OBSERVABILITY BEST PRACTICES THAT SCALE

eBook

cloudEQ

PUT OBSERVABILITY TO WORK FOR YOU

Observability practices are essential in today's always-on world. The evolving tech landscape and multi-cloud environments mean more applications, more updates, and more services are required to run a high-performing organization. Teams need to be able to look across the entire IT environment with context into interdependencies to see holistically the state of their systems. This requires seamless and efficient workflows for detecting, diagnosing, and resolving issues, fast.

An effective observability practice empowers teams to identify problems and resolve them in seconds. Most importantly, this enables resolution of potential threats or issues before there is even a chance to impact business or performance.

The first step in building an observability practice today that scales is understanding what key performance indicators (KPIs) need to be measured. There are standard metrics that every organization needs to have. These metrics include baselines for uptime, incident metrics including mean time to detection (MTTD) and mean time to resolution (MTTR), but also financial metrics like cost to serve. Identifying and measuring what matters to your unique business is key to success.

SEE EVERYWHERE. MANAGE EVERYTHING.

Observability is the practice of understanding and interpreting the internal states of a system by analyzing the data it produces. It's much more than simple monitoring, which answers what happened. Observability answers why and where events can and do occur.

THE BENEFITS OF OBSERVABILITY

- **STREAMLINED WORKFLOWS**
  Observability provides a seamless workflow for monitoring, troubleshooting, and investigating system behaviors. It enables teams to detect and resolve problems in minutes rather than hours, significantly improving response times.
- **FASTER INNOVATION AND SCALABILITY**
  With observability, organizations can deploy updates quicker, analyze user behavior data for better optimization, and leverage data-driven decision-making to innovate and scale faster.
- **BRIDGING TECHNICAL AND FINANCIAL TRANSPARENCY**
  Observability transforms raw technical data into actionable insights, bridging the gap between technical performance and financial strategy. Organizations can achieve transparency by aligning cloud expenditures with business outcomes.
- **REDUCED FIREFIGHTING**
  By focusing on data transformation and predictive analysis, observability minimizes time spent on reactive firefighting, allowing teams to focus on innovation.
- **INCREASED UPTIME AND RELIABILITY**
  Improving uptime and reliability translates into significant financial savings. How much? According to the New Relic 2024 *Observability Forecast*, ***the median ROI for an observability solution is 4x. That translates into organizations receiving $4 in value for every $1 spent on observability.***

OBSERVABILITY BRINGS METHOD TO THE MADNESS

SIMPLIFICATION

Fewer tools and streamlined processes.

VISIBILITY

A comprehensive view of customer journeys and technology spending.

RELIABILITY

Reduced incidents and faster resolution times.

PUTTING THE "SMART" IN SEEING

Think of the dashboard in a smart car. It does far more than the "warning light" on older models – which tells you that there is a problem but does not specify what the problem is. The smart car, however, has sensors everywhere, monitoring speed, fuel, engine health, and surroundings. Most importantly, a smart car looks at the information holistically, reporting on whole health. Plus, the dashboard gives you real-time insights, predictive alerts, and troubleshooting assistance.

Comprehensive visibility into your system works in much the same way. It plays a critical role in enabling proactive, informed, and efficient cloud operations management.

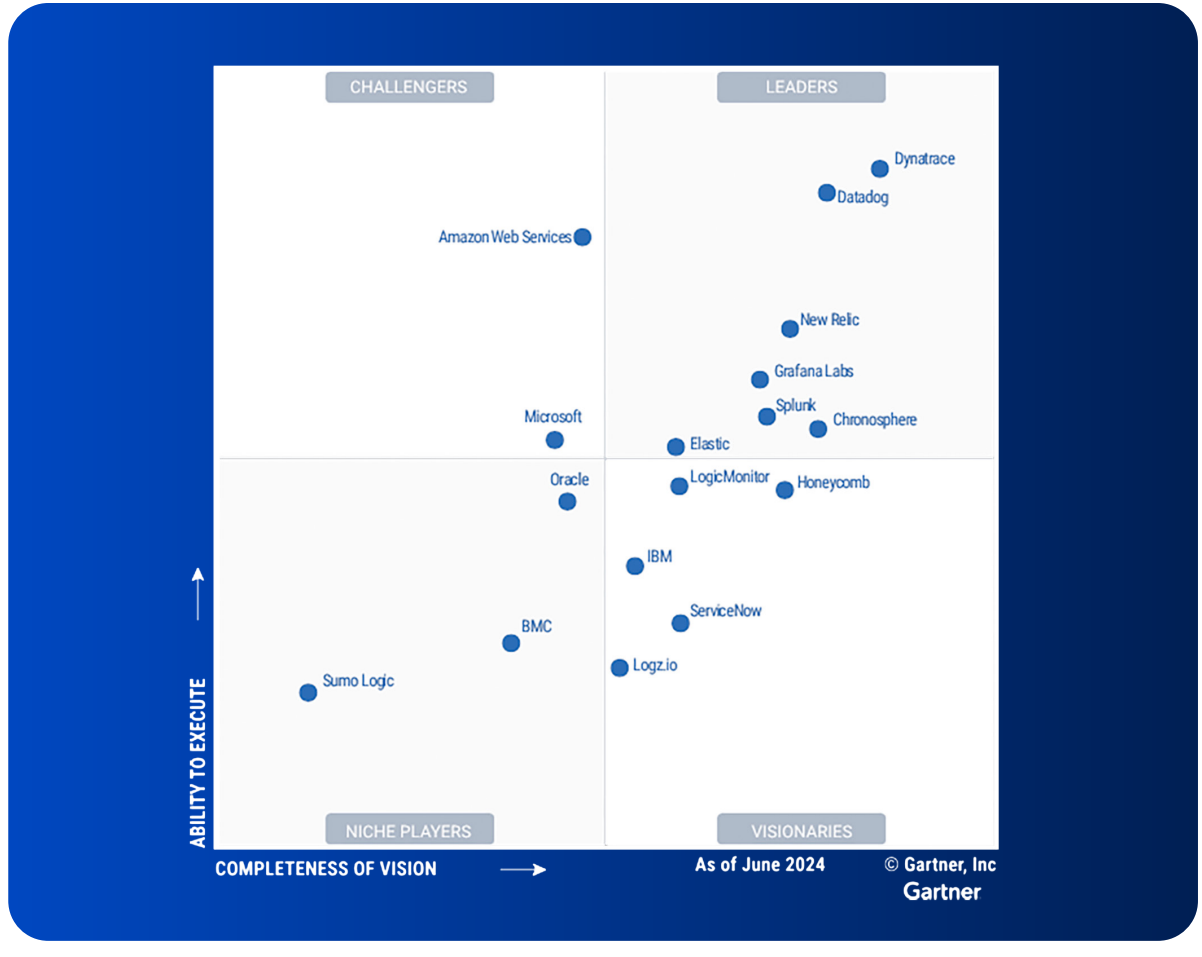
However, more information doesn't necessarily mean a more effective system. In fact, the amount of noise generated by a system can sometimes make it harder to take note of key health signals across your environment. True observability calls for the right data at the right time for the right consumer to make the right decisions. That's putting the "smart" in seeing.

THE CORE PRINCIPLES OF OBSERVABILITY

When undertaking observability initiatives, it can get complex, fast. As with any technology solution, there is no shortage of observability vendors and solutions. Each provides core observability functionality and benefits to their customer. See the latest from the 2024 Gartner Magic Quadrant for Observability Platforms.

Before selecting an observability solution, teams need to do some work to align on goals, key performance indications, and outline how progress and data will be shared to optimize and action it. It's also important to evaluate overall scalability and cost of a solution. Nothing stays the same anymore and high-performing teams need to future-proof their organizations now.

Finally, look at the types of analysis offered by each solution. This will impact the people and process needed to leverage the solution as it may mean you need to outsource services, implementation help, or invest in training for your teams. The technology is what powers a solution, but it is only one part of the puzzle.



Think about the following key areas when selecting your observability platform:

ALIGNING ON COMMON GOALS

- Improving service availability, performance, and reliability.
- Reducing operational costs and risks while enhancing efficiency.
- Boosting customer satisfaction and retention.
- Driving business growth.

DEFINING KEY PERFORMANCE INDICATORS (KPIS)

- **SERVICE-LEVEL OBJECTIVES, INDICATORS, AND AGREEMENTS** (SLOs, SLIs, and SLAs)
- **INCIDENT METRICS:** Mean Time to Detect (MTTD) and Mean Time to Resolve (MTTR).
- **FINANCIAL METRICS:** Cost to Serve, OPEX, and CAPEX.
- **CUSTOMER METRICS:** CSAT (Customer Satisfaction), NPS (Net Promoter Score), and LTCV (Lifetime Customer Value).
- **OPERATIONAL METRICS:** Deployment success rates and error frequencies.

COMMUNICATING CURRENT AND FUTURE STATES

- Visualizing and democratizing the current system state.
- Quantifying negative impacts and articulating potential improvements.
- Demonstrating value through tracked goal attainment and trends.

HOW OBSERVABILITY WORKS

Observability solutions look at three core pillars to measure and track across systems. These include traces, metrics, and logs.

TRACES track events as they move through a system, offering a detailed view of how different components interact. They help pinpoint latency bottlenecks, identify service dependencies, and uncover where issues may arise within complex workflows.

METRICS provide quantitative data that represents the system's performance and health over time. Examples include CPU utilization, memory consumption, network throughput, and request latency. Metrics are instrumental in identifying trends, setting baselines, and triggering alerts when predefined thresholds are exceeded.

LOGS capture detailed, timestamped records of events, offering granular insights into specific actions or errors occurring within the system. Logs are invaluable for debugging, auditing, and understanding the sequence of events leading to an issue.

True observability lets you go beyond reactive monitoring. It provides a holistic understanding of both high-level system behavior and low-level details – so you can identify the root causes of issues, predict future problems, and provide insights into the "why" behind system behaviors. This leads to better-informed decisions and proactive system improvements.

A DEEP DIVE INTO THE OBSERVABILITY ADVANTAGE

REAL-TIME TELEMETRY

Modern observability tools offer granular insights into infrastructure performance, resource consumption, and application behaviors. By ingesting telemetry from diverse sources, teams gain a unified view of their cloud ecosystem, enabling better decision-making.

ADVANCED CORRELATION AND ANALYSIS

Observability tools utilize AI-driven algorithms to correlate events across system layers. This helps pinpoint root causes of performance issues, detect anomalies, and predict potential threats.

COST OPTIMIZATION

Granular cost allocation enables organizations to manage their cloud expenditures effectively. Observability tools identify cost-saving opportunities and optimize resource allocation, ensuring financial agility.

BUSINESS-ALIGNED KPIS AND DATA STORYTELLING

Observability platforms translate technical insights into financial terms. They provide interactive visualizations that foster alignment and collaboration between technical and non-technical stakeholders.

TAKING A FULL STACK APPROACH

INSTRUMENTATION

- Collect data from end-user devices.
- Use automatic instrumentation to eliminate blind spots.
- Consolidate data into a single repository for better analysis.
- Reduce developer toil through automation tools like CLI-based dashboards and alerts.

ANALYSIS

- Drill down into root causes using integrated workflows.
- Build tailored visualizations for specific audiences, ensuring relevance.
- Bridge gaps between infrastructure, application performance management (APM), and logging systems.

ACTION

- Customize dashboards to align with business needs.
- Correlate related alerts to reduce noise and focus on critical issues.
- Streamline alerting and resolution workflows for faster responses

IMPLEMENTING BEST-IN-CLASS OBSERVABILITY AT SCALE

KEY MILESTONES

Establish a single pane of glass for unified monitoring with your observability solution. Next, consolidate redundant tooling and fill visibility gaps. Third, optimize alerting to reduce noise and improve detection times. And lastly, create dashboards that link technical performance to business outcomes.

Think about observability in steps:

IMPLEMENT ORGANIZATIONAL CONSISTENCY

Adopting best-in-class observability practices requires robust processes, documentation, and enablement. These improvements foster enterprise-wide adoption and consistency.

DRIVE CULTURAL ADOPTION

Deep training and documentation ensure that teams across the organization embrace observability practices, enabling a shift from reactive to proactive mindsets.

LEVERAGE COST AND PERFORMANCE BENEFITS

Observability reduces vendor costs, streamlines resource allocation and improves overall system performance. This enhances business outcomes including the ability to make data-driven decisions, improve the user experience, and ultimately, increase customer satisfaction.

Observability practices are not implemented and done. It's an evolution to reach, maintain and optimize observability. There are steps to take to reach levels in the maturity model to help guide you as your organization progresses. However, starting with key milestones puts you on the right path to success at any stage.

WHY WORK WITH CLOUDEQ FOR OBSERVABILITY?

Clients often seek our expertise when they have invested in observability tools but lack operational expertise. Or when assessments (such as AWS Well-Architected Reviews) reveal observability gaps.

Here's where we shine:

- **BEYOND THE TECHNOLOGY:**
  With a high tech, high touch experience, cloudEQ brings deeply skilled technicians, optimized processes, and operational excellence.
- **CUSTOMER SUCCESS FOCUS:**
  Genuine care for client outcomes and partner growth.
- **CONCISE, ACTIONABLE AND OUTCOME DRIVEN GUIDANCE:**
  Hands-on execution of best practices for efficiency and effectiveness.
- **PROVEN TRACK RECORD:**
  Over 45,000 of observability experience with 15,000 hours of experience with Fortune 10 enterprises.

cloudEQ combines technical mastery with a client-first philosophy, ensuring organizations achieve true operational maturity and success in their observability journey. We go beyond the technology, always.

Learn more about how cloudEQ can help you achieve your *observability goals here.*