaches, necessitating more sophisticated, integrated solutions.

AT A GLANCE

KEY STATS

- Over half the Saudi organizations surveyed by IDC say digitalizing operations is their top priority in the next 12–18 months.
- 49% say they find it challenging to balance digital innovation with managing daily operational issues.
- Currently, 58% of the organizations in Saudi Arabia classified by IDC as Digital Leaders have adopted unified observability and are planning to expand it. Those in the Digital Mainstream and Followers categories have not yet adopted this approach.

KEY TAKEAWAYS

With businesses' growing reliance on digital technologies, delivering an optimal digital experience, and ensuring resilience has become more vital than ever. Unified observability enables consolidated metrics, events, logs, and traces in a single location. Using built-in AI/ML models to analyze centralized data, the platform generates insights that facilitate proactive issue resolution, ensuring business continuity and superior customer experience.

Unified Observability as the Key to Navigating Digital Complexity

As Saudi organizations navigate the complexities of a digital-first world, unified observability stands out as a pivotal solution to the challenges they face. This approach represents a paradigm shift from traditional, fragmented monitoring systems to a more holistic, integrated framework. Unified observability enables organizations to effectively consolidate and analyze the vast array of metrics, logs, events, and traces generated across their IT environments. This provides a comprehensive, real-time view of the entire digital ecosystem, facilitating quicker and more accurate problem identification and resolution. This enhanced visibility is not only about monitoring but also about gaining actionable insights that support informed decision-making, ensuring both robust digital services and the agility to adapt to changing demands.

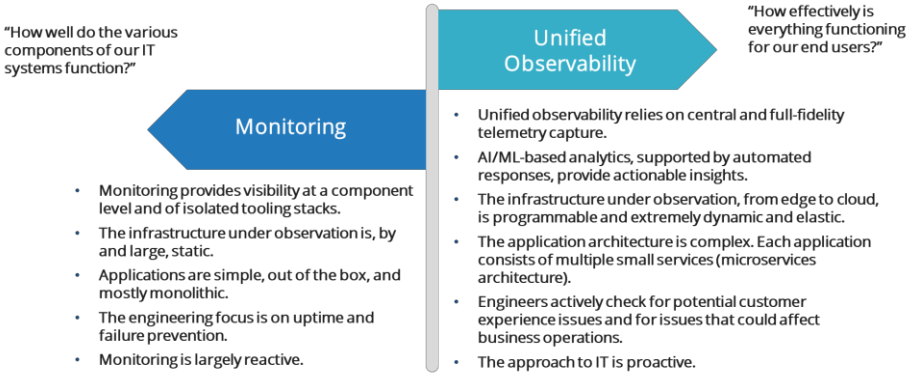
Moreover, unified observability plays a pivotal role in fostering resilience and maintaining superior digital experiences. In a digital-first world where customer expectations and business continuity hinge on seamless digital interactions, the ability to rapidly identify and address potential issues before they escalate is invaluable. This approach aligns closely with the evolving needs of Saudi organizations, providing a scalable and efficient way to manage the complexities of modern digital operations. As such, unified observability is not merely a tool for IT efficiency; it is a strategic asset that underpins customer-centricity, business agility, and the overall resilience of an organization in a dynamically evolving digital landscape.

Evolution of Unified Observability

The Journey of Monitoring

Traditionally, monitoring has involved continuous oversight of IT systems to ensure their performance and availability. This process began with simple checks and balances in the early days of computing, where the primary focus was on basic system health indicators such as uptime and resource utilization. Monitoring evolved along with technology, transitioning from basic system checks to more sophisticated methods encompassing network monitoring, application performance monitoring, and log management. This progression mirrored the growing complexity of IT environments, marked by the advent of distributed systems, cloud computing, and microservices architectures. At each stage, monitoring adapted to provide deeper insights into increasingly complex systems.

However, the limitations of traditional monitoring became evident as the complexity of digital ecosystems continued to grow. While effectively enabling systems visibility and the tracking of specific metrics and logs, these tools often operated in silos, leading to fragmented views of IT health and performance.



The Rise of Observability

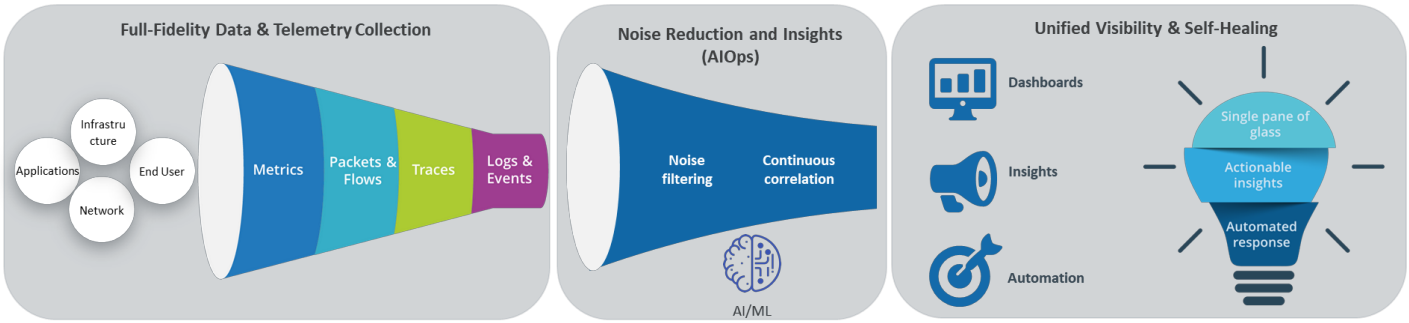
The concept of observability was originally coined by Rudolf E. Kalman in a 1960 paper on mathematical control systems. Its application and significance have evolved substantially over time, particularly in the realm of IT and digital systems. Control theory uses Kalman's definition of observability as a measure of how well a system's internal states can be inferred from knowledge of its external outputs. This concept, though rooted in a different field, is relevant to modern digital systems, where understanding the internal workings of complex IT environments is crucial.

Cloud-native application developers brought the term back to life in the context of IT. Their primary objective was to gain a deeper understanding of their applications, aiming for the timely and proactive identification of bugs and performance issues. This goal required a shift from traditional monitoring, which focused on external signals and outputs, to a more holistic view that considers the intricate, internal dynamics of software applications.

Modern Digital-First Organizations Need Observability and More

Many observability platforms tend to serve cloud-native application teams, offering a centralized method for collecting telemetry data across applications and infrastructure. However, the scope of a modern digital-first enterprise extends far beyond cloud-native boundaries, presenting a web of complex and diverse systems that are integral to service delivery. This expansive ecosystem includes not only cloud-based components but also an array of other sources (e.g., endpoint devices, non-cloud-native servers, applications, security systems, and third-party services).

The enterprise IT landscape now requires a comprehensive observability strategy that transcends traditional monitoring and is capable of capturing and correlating data from every part of the digital footprint. The sources of telemetry are varied, spanning legacy systems, hybrid cloud environments, IoT frameworks, and edge computing platforms, all contributing to a holistic narrative of the enterprise's operational health.



Actionable Insights from a Sea of Events

In their quest to maintain robust digital channels, forward-thinking organizations recognize the need to evolve beyond basic observability toward a more enriched and predictive operational model. This evolution involves harnessing sophisticated data analytics, machine learning algorithms, and AI to achieve more than just a visualization of current system states. It extends to anticipating future trends, potential disruptions, and automating mitigation strategies. Such a proactive approach allows enterprises to address issues preemptively, optimize performance, and ensure a consistently high-quality user experience.

The true strength of unified observability lies in its capacity to transform the vast sea of data generated by digital enterprises into actionable insights. The challenge transcends data collection; it requires a meticulous process of sifting and refining to identify meaningful patterns, anomalies, and trends. These advanced observability platforms are adept at navigating through dense data, pinpointing signals indicative of performance deviations, potential security threats, and opportunities for optimization.

The real sophistication of these systems is in their ability to contextualize data, transforming raw events into actionable narratives for IT teams. Leveraging technologies such as machine learning and AI, observability tools offer predictive analytics, enabling businesses to anticipate and resolve issues before they can impact service delivery. This shift from a reactive to a proactive approach is driven by foresight and a deep understanding of the enterprise's digital operations.

Moreover, the insights gleaned are not merely technical; they are intrinsically linked to business outcomes and play a pivotal role in shaping decisions that influence customer satisfaction, operational efficiency, and, ultimately, financial performance. Therefore, these actionable insights, derived from the comprehensive analysis of events, are invaluable assets for digital-first organizations. They provide the necessary clarity and agility to navigate the complexities of modern IT environments, ensuring resilient and effective digital service delivery.

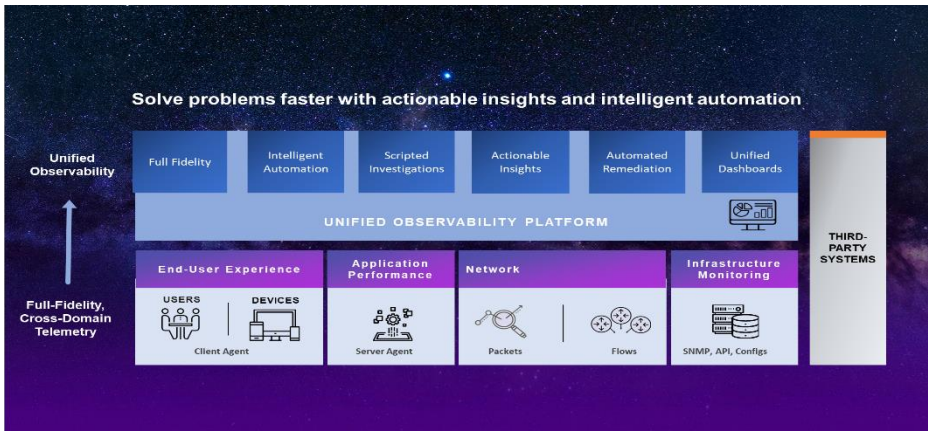
Self-Healing with Automated Response

Building on the foundation of advanced observability and predictive analytics, digital-first organizations are now embracing the next frontier: self-healing systems with automated response mechanisms. This transformative approach marks a significant shift from traditional IT management, where human intervention was key to resolving system issues. In self-healing frameworks, systems are equipped with an expandable library of pre-configured and customizable actions to automatically initiate corrective actions with or without human oversight.

How Riverbed Addresses Unified Observability Needs

Riverbed's approach to unified observability is encapsulated in its products and platform. The Riverbed portfolio offers observability across an organization's IT landscape. It aims to provide IT teams at various levels — from C-suite executives to service desk, NetOps, and SecOps personnel — with the tools required to monitor applications and user interactions throughout the network.

Riverbed Unified Observability integrates data from multiple sources, thereby facilitating insight generation. It also includes features for automating certain responses based on these insights. The intended outcome of using Riverbed is to support IT teams in ensuring smooth digital experiences and consistent performance across their networks.



The key capabilities of Riverbed Unified Observability include:

- **Full-fidelity data collection:** Riverbed Unified Observability captures data across an enterprise to provide a complete overview of performance. The platform supports various IT infrastructure components, including endpoint devices, networks, servers, applications, cloud-native environments, and user experience monitoring. Instead of sampling data, Riverbed captures every transaction, packet, and flow. This method is intended to provide a detailed view of network and application performance. In addition to performance metrics, the platform focuses on analyzing user experience. This analysis covers both quantitative and qualitative aspects and is applicable to various types of applications, including those in the cloud, software-as-a-service applications, and mobile applications.

- **AI-driven problem isolation and remediation**: Riverbed solutions employ analytics, AI, and machine learning to enhance decision-making and streamline problem identification, resulting in more relevant alerts. The system uses various anomaly detection techniques to analyze operational data:

- Behavioral analytics identify deviations from established "normal" performance baselines, analyzing weekly, monthly, and seasonal usage variations to pinpoint significant operational impacts.
- Variance analysis compares expected outcomes with actual results.
- Thresholds set specific limits on metrics to trigger alerts in known scenarios (e.g., device failures or high utilization) and are combined with behavioral analytics for more nuanced situations.

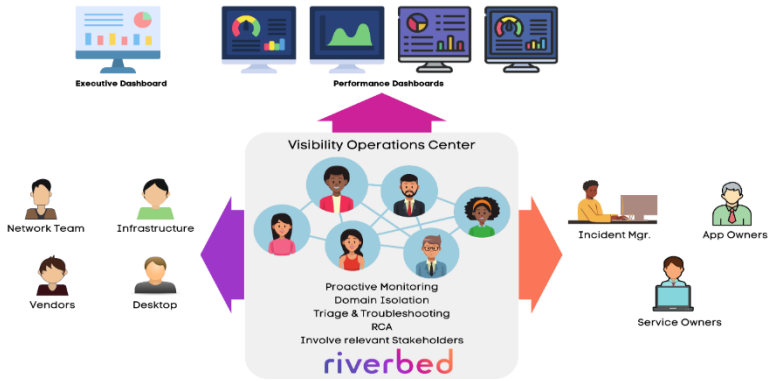
Furthermore, Riverbed IQ applies correlation and statistical methods to isolate root causes. This includes identifying patterns and relationships among anomalies to reduce irrelevant data and grouping related indicators using time, location, connection, and relationship data. Iterative investigative analysis is also utilized to gather the necessary data for quicker troubleshooting and resolution.

» **Automated response:** The Riverbed portfolio employs AI, correlation, and automation to simplify repetitive processes, with the aim of reducing human involvement. This approach is intended to lower operational costs and enhance user satisfaction. Riverbed aims to provide a broad range of automation use cases, leveraging insights from both its own telemetry data and data from existing third-party tools to expedite problem resolution. The portfolio's automation capabilities, along with its analytical and integration features, are designed to support various use cases (e.g., incident response, security forensics, smart trouble ticketing, and desktop remediation).

Visibility Operations Center

The Visibility Operations Center is Riverbed's initiative to assist customers in transforming their IT operations. It provides a framework for establishing a center of excellence within customers' existing IT operations setup. Riverbed's specialists, including consultants and service delivery managers, oversee the operation of this center.

This initiative utilizes the Riverbed Unified Observability Platform and incorporates established industry best practices to enhance IT operations, including by integrating processes and workflows in line with ITIL v4 standards (the current version of the IT service management framework). The aim is to advance the organization's performance management maturity incrementally, with a focus on creating an efficient, robust, and adaptable IT operations environment.



Conclusion

A critical need for more efficient, proactive operational strategies has emerged against a background of shifting market dynamics. These shifts encompass the complex interaction between distributed and cloud-native applications, modern infrastructures that stretch from edge computing to cloud systems, and an increasingly mobile workforce. The contemporary market landscape no longer tolerates reactive approaches or subpar customer experiences. Instead, the preference for proactive strategies that anticipate disruptions and guarantee exceptional end-user experiences is clear.

The industry has responded adeptly to these evolving demands and the nuances of a digital-first world by introducing unified observability as an innovative solution. It is designed to enable IT operations to identify and resolve issues before they negatively affect business functions and customer experience. Notably, unified observability vendors are evolving toward automated responses that function with minimal or no human intervention. IDC expects the increased adoption of unified observability across organizations in the current digital era. Riverbed is poised to play a significant role in meeting the resulting demand, provided it maintains its current momentum in terms of innovation and continues to place customer-centricity at the heart of its product strategy.

About the Analyst

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Shahin Hashim leads IDC's enterprise infrastructure and datacenter research programs in the Middle East, Türkiye, and Africa (META). Based in Dubai, Shahin's primary focus is on analyzing and assessing the compute, network, and storage markets. Shahin also examines the abstraction layer above, including software-defined infrastructure, programmable infrastructure, and advancements in hybrid cloud transitions. His expertise extends to essential components that contribute to autonomous operations, such as hybrid cloud automation and orchestration, AIOps, and central observability. He provides comprehensive coverage of the datacenter infrastructure market, including the latest developments, regional capacities, investments, market outlook, and key players in the META region.

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