# chronosphere

Revolutionizing Observability with Chronosphere:

A Comparative Analysis with Datadog

Executive Summary

In the rapidly evolving landscape of observability, organizations often face challenges with high data volumes, cost unpredictability, and limited control over data. Datadog, while comprehensive, can fall short in addressing these issues effectively. Chronosphere emerges as a powerful alternative, with its unique Control Plane capabilities and its predictable and fair pricing philosophy.

This ebook provides an in-depth comparison with Datadog, shedding light on the tangible benefits and significant improvements that Chronosphere offers. Through practical use cases and testimonials, it demonstrates the superior value we bring to technical decision-makers across different roles, underscoring the compelling case for choosing Chronosphere.
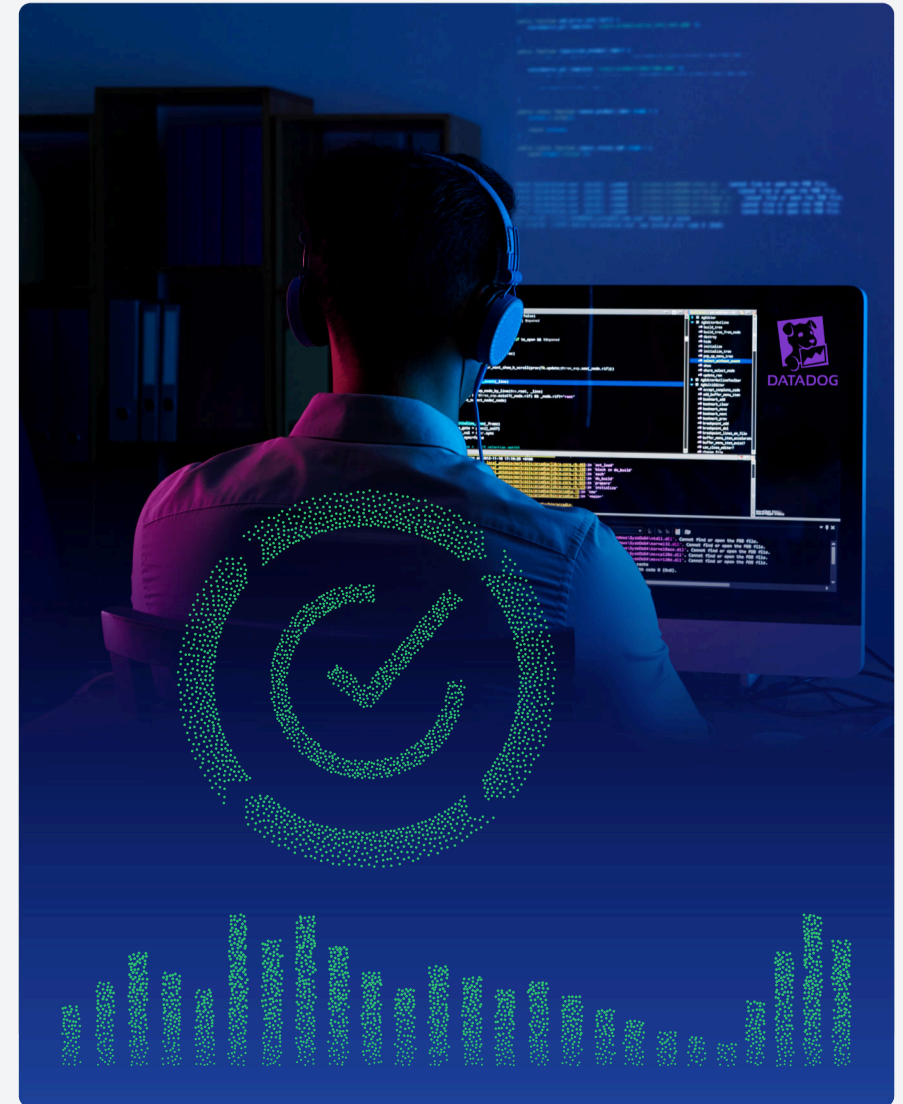
Cloud native observability **as a cornerstone of modern infrastructure management**

As the complexity of distributed systems grows, the ability to monitor, understand, and optimize these systems becomes increasingly critical. Traditional observability platforms, while providing a significant level of insight, often come with their unique challenges.

Data volume management, cost unpredictability, and limited features for controlling and optimizing observability data can often turn into stumbling blocks. These challenges are particularly prominent with widely-used platforms such as Datadog. While Datadog offers a range of robust products for observability, certain areas leave room for improvement.

This is where Chronosphere offers an innovative solution. Built on a unique Observability Data Optimization Cycle, Chronosphere provides a comprehensive approach to observability. It not only mitigates the challenges posed by traditional observability platforms, but also optimizes data management, improves cost predictability, and offers robust data management and optimization.

This ebook provides a thorough examination of some of the capabilities and benefits of Chronosphere and how they can address the challenges organizations face with Datadog. By diving deep into some of the features of Chronosphere's offering and comparing them directly with Datadog's capabilities, it will provide a clear understanding of the value that Chronosphere brings to the table.

DATA VOLUME MANAGEMENT, COST UNPREDICTABILITY, AND LIMITED FEATURES FOR CONTROLLING AND OPTIMIZING OBSERVABILITY DATA ARE COMMON CHALLENGES WITH TRADITIONAL OBSERVABILITY PLATFORMS LIKE DATADOG.

The unresolved challenges of Datadog

As businesses evolve to cloud native, their systems grow increasingly complex and the need for effective observability becomes critical. While Datadog is a notable player in the space, users often encounter challenges that can impede their ability to effectively manage and understand their systems.

High data volumes

As systems grow in complexity, the amount of data they generate can skyrocket. Datadog users often find themselves dealing with an overwhelming volume of data, which can make it difficult to identify and focus on the most crucial metrics. This can lead to longer troubleshooting times, missed issues, and ultimately, a lower quality of service for end-users.

Cost unpredictability

One common grievance with Datadog is the unpredictability of costs due to its complex pricing. When data volumes surge or a spike in cardinality occurs, users can find themselves facing unexpected and substantial overages. This unpredictability can make budgeting difficult and put significant financial pressure on organizations, especially those operating on a tighter budget or at a large scale.

Handling high cardinality

With Datadog, high cardinality - the number of unique metric name and tag combinations - can lead to exorbitant costs and performance issues. High cardinality is often necessary for modern microservices-based architectures, but managing it effectively within Datadog can be a real challenge. This can result in users having to make trade-offs between the level of detail they need and the costs they can afford.

Limited team-based control

Datadog's platform does not inherently support decentralized team-based control over data optimization. This can make it difficult for individual teams to manage and optimize their own observability data, potentially leading to inefficiencies and a lack of accountability.

Time consuming metric-reduction projects

Due to cost concerns or capacity limits, Datadog users often have to invest significant time in metrics-reduction projects. This can take developers' time away from more strategic initiatives, slowing down the pace of innovation and product improvement.

Dashboard sprawl

As teams grow and more services are monitored, the number of dashboards in Datadog can multiply rapidly, leading to what's known as "dashboard sprawl." This can make it difficult for users to keep track of important metrics and dashboards. Often, users end up spending more time managing and navigating through countless dashboards instead of focusing on resolving performance issues. Dashboard sprawl can also lead to redundant or inconsistent data, causing confusion and reducing overall efficiency.

In the following sections, we'll illustrate how Chronosphere provides a solution to these challenges, making it a compelling alternative for companies of all sizes.

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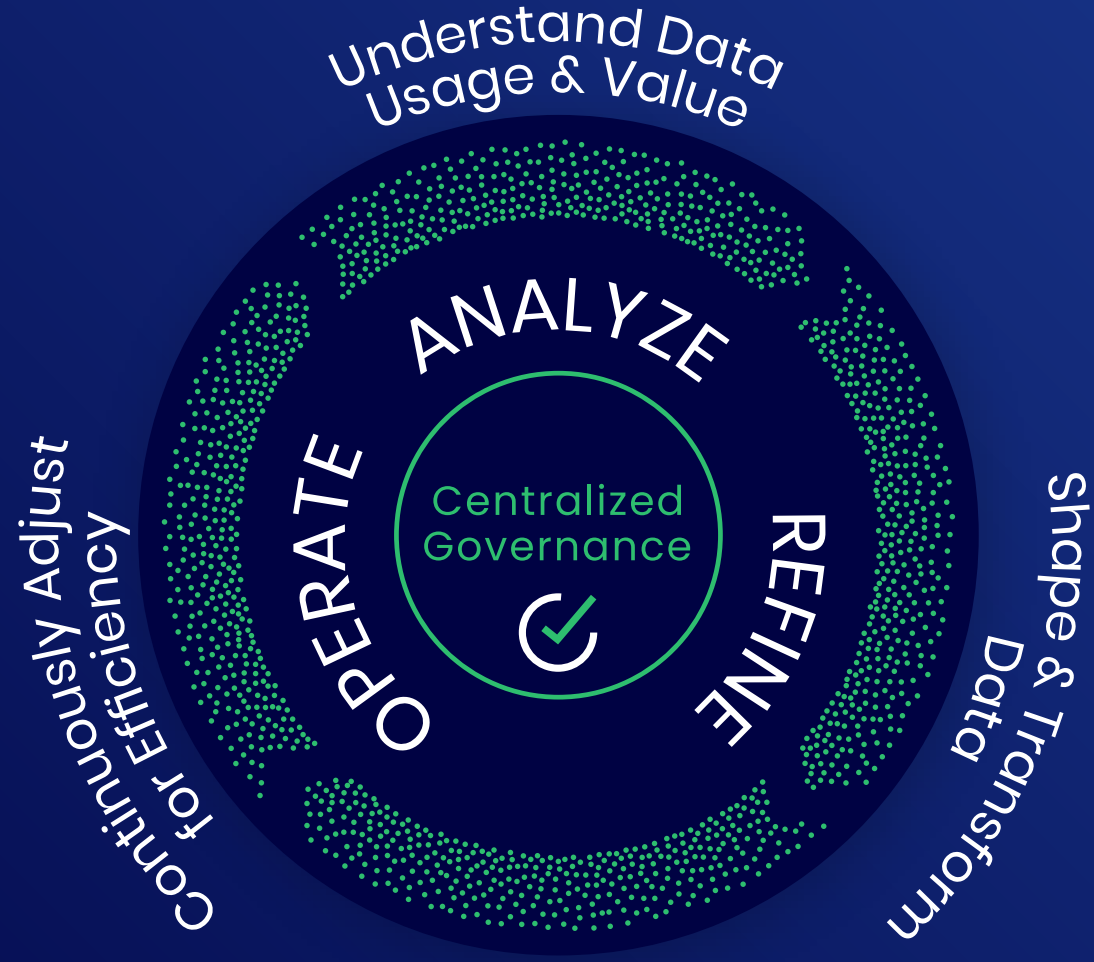
The Chronosphere Control Plane:
Mastering observability optimization

At the core of Chronosphere's modern approach to observability is the Control Plane. It's designed to tackle the challenges faced in traditional observability platforms like Datadog, offering a transformative solution for cloud native environments. Built upon the Observability Data Optimization Cycle, the Control Plane provides four interconnected components: Operate, Analyze, Refine, and Centralized Governance.

Operate focuses on efficiency. It provides platform-generated optimization opportunities and mechanisms like the Query Accelerator and Scheduler to ensure fast and effective queries. This leads to quicker problem-solving and time savings, improving engineering productivity.

Analyze lets organizations understand their observability data's value and cost in real-time. With tools like Traffic Analyzer and Usage Analyzer, you can identify high cardinality metrics, understand data usage, and determine the utility of each metric, helping you make more informed decisions about your observability practices.

The **Refine** aspect empowers teams to transform their data based on need, context, and utility. Dynamic shaping policies can be implemented and adjusted on the fly to reduce noise, improve data usefulness, and control costs.

Finally, **Centralized Governance** brings accountability and control to the hands of teams. By setting quotas and providing ownership of their data to teams, it helps contain cardinality, control long-term data growth, and avoid budget overruns.

Overall, Chronosphere is designed to reduce observability data volumes, control costs, and improve troubleshooting efficiency. Very importantly, Chronosphere brings predictability and eliminates surprise overages. As we proceed, we'll explore how each component effectively addresses the challenges faced with Datadog and demonstrates the unique value it brings to technical decision makers.

Solution Mapping with Chronosphere

In this section, we'll walk through how Chronosphere's Control Plane directly addresses the challenges identified with Datadog:

Managing High Data Volumes

Chronosphere's Control Plane enables a reduction of observability data volumes by 60% or more on average. Its Refine component applies shaping policies to eliminate data that isn't used or doesn't deliver value, making it easier to find meaningful insights amidst the data.

Cost Predictability

The Centralized Governance component of the Control Plane assigns quotas to teams or services, preventing unexpected overages and keeping costs predictable. The Analyze component provides real-time understanding of data usage and cost, allowing for more precise budget management.

Handling High Cardinality

Chronosphere's Traffic Analyzer identifies high cardinality metrics, and shaping policies in the Refine stage allow for efficient management of these metrics without inflating costs. This ensures high cardinality doesn't impede effective data analysis or add unnecessary expense.

Team-based Control

Chronosphere empowers teams to manage their own data. The Centralized Governance feature gives teams ownership and control of their data. The Analyze feature allows teams to understand the utility of their data, encouraging smarter decisions on data optimization.

Dashboard Sprawl

With its Operate feature, Chronosphere helps manage dashboard efficiency. The Query Accelerator speeds up slow dashboard queries by pre-aggregating data, reducing the need for multiple dashboards for different query speeds. Also, the Control Plane's centralized approach helps curb the sprawl by ensuring only relevant and valuable data is retained and visualized.

Migrating
from Datadog to Chronosphere

Transitioning from one observability platform to another can appear daunting. However, Chronosphere makes this process smooth and efficient. **The Quick Start program** is specifically designed to guide users through a step-by-step technical migration process, including data ingestion, control, visualization, and operational setup. Additionally, it provides comprehensive training resources and continual support, ensuring users quickly master the Chronosphere platform.

A testament to Quick Start's effectiveness is our recent success story with mParticle. As a fast-growing B2B SaaS company, mParticle sought a more cost-effective observability solution. Leveraging Chronosphere, they successfully migrated from Datadog in less than five weeks, transitioning more than 500 dashboards and alerts and 150 active users. Impressively, they cut their observability costs by 80%, showcasing how Chronosphere can deliver superior observability optimization without compromise on cost. With Quick Start, migrating from Datadog to Chronosphere is streamlined and efficient, allowing you to focus on harnessing the full potential of cloud native observability.
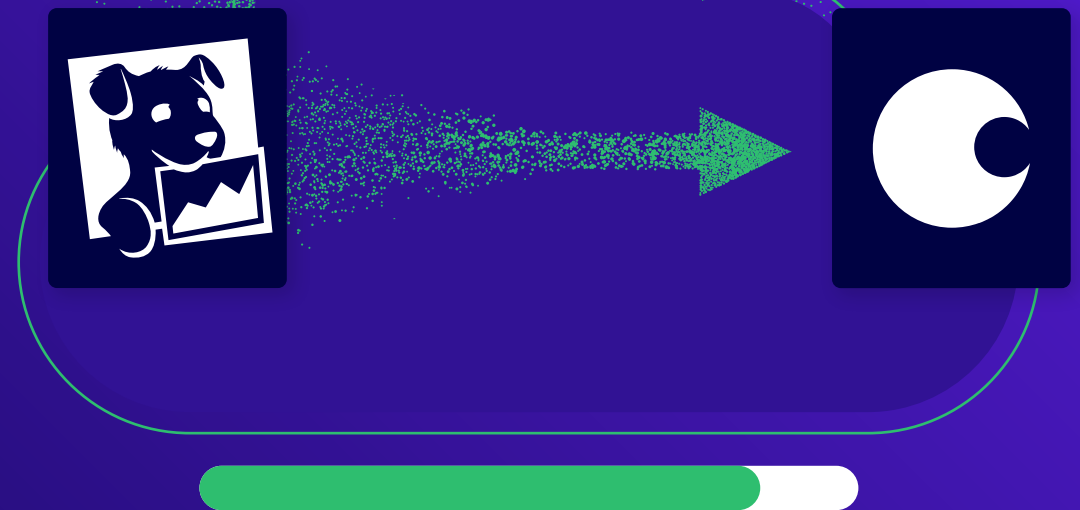
A New Era of Observability
with Chronosphere

Navigating the sea of cloud native observability can be an arduous task for many organizations, but it doesn't have to be that way. Chronosphere introduces a transformative approach that directly tackles the challenges often encountered with platforms like Datadog. From managing high data volumes, providing cost predictability, and handling high cardinality to enabling team-based control and eliminating dashboard and data sprawl, Chronosphere emerges as a more efficient, effective, and manageable platform for observability.

Empowered with the knowledge that observability can be significantly optimized without compromising on cost or performance, organizations are in a powerful position to make a pivotal shift. By harnessing the power of Chronosphere, they can elevate their observability strategies, foster efficient collaboration, and drive measurable impact for their organizations.

> **Don't let your observability practices be riddled with inefficiency, high costs, or complexity. Join the growing ranks of forward-thinking businesses like mParticle, Doordash, and Affirm who have embraced the future of cloud native observability with Chronosphere.**

Learn more and request a demo
at **chronosphere.io**

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