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Whitepaper

A CIO's Guide to Harnessing Next-Gen Monitoring to Reduce Cloud Costs and Risks

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Your business has successfully achieved agility and flexibility through a cloud migration strategy. Whether you're moving from on-premises to cloud environments or repatriating workloads to optimize performance, a hybrid observability solution can provide invaluable performance benefits. This solution grants you complete visibility across your entire hybrid multi-cloud ecosystem.

In this whitepaper, we'll cover:

1. **Agility and value of a hybrid cloud approach**
2. **Managing cloud migration risk**
3. **Controlling cloud costs and optimizing performance**

Introduction:
Extend visibility wherever your business demands

Your organization has likely already migrated workloads and is now determining the best place to deploy the next ones. When fulfilling modernization strategies, organizations that move applications and resources to the cloud usually gain:

- Reduced data center costs
- Improved ability to adjust to business changes
- Faster application development and deployment

Teams might expect these improvements to accelerate operational goals and improve customer experience. However, there is potential for increased operational risks, and cloud costs could grow when cloud resource consumption increases. Estimating cloud resource requirements to ensure optimal performance and availability of workloads and applications in the new cloud environment can pose a significant challenge.

40% of monitoring teams say they've delayed increasing user and customer satisfaction while responding to incidents, and 35% say they put off increasing revenue.[1]

You've likely made good progress managing your hybrid environment. Your CloudOps teams may have started refactoring applications and using Kubernetes in development in addition to migrating to the cloud. But you may have hit some roadblocks along the way—controlling cloud spend, getting performance insights across all your environments, and proactively resolving cloud issues. You might also manage an existing on-prem environment with mission-critical applications vital to your business.

LogicMonitor meets you at any stage of your cloud journey, providing a hybrid observability platform powered by AI to visualize monitoring across infrastructure. This enables your organization to navigate migration strategies with confidence.

It's time to choose your cloud migration adventure. Keep reading if:

- You manage IT or cloud services for your organization
- You are in an IT Ops function with on-premises infrastructure and cloud migration responsibilities
- Your IT management responsibilities are changing, and you're increasingly becoming responsible for cloud workloads or development

1. LogicMonitor *Future Forward Research Report*. | auxis.com

Chapter 1:
Advantages of a hybrid cloud approach

Hybrid cloud environments offer substantial benefits. Organizations can place workloads where they function best by distributing workloads between on-premises infrastructure and cloud environments. This adaptability enables operations experts to respond quickly to changing resource demands for critical applications housed in the cloud.

A hybrid cloud approach also provides the organization with flexibility, a more balanced return on new and existing investments, improved resource and cost optimization, and scalability as business demands change. According to a recent LogicMonitor report, Future Further Research Report: How Data Illumination Futureproofs Your Business, 100% of IT leaders surveyed working in a hybrid environment think a mix of on-prem and cloud is optimal for their business.

Hybrid IT: Here for the long haul

Despite massive organizational migration to the cloud over the past decade, on-premise infrastructure remains sticky. Most organizations that are currently hybrid expect they'll be maintaining a mix of both cloud and on-premise infrastructure for the long-term. In fact all IT leaders (100%) currently working in a hybrid environment think that a mix of on-prem and cloud is optimal for their business.

Scalability: Thanks to the elasticity of cloud providers, organizations can rapidly scale up resources and capacity when demand spikes—and scale right back down when that extra oomph isn't needed. No more paying for idle resources.

Leverage existing investments: A strategic migration of workloads to the cloud can minimize service disruptions while maintaining certain workloads in on-prem infrastructure, applications, and data centers, which could optimize your hybrid cloud approach.

Cost optimization: Capitalizing on cloud elasticity for more variable workloads can distribute infrastructure spending to better align with budgetary guidelines. 88% of IT leaders have been asked by their company's leadership to take some sort of action related to cloud spending, be it better cost documentation, justifying ROI, finding a lower-cost provider, or other steps.[2]

Disaster recovery and business continuity: Replicating critical data across cloud and on-prem environments safeguards performance reliability in the event of an outage.

2. LogicMonitor *Future Forward Research Report*. | auxis.com

Chapter 2:

Challenges of a hybrid cloud approach

Organizations encounter significant challenges with hybrid cloud infrastructure due to the complexity of managing diverse environments and technologies. As businesses migrate from on-prem to a hybrid model with multiple cloud service providers, it's easy to keep adding monitoring and management tools to their stack. Before they know it, they're dealing with tool sprawl and information silos across operations teams.

Tool sprawl: Different teams may deploy their own mix of observability tools to gain insights into the portion of the estate under their purview. Consequently, costs and complexity will rise, preventing IT and Cloud Ops teams from getting a comprehensive, singular view of the hybrid environment. This leads to silos, inefficient workflows, delayed troubleshooting, increased costs, and decreased productivity.

76% of organizations with hybrid infrastructure have separate monitoring tools for their on-prem and cloud stacks.[3] Additionally, 53% of organizations are looking for ways to consolidate their monitoring tools, while 21% of IT leaders at organizations using multiple monitoring tools describe the approach as "chaotic".[4]

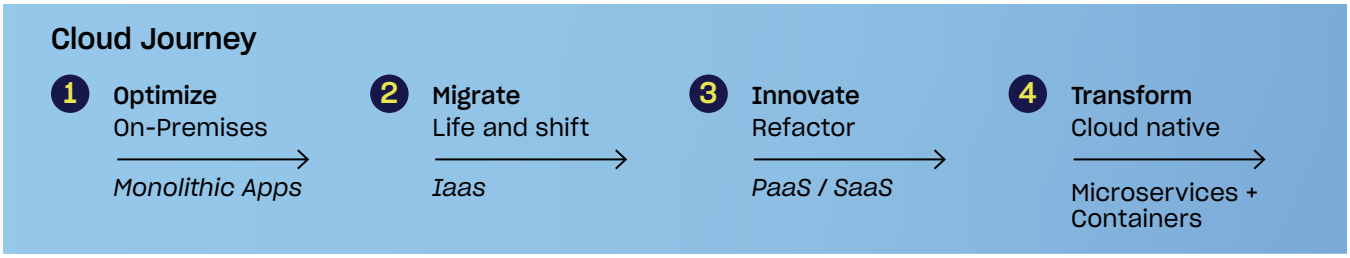
> *"76% of organizations with hybrid infrastructure have separate monitoring tools for their on-prem and cloud stacks. Additionally, 53% of organizations are looking for ways to consolidate their monitoring tools, while 21% of IT leaders at organizations using multiple monitoring tools describe the approach as 'chaotic'."*

Performance bottlenecks: When applications require intensive data transfers between on-premises and cloud environments, latency and network constraints may negatively impact application responsiveness, user experience, and revenue.

Cost concerns: Cloud billing models can be unclear. Incorrect forecasting can result in unexpected overages when future consumption is based on previous resource usage. Budget cuts and cost considerations negatively impact cloud migration for 4 in 5 IT leaders (80%).[5]

Organizations can overcome these challenges by deploying a hybrid observability solution powered by AI, such as LogicMonitor's LM Envision platform. LM Envision is fast to deploy and rich with correlated context, helping teams deliver efficiency, insights, and value from their infrastructure to digital experience.

LM Envision provides a single pane of glass for monitoring and managing on-prem and multi-cloud environments. It uses contextual logs and metrics to provide a central source of truth for IT and CloudOps teams. This promotes collaboration across teams while ensuring cost optimization and risk mitigation across infrastructure environments.



Develop a migration plan

Adopting a phased migration plan allows ITOps teams to maintain critical on-premises resources while progressively transitioning workloads to the cloud. Successful migration strategies involve:

- Careful attention to co-existing environments: Hybrid observability solutions with visibility across on-prem and cloud environments enable developers to sustain essential operations during rehosting and transitioning resources.

- Robust backup and disaster recovery plans: Such plans ensure data integrity and resilience throughout the migration process.
- Determining risks and mitigation plans: A small-scale pilot replatforming of non-essential workloads could outline a more robust plan for managing potential challenges and designing contingencies or protocols based on what worked well during these exercises.

Test, validate, repeat

Once ITOps teams identify potential workload migrations, the process should be thoroughly tested and validated to maintain reliability. Practitioners need to visualize and validate that migrated workloads perform the same way in the cloud as in original on-prem environments.

During testing, teams should identify and resolve potential issues before rehosting or re-platforming applications. A unified hybrid cloud monitoring tool can help visualize application performance to resolve migration risks.

This reduces complexity for ITOps and CloudOps teams that need insights into what is happening across on-prem applications and those that migrated to the cloud. It is difficult to proactively visualize these insights with multiple monitoring tools across dispersed teams.

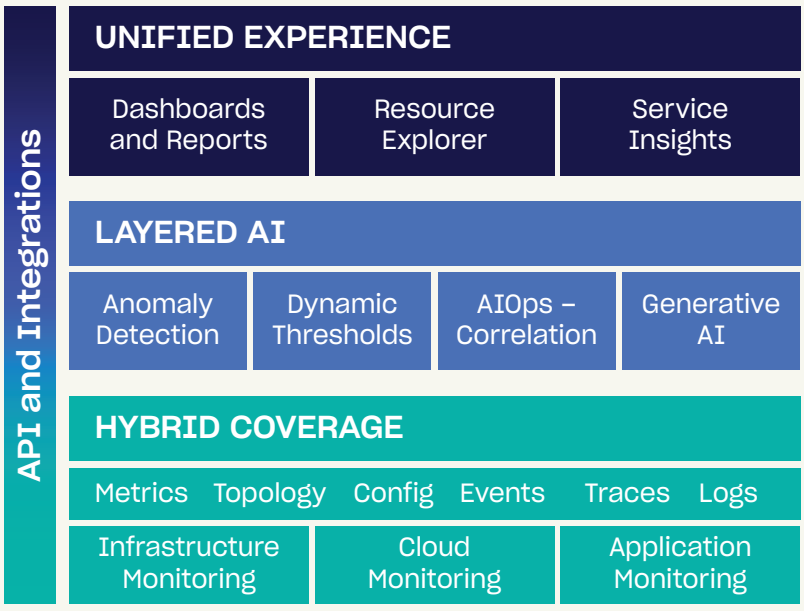
Leveraging a single source of truth for insights into multiple environments can ensure high availability and resilience during migration.

Continuous monitoring across the migration process, both on-premises and in the cloud, with observability platforms such as LogicMonitor's LM Envision, helps promptly detect and address anomalies or performance bottlenecks, reducing the risk of unexpected disruptions.

Did You Know?

LogicMonitor assists organizations in making informed decisions by providing deep insights across multiple phases of the cloud modernization journey.

LM Envision: Hybrid Observability powered by AI



Unified Experience

- Built for Opps by OPs
- Connect the dots (MTTR)
- Predictable Infrastructure Utilization and Optimization

Layered AI

- Deeply integrated into the platform
- Alert correlation and actionable insights
- AI-driven analysis and anomaly detection

Hybrid Coverage

- Market Leading platform for Hybrid IT (longer than IT)
- Agentless discovery
- Integrations with 2500+ technologies

Chapter 3:

Controlling cloud costs

Cloud costs can be hard to see and predict for organizations of all sizes. Andy Thurai, VP of Constellation Research, lamented in this LogicMonitor observability webinar on behalf of some clients he has worked with that have been hit with multi-figure cloud cost overages. "I get hit with a bill that I never thought would be possible, and it's only growing. I don't see that going down. What am I going to do? How do I get that under control? That's a real conversation that's happening now." This sentiment highlights a key challenge during cloud migration: clarity in cloud costs.

Why it is hard to see cloud costs

Cloud costs are difficult to predict due to changing cloud resource usage, unpredictable billing models, and visibility gaps across distributed teams.

Existing billing models are often based on forecasted models from historical usage, resulting in unpredictable costs if utilization changes. If an organization experiences a usage spike or sudden shift in resource demand, the forecast is no longer relevant, resulting in large, unplanned overages. Enterprises can benefit from cost optimization capabilities that help predict and suggest improved resource utilization options to reduce costs.

Growing visibility gaps can also occur when different CloudOps teams manage different cloud workloads. This creates the challenge of different teams deploying various monitoring tools to help visualize application performance for their workloads. These visibility gaps only grow and create more barriers as the business expands or evolves.

Controlling costs: The downside of downtime

Unanticipated problems and a lack of proactive monitoring across cloud environments can lead to unplanned downtime, severely impacting revenue and customer experiences. Andy Thurai, VP of Constellation Research, notes that downtime can cost close to $300,000 per hour for small businesses and between $1 million and $5 million per hour for large companies.

Comprehensive observability can help proactively identify issues and provide real-time insights into system health, improving financial predictability. With proper monitoring tools, organizations can prevent issues before they impact services, ensure uptime, and minimize the financial impact of service disruptions.

> *"Comprehensive observability can help proactively identify issues and provide real-time insights into system health, improving financial predictability."*

Improve performance and reduce cloud costs

Organizations should leverage a hybrid monitoring approach to optimize cloud costs, prevent downtime, and improve ROI. This strategy provides comprehensive insights into resource usage, associated costs, and performance outcomes.

Here's how Ops teams can achieve cloud cost optimization:

1. **Dial in cloud usage**: Fine-tune cloud utilization to keep costs in check while maintaining top-notch service levels
2. **Untangle multi-cloud billing**: Connect the dots between costs and resources across all cloud providers
3. **Unify toolkit**: Consolidate monitoring tools into a single platform for crystal-clear visibility and streamlined costs across on-prem and cloud deployments

Performance optimization for Kubernetes applications

Organizations use Kubernetes for its scalability and flexibility, but they shouldn't forget that Kubernetes monitoring is a must-have for CloudOps teams. It provides real-time insights into containerized applications running on Kubernetes clusters' health, performance, and availability.

With the dynamic nature of container orchestration, hybrid cloud monitoring helps detect and troubleshoot issues promptly, ensuring optimal performance and reliability across the infrastructure landscape. Users can spot anomalies quickly and proactively solve problems to limit service disruptions by identifying frequent changes and automatically detecting issues.

A hybrid observability platform that spans both on-premises and cloud environments enables centralized visibility. Platform engineering and CloudOps teams can monitor and manage their entire infrastructure from a single interface. This unified approach streamlines operations, enhances collaboration, and simplifies troubleshooting, regardless of where the applications are deployed. A Kubernetes monitoring solution should include detail on how to configure logs and events to provide a holistic view into the container architecture, correlating both metrics and logs.

> *"A hybrid observability platform that spans both on-premises and cloud environments enables centralized visibility.*

Over time, Kubernetes monitoring becomes part of the CloudOps DNA, providing a level of vigilance that allows teams to address imbalances, fostering an environment of continuous improvement swiftly.

Case Study: LogicMonitor slashes Triton's cloud costs

In a remarkable case study, Triton detailed how they effectively used LogicMonitor's monitoring and automation capabilities to save money and gain better control over their cloud costs.

Triton leveraged LogicMonitor's hybrid observability platform to extend visibility across their hybrid cloud environment. This enabled teams to monitor the health of on-premises infrastructure and cloud resources through a single tool. Triton found that once LogicMonitor was implemented, it was much easier to adjust resources based on insights into utilization.

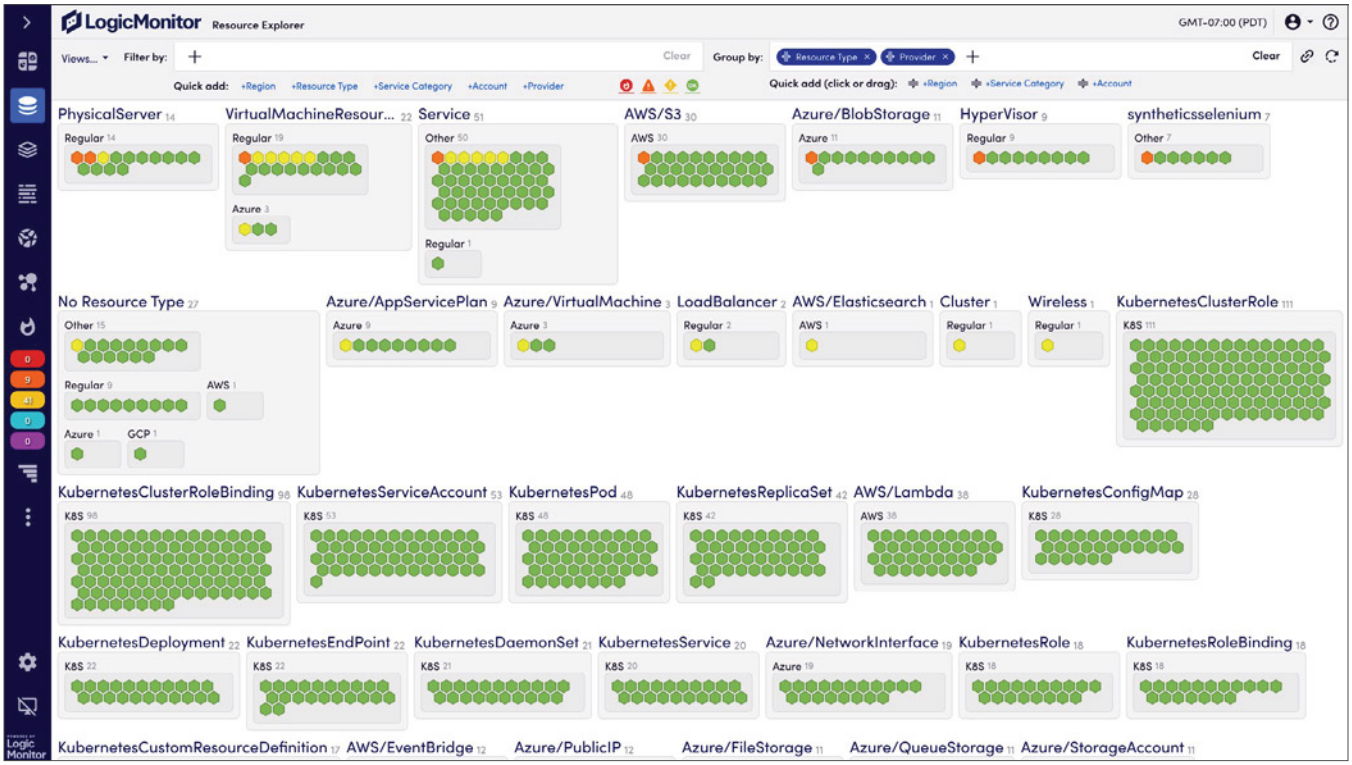
Triton also used LogicMonitor's automation features to set up automated alerting and remediation processes to cut costs and reduce the risk of unplanned downtime. Triton illustrates how LogicMonitor's proactive capabilities can quickly optimize cloud resources, align cloud spending with actual resource utilization, and ensure a cost-effective cloud migration.

Practical strategies to optimize cloud costs

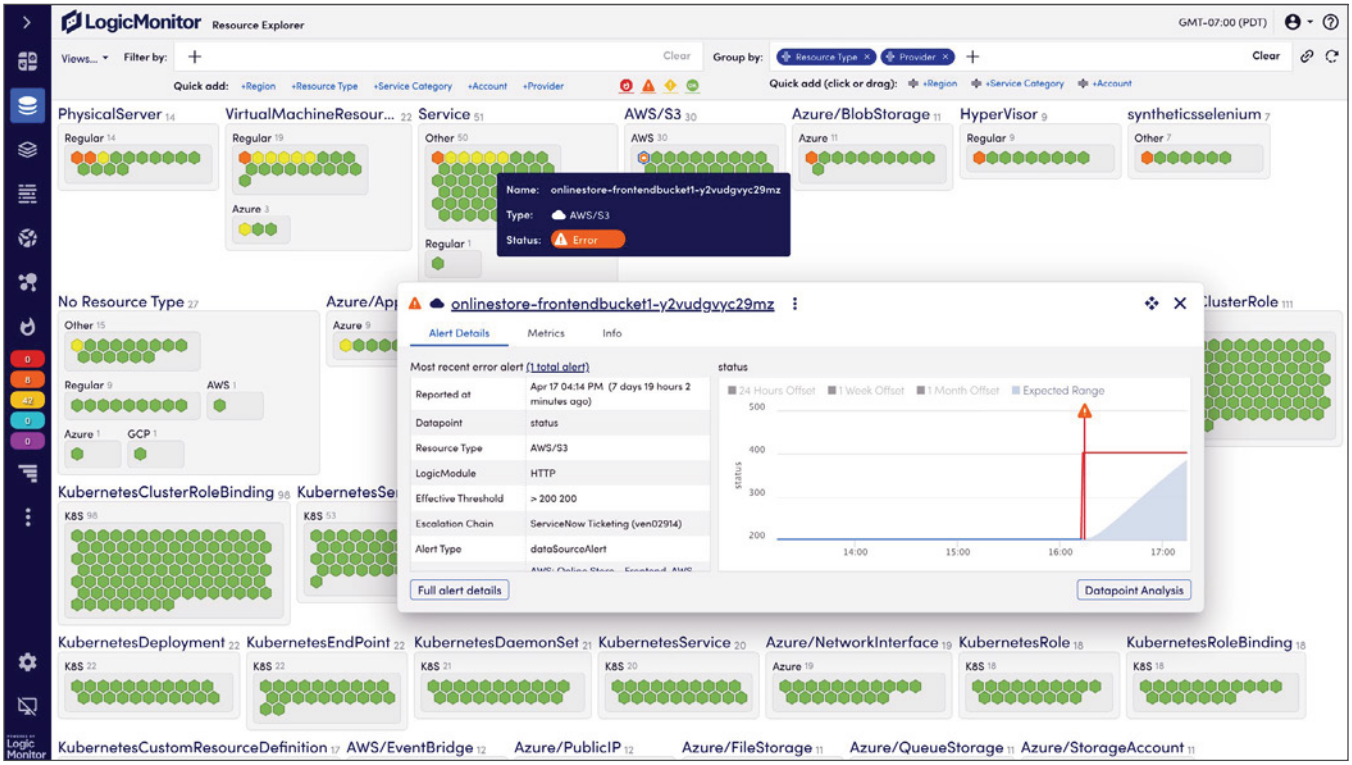
Businesses can adopt these practical strategies when deploying LogicMonitor across their environments:

- Use **Resource Explorer** to quickly organize and visualize all hybrid multi-cloud deployments and clearly see overall resource and application health. Teams gain comprehensive visibility across thousands of resources and can easily isolate high-priority issues to accelerate resolutions.
- Leverage **Cost Optimization** to simultaneously balance performance with cloud costs, gain detailed multi-cloud billing visibility, and provide elevated service levels using monitoring coverage across multiple cloud providers.
- Implement a structured process driven by intelligent recommendations to de-provision or modify resources that require realignment or reducing or avoiding unnecessary cloud expenses.
- Proactively optimize usage patterns to determine which resources can be right-sized, leading to significant cost savings.

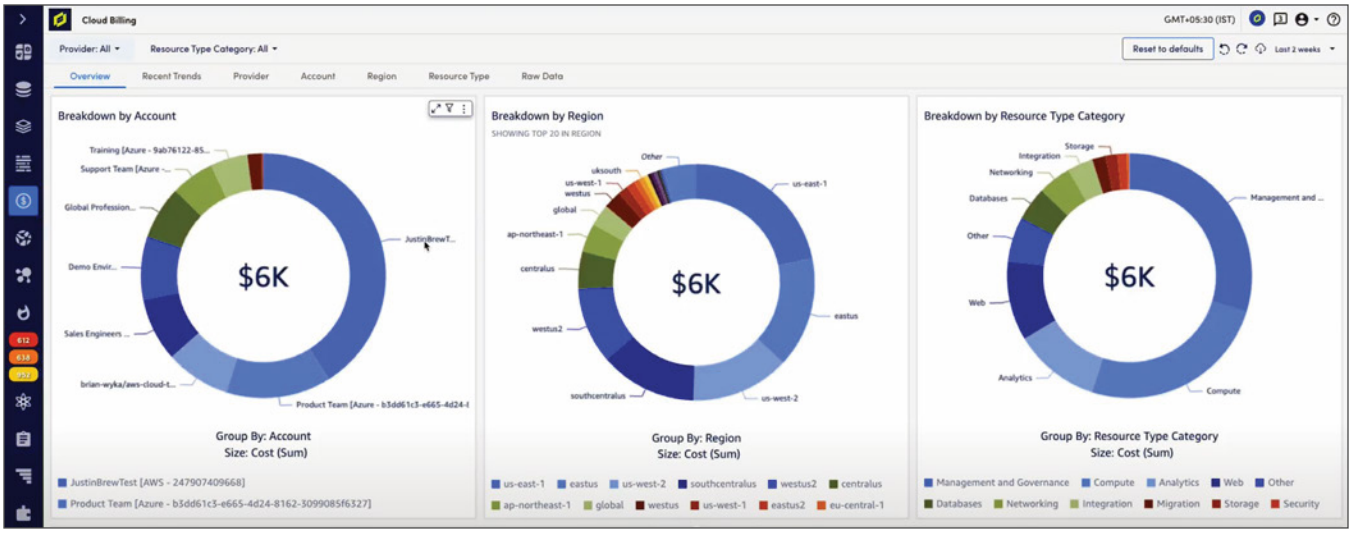
Businesses that follow these tips and leverage the expertise of CloudOps teams will gain control over their cloud costs, ensuring predictable spending, maintaining optimal performance, and facilitating more reliable migration strategies.



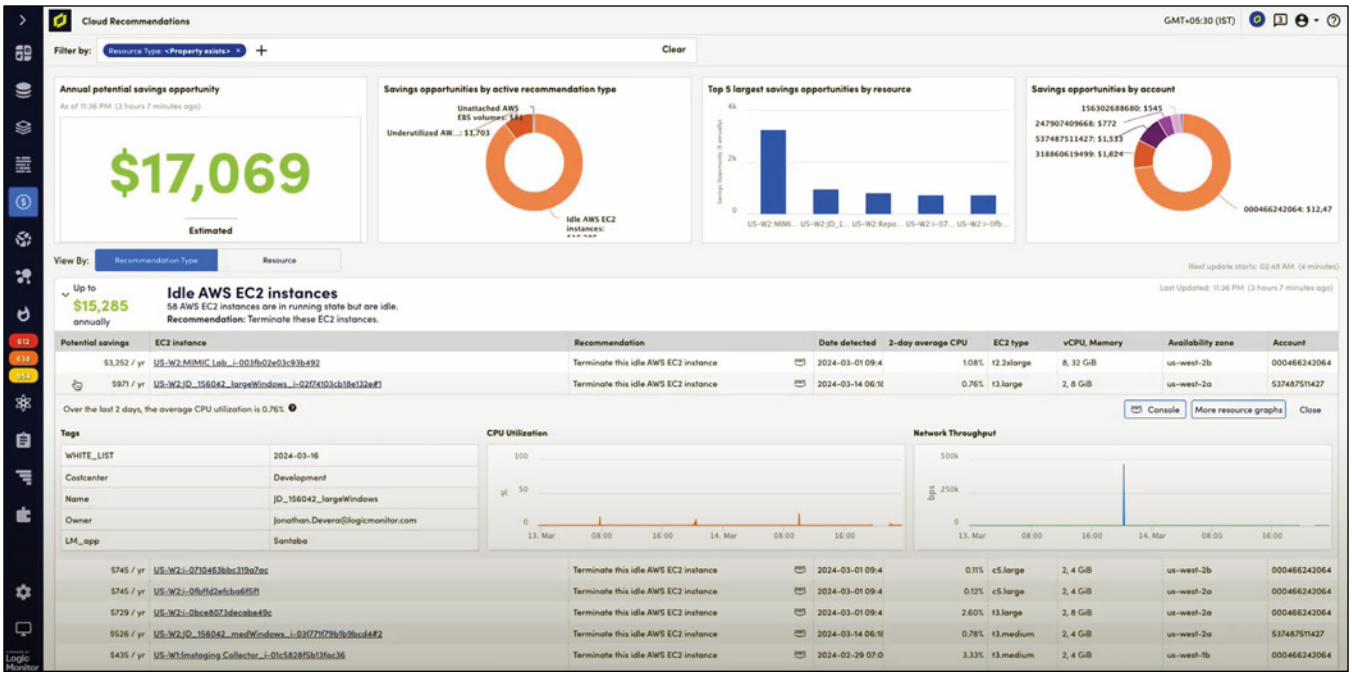
Organize and visualize on-prem, cloud, and containerized resources.



Drill down into a specific resource to identify issues.



Fully visualize multi-cloud spend in a single view, with filtered tags such as account, region, provider, resource type, and more to analyze spend allocation and identify changes.



Intelligent recommendations into cloud resources identify cost savings opportunities such as changing or terminating instances without affecting performance.

Chapter 4:

Growth challenges and hybrid cloud observability solutions

Operational growth, mergers, acquisitions, and team expansions can drive monitoring tool sprawl. Teams might use different tools to monitor the resources and applications that matter to their business services, resulting in visibility gaps across teams.

Multiple monitoring tools can slow down incident response times and root cause analysis because teams are bombarded with alerts from numerous platforms and are unsure how to react and prioritize them. Consolidating disparate monitoring tools into a single monitoring platform with hybrid observability coverage solves this problem. This approach ensures operational teams can leverage consistent information and prioritized alerts to make decisions.

Alert fatigue and incident response

Too many monitoring tools yield many disconnected alerts, leading IT teams to spend significant time wading through notifications and escalations without clarity on which issues warrant immediate attention.

Without a singular hybrid observability platform that spans multiple data sources, teams operate under different assumptions and interpretations of data. This fragmented approach undermines collaboration and problem-solving, hindering incident response and problem resolution.

The path to hybrid observability excellence

Overcoming tool sprawl and alert fatigue starts with adopting a hybrid observability solution such as LM Envision—a platform bridging on-premises, multi-cloud environments, and containerized deployments. Centralizing monitoring and data collection mitigates tool proliferation, fostering a cohesive ecosystem. This provides ITOps and CloudOps teams with comprehensive views, improved collaboration, reduced alert fatigue, and faster incident response.

Transcending departmental boundaries

Operations teams, SRE, and network engineers, among others, require access to similar data sets for cross-functional visibility and coordinated outcomes. A hybrid observability platform supplies these insights to break down organizational silos and advance the progress of organizations toward hybrid cloud adoption.

Contextual insights for informed action

A hybrid observability platform equips teams with contextualized metrics and logs so they have comprehensive knowledge of the underlying issues and root causes. This integration of insights ensures that teams identify problems promptly and possess the knowledge needed to address them efficiently.

> *"A hybrid observability platform that coincides with a cloud migration strategy bridges the gap between on-premises and hybrid multi-cloud monitoring requirements."*

Complete journey cohesion

A hybrid observability platform that coincides with a cloud migration strategy bridges the gap between on-premises and hybrid multi-cloud monitoring requirements. When organizations choose LogicMonitor Envision as their bedrock for monitoring, they receive a seamless experience with easy onboarding and insights that are generated within minutes. Out-of-the-box dashboards intuitively visualize performance and metrics across diverse teams without requiring technical expertise.

Chapter 5:

How LogicMonitor empowers seamless hybrid cloud management

LogicMonitor extends visibility across hybrid multi-cloud environments, addressing the issues that often plague businesses navigating the complexities of cloud adoption.

Mitigating migration pressure and risk

Cloud migration can be fraught with risk and uncertainty. LogicMonitor provides immediate insights, seamless data connectivity, and rapid issue resolution. It offers scalable visibility that aligns with on-premises infrastructure for frictionless migration across environments. With LogicMonitor, organizations maintain clear insights into performance and resource utilization, minimizing the risk associated with such a transformative move.

Taming sprawl and uncontrolled spend

LogicMonitor helps businesses slash cloud costs and uncontrolled spending by providing deeper visibility into cloud resource usage and consolidating monitoring tools. By presenting resource utilization data alongside cloud costs and delivering AI-powered recommendations, LogicMonitor empowers teams to eliminate inefficiencies associated with reactive cost management, reduce cloud expenditures, and maintain performance. Organizations can transition from a reactive to a proactive optimization approach with a steady stream of recommendations that align with the high performance requirements that customers expect.

Unlocking actionable insights and accelerating resolution

The proliferation of alerts and the absence of actionable insights lead to suboptimal decision-making and hinder Mean Time to Resolution (MTTR). LogicMonitor quickly surfaces incidents and facilitates the identification of root causes to accelerate resolution time. The integration of contextual logs, alerts, and metrics gives teams the tools they need to efficiently mitigate issues, providing more agile incident response.

Catalyzing speedy outcomes and enhanced expertise

Manual monitoring, disconnected tools, and technical debt impede decision-making and execution. LogicMonitor's automated resource discovery and out-of-the-box dashboards streamline processes, reducing the burden of manual tasks. This automation, combined with contextual metrics, logs, and traces, empowers teams to make informed decisions promptly.

LogicMonitor's seamless integration of on-premises, multi-cloud, and container monitoring automates resource discovery and delivers real-time insights. This reduces risk, letting organizations reap the benefits of the cloud, retain control over costs, and foster operational excellence.

Click here to learn more about LogicMonitor solutions.

About LogicMonitor®

LogicMonitor® offers hybrid observability powered by AI. The company's SaaS-based platform, LM Envision, enables observability across on-prem and multi-cloud environments. We provide IT and business teams operational visibility and predictability across their technologies and applications to focus less on troubleshooting and more on delivering extraordinary employee and customer experiences. For more information, visit logicmonitor.com and our blog, or follow us on LinkedIn, X, Facebook, and YouTube.

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