AXIOM

#SOLUTION_BRIEF (PDF)

From CloudWatch Logs to Axiom: Slash costs and reach answers faster

Switching from Amazon CloudWatch Logs to Axiom slashes costs and speeds up the path to actionable insights.

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Amazon CloudWatch Logs is like a digital watchdog, stashing away log files from EC2 instances, CloudTrail, and other sources. Engineering teams using AWS often start with CloudWatch because it's a breeze to set up and integrates well with the wider AWS ecosystem. But, as log volumes grow, CloudWatch can quickly drain your budget. Worse, the search and analytics experience is basic, especially when navigating logs from multiple AWS accounts or a variety of cloud platforms.

Why Amazon CloudWatch Logs falls short

High and unpredictable costs: The first reason for rethinking Amazon CloudWatch Logs is usually the cost. CloudWatch charges by GB ingested, stored, and analyzed. Logs in the Standard tier start at $0.50 per GB, not including storage and analysis costs.

Comparing ingestion and storage alone for 5 TB of log data per day, CloudWatch is 3.5x more expensive ($79.5K/mo) than Axiom ($22.5K/mo).

Log management price comparison USD for 5 TB of log data per day:

	Axiom	Amazon CloudWatch
Ingest cost	$0.15/GB * 5000 GB = $750	$0.50/GB *5000 GB = $2,500
Retention cost	$0.00	$0.03/GB *5000 GB = $150
Standard retention	95 days	30 days
Total daily cost	$750	$2,650
Total monthly cost	$22,500	$79,500

Beyond ingest and storage, extra fees are applied for dashboards ($3.00 each), log metrics (starting at $0.30 per metric), and alarms (from $0.10 per alarm metric). With so many variables, estimating monthly charges gets tricky, and many CloudWatch users realize they could save big by switching to Axiom, getting more fidelity and analysis power for less cost.

Clunky analytics workflows: Once logs are stored in CloudWatch, teams have to sift through log groups and log streams to find insights. Log streams, sequences of log events from the same source, get split once they hit a volume threshold, which creates painfully slow and error-prone workflows.

CloudWatch Logs Insights offers some relief with multi-log group search, but querying large datasets, even those just over tens of GBs, is brutally slow. Plus, the query commands are limited, with only a dozen or so options beyond basic arithmetic and comparison operations. This significantly reduces the value of the log data goldmine, leading to missed opportunities for critical issue mitigation and costly downtime.

Replacing Amazon CloudWatch Logs with Axiom

"We chose Axiom because it's the only product out there that allows me to affordably see all my logs for a year. And it's very good at that."

Andres Hernandez
Co-founder & CTO

hapn

Switching from Amazon CloudWatch Logs to Axiom slashes costs and speeds up the path to actionable insights. This strategy is well-proven by rapidly growing companies like Hapn, where the AWS CloudWatch footprint was greater than the rest of their cloud bill combined.

Hapn's event-driven architecture generates nearly 100 TB of logs each month, mostly from AWS Lambda. Initially, using CloudWatch made sense since Lambda functions can capture logs for all requests and send them to CloudWatch Logs. However, costs quickly spiralled out of control.

AWS cloud billing expert Corey Quinn had a solution: adopt Axiom. This cut costs immediately, with none of the tricks other vendors use, like tiered storage and rehydration charges.

How? Axiom's unique architecture is designed for timestamped event data. It has a smart, battle-tested router for ingest that avoids the bloat of Kafka. It uses hot object storage exclusively, ditching SSDs, and employs a block format that compresses data by over 35x on average. That's like fitting a truck-load of data into the glove box of a compact car—a reduction north of 97%. Best of all, queries run on serverless functions, provisioned only when needed, eliminating outdated and long-running query nodes. This is a conveniently managed platform with all the smartest optimizations baked in.

Even before considering the cost of CloudWatch dashboards, metrics, and alarms (which come included with an Axiom plan), using Axiom was 70% cheaper for Hapn than CloudWatch Logs. Yes, seventy.

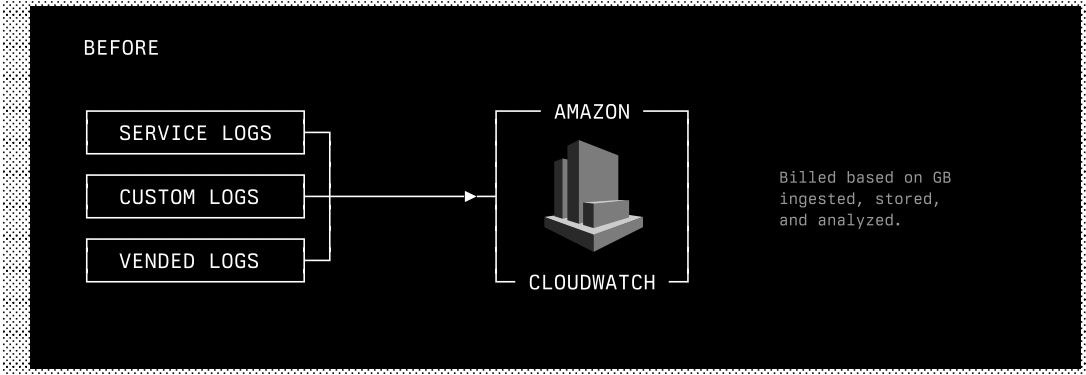
The benefits of switching to Axiom go beyond cost savings. Axiom collects events from all kinds of apps, infrastructure, and cloud service providers, creating a single source of truth for growing and changing environments.

Making the transition smooth. Hapn's co-founder and CTO, Andres Hernandez, remarked, "Going from CloudWatch to Axiom feels very natural. With APL for queries, it's the same muscle memory, the same workflow." Teams move from the limited functions in CloudWatch Logs Insights to a rich language in APL, enabling much deeper analysis and faster insights.

Seamlessly transitioning from CloudWatch Logs to Axiom

Amazon CloudWatch Logs captures three main types of logs:

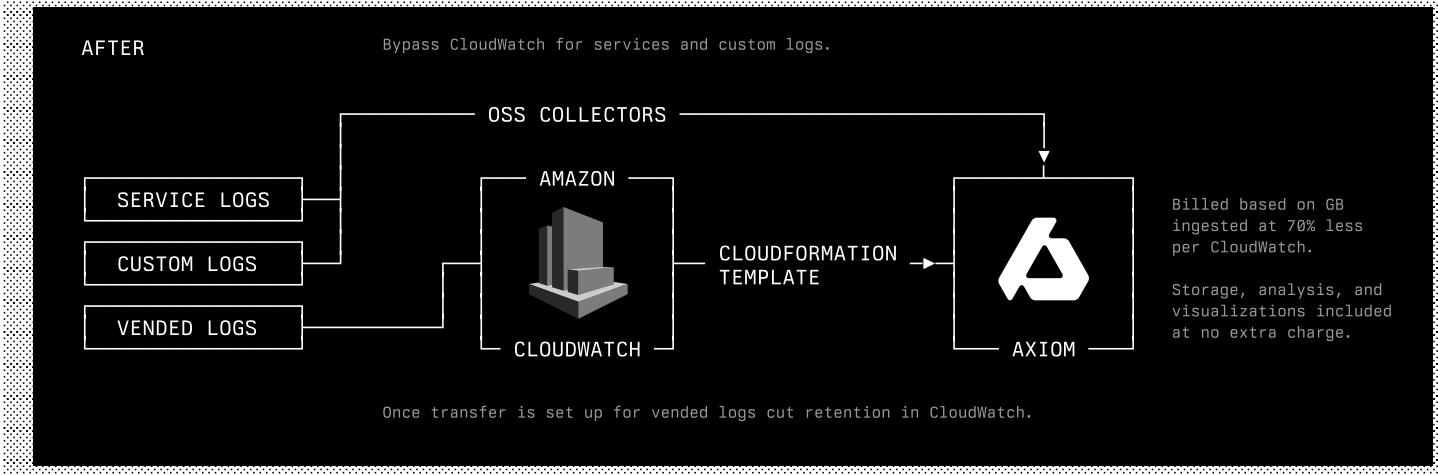
1. **Service logs:** More than 30 AWS services, including Amazon API Gateway, AWS Lambda, AWS CloudTrail, can send logs to CloudWatch.
2. **Vended logs:** Automatically published by certain AWS services like Amazon VPC and Amazon Route 53.
3. **Custom logs:** Logs from your own applications, on-premise resources, and other clouds.



For selectively-enabled service logs and custom logs, you can skip CloudWatch altogether by pointing various open-source collectors like Fluent Bit, Fluentd and Vector at Axiom. Here's a table with examples of collectors that can be used for a variety of popular AWS services:

AWS service	Collector option	Sample use case
Amazon ECS	Fluent Bit	Collecting and aggregating application logs for performance monitoring and troubleshooting.
Amazon RDS	Fluentd plugin	Capturing database query logs for auditing and optimization analysis.
Amazon S3	Vector	Aggregating access logs for security analysis and usage reporting.
Amazon ECS	FireLens	Collecting container logs for centralized monitoring and alerting.
AWS Lambda	Axiom's AWS Lambda Extension	Capturing function execution logs for debugging and performance analysis.

For vended logs, Axiom provides a handy CloudFormation template to transfer logs from CloudWatch to Axiom. Once set up, you can shorten the retention period for these logs to cut CloudWatch costs even more.



A proven path to CloudWatch Logs cost reduction and richer insights

Amazon CloudWatch Logs is an easy starting point for learning from AWS service telemetry. However, as data volumes increase, costs can skyrocket, and during crucial troubleshooting moments, the experience often disappoints.

Switching to Axiom can save you 70% or more on your CloudWatch Logs bill, freeing up your budget to capture events from more services for better visibility or to invest in other important initiatives. With Axiom, you not only save money but also gain a more powerful, user-friendly platform for deeper insights and faster problem-solving that leads to better customer outcomes.

About Axiom

Axiom is a cloud-native data platform tuned for timestamped events with collection, streaming, search, reporting, monitoring, alerting, and data management capabilities. Built from the ground up, Axiom delivers performance and scalability at a lower cost. Today, thousands of companies — from ambitious startups to the world's largest enterprises — trust Axiom to make sense of event data for engineering, security, and operational use cases.

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Learn more at axiom.co or get in touch with the team at sales@axiom.co.