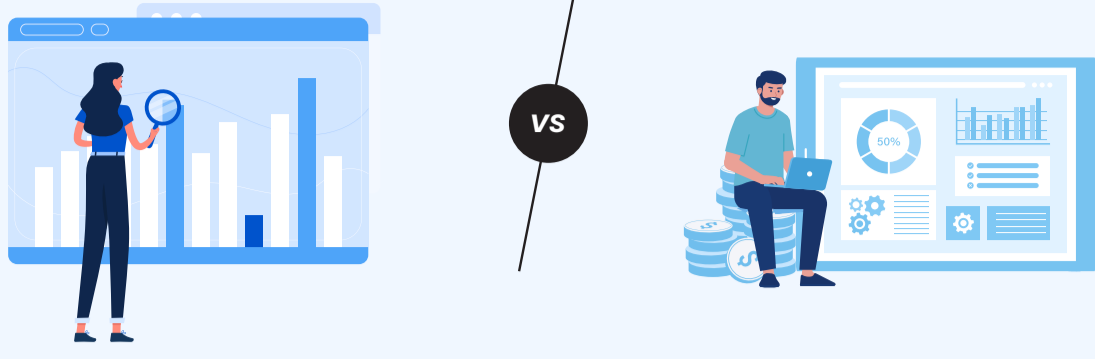


# Data Observability vs Data Monitoring

## What's the Difference and Why It Matters?



In today's complex cloud-native and data-driven environments, ensuring system reliability is more than just uptime—it's about deep visibility. While monitoring tells you when something breaks, observability helps you understand why.

This infographic breaks down the difference—and how both can work together to boost your system health and performance.

### Observability: A Brief Introduction

**Data Observability** is the ability to understand the internal state of a system by analyzing the data it produces—like logs, metrics, traces, and events.



**Focus:** Root cause analysis and system behavior

**Goal:** Enable proactive issue detection and faster troubleshooting

**Key tools:** Distributed tracing, anomaly detection, dependency maps

**63% of organizations say observability improves mean time to resolution (MTTR) by over 50%.**

### Monitoring: A Brief Introduction

Monitoring is the practice of collecting and analyzing predefined metrics to track system performance and alert on issues.



**Focus:** Performance tracking and alerting

**Goal:** Identify known issues using thresholds

**Key tools:** Dashboards, alerts, uptime trackers

**73% of teams rely on basic monitoring, but only 29% say it provides enough context to resolve incidents quickly.**

### Monitoring: A Brief Introduction

Understanding the core differences between monitoring and observability is key to building resilient, high-performing systems. While they both aim to ensure reliability, their approach, depth, and purpose are quite different.

#### Monitoring

#### Observability

##### Purpose

Is the system working?

Why is the system not working as expected?

##### Data Scope

Relies on predefined metrics and logs set up in advance

Leverages comprehensive telemetry: metrics, logs, traces (MELT)

##### Issue Detection

Detects known issues using threshold-based alerts

Uncovers unknown issues through deep analysis of system behavior

##### Root Cause Analysis

Provides limited context—needs human digging for answers

Enables faster root cause detection using correlated and contextual data

##### Visibility

Offers a narrow view—mostly surface-level insights

Offers a holistic view across all services and dependencies

##### Approach

**Reactive:**  
Tells you when something breaks

**Proactive:**  
Helps prevent problems before they impact the user

##### Alerts

Static alerts based on fixed thresholds (e.g., CPU > 90%)

Dynamic alerts based on behavior patterns and anomalies

#### In short:

**Monitoring tells you when the house is on fire. Observability tells you why it caught fire—and helps you design systems that don't.**

### How Do Monitoring and Observability Work Together?

They're not rivals—just different roles in the same team.



Monitoring spots what went wrong

Observability helps you understand why it happened

Together, they enable faster resolution, higher uptime, and better digital experiences

**Companies with mature observability practices experience 68% fewer critical outages annually.**

## Ready to Move from Reactive to Proactive?

Let Credencys help you build end-to-end data observability solutions that reduce downtime, boost performance, and ensure data trust.

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