



Scaling Smarter Cloud Cost Optimization Success

Professional Technology Consulting

The Origami Corporation

18.09.2025

Table of Contents

1

Tuning the Cloud for Peak Efficiency: 40% Cost Reduction for an Automotive Innovator

1

1.1

Executive Summary

1

1.2

The Challenge

1

1.3

Our Approach

2

1.4

Implementation

2

1.5

Results & Impact

4

1.6

Technologies & Services Used

5

1.7

Conclusion

5

About The Origami Corporation

1 Tuning the Cloud for Peak Efficiency: 40% Cost Reduction for an Automotive Innovator

1.1 Executive Summary

A fast-growing automotive client engaged us to uncover inefficiencies in their public cloud estate and implement a comprehensive cost optimization program—without sacrificing performance or reliability. Through a combined effort of cloud-migration modernization, DevSecOps outsourcing, and rigorous cloud-cost-optimization, we right-sized compute and databases, increased commitment discount coverage, automated resource scaling, and instituted FinOps governance. The result: a sustained 40% reduction in monthly cloud spend, stable p95 latency, and 99.95%+ service availability across key digital platforms powering connected-vehicle services and internal engineering workloads.

1.2 The Challenge

The client’s cloud usage had expanded rapidly alongside new digital offerings—vehicle telemetry processing, over-the-air update services, and internal analytics. While revenue and usage grew, so did cloud costs and operational complexity. Key challenges included:

- Low compute and database utilization due to conservative provisioning and static autoscaling thresholds
- Minimal coverage of reserved instances/commitment discounts leading to high on-demand rates
- Always-on non-production environments inflating monthly spend

- Inconsistent tagging, fragmented accounts/subscriptions, and limited cost accountability
- Data egress inefficiencies between regions and services
- Gaps in CI/CD security and infrastructure governance as teams scaled
- Limited visibility into cost per business unit, product feature, or workload

The business imperative was clear: materially reduce cost while maintaining strict performance SLOs for customer-facing applications and avoiding any disruption to production.

1.3 Our Approach

We brought a structured, outcomes-first approach that balanced financial, operational, and security goals:

- FinOps-led discovery to baseline costs, utilization, and unit economics (e.g., cost per API call/vehicle)
- Rapid “no-regret” optimization wins followed by architectural improvements
- Targeted cloud migration to a standardized landing zone to improve governance and cost control
- DevSecOps outsourcing to accelerate secure automation, CI/CD hardening, and policy enforcement
- Data-driven rightsizing and commitment management, backed by observability and budgets
- Automation-first scaling to align capacity to demand across compute, containers, and databases

Success metrics included monthly cost reduction, RI/commitment coverage, utilization improvements, change lead time, and adherence to performance SLOs.

1.4 Implementation

1) Discovery, Baseline, and KPIs

- Implemented a consistent tagging policy (cost center, environment, application, owner) across accounts and services.
- Created FinOps dashboards for cost allocation, anomaly detection, and unit cost (cost per 1,000 API calls and per connected vehicle).
- Established performance guardrails: p95 latency, error rate, and availability targets, ensuring optimizations never compromised SLOs.

2) Landing Zone and Targeted Cloud Migration

- Standardized a multi-account/multi-subscription landing zone with hub-and-spoke networking, centralized identity, logging, and security.

- Migrated selected dev/test and analytics workloads into the landing zone to consolidate usage and apply governance policies.
- Codified infrastructure with Terraform to enforce consistency, enable repeatability, and support policy-as-code.

3) Rightsizing and Modernization

- Analyzed 90 days of utilization metrics to rightsize over-provisioned VMs and managed databases (compute, memory, IOPS).
- Moved suitable services to containerized workloads on a managed Kubernetes service, improving bin-packing and reducing VM fragmentation.
- Tuned database instance classes, enabled storage autoscaling, and introduced connection pooling to reduce idle overhead.

4) Commitment Strategy and Purchasing

- Modeled workload steadiness and purchase horizons to increase commitment coverage (e.g., reserved instances/savings plans) for base-load compute and databases.
- Staggered commitments across families and terms to balance savings with flexibility.
- Automated coverage monitoring to maintain optimal commitment levels as workloads evolved.

5) Automation of Scaling and Scheduling

- Implemented horizontal pod autoscaling and cluster autoscaler for containerized services, aligning capacity with real-time demand.
- Introduced predictive and scheduled scaling for batch and peak-hour workloads.
- Automated start/stop schedules for non-production environments, achieving significant off-hours savings without impacting developer velocity.

6) Storage and Data Transfer Optimization

- Enabled intelligent tiering and lifecycle policies for object storage; pruned snapshots with age and dependency checks.
- Reduced cross-region and NAT egress by using private endpoints and co-locating tightly coupled services.
- Implemented CDN caching for frequently accessed content to lower origin egress and improve latency.

7) DevSecOps Outsourcing and Governance

- Established CI/CD pipelines with integrated SAST/DAST, container image scanning, and software bill of materials (SBOM) generation.
- Deployed secrets management and enforced least-privilege IAM roles; introduced OPA-based policy-as-code for Terraform and Kubernetes manifests.

- Stood up golden base images and signed container images; added pre-deploy checks to prevent cost and security regressions.
- Created budgets, alerts, and change-approval workflows that included cost impact assessments prior to rollout.

8) Observability and Continuous Improvement

- Centralized logs, metrics, and traces; instrumented service-level indicators and error budgets to guard against performance regressions.
- Implemented automated cost anomaly alerts and monthly optimization reviews with product teams.
- Documented playbooks and transferred knowledge to client operations, with our team remaining on retainer for DevSecOps and FinOps support.

1.5 Results & Impact

- 40% reduction in monthly cloud spend sustained over three consecutive quarters.
- Commitment coverage increased from 18% to 72% for steady-state compute and database workloads, cutting on-demand exposure.
- Average compute utilization improved from 12–18% to 40–55% through right-sizing and container bin-packing.
- Non-production spend reduced by 65% during off-hours via environment scheduling and scale-to-zero patterns.
- Storage costs dropped 22% with lifecycle policies, snapshot hygiene, and intelligent tiering.
- Data transfer charges decreased 15% by leveraging private endpoints and optimizing service placement.
- Performance maintained: p95 latency unchanged for customer-facing APIs; availability at or above 99.95%.
- Security posture strengthened: 60% reduction in critical/high vulnerabilities surfaced in CI/CD within the first 90 days.
- Delivery velocity improved: 30% faster average lead time for changes through standardized pipelines and automation.
- Forecast accuracy improved: budget variance reduced to less than 5% through ongoing FinOps governance.

Beyond the quantitative results, the client gained clarity on unit economics and a repeatable governance model. Product owners now see cost per feature and environment in near real time, enabling informed tradeoffs between performance, resilience, and spend.

1.6 Technologies & Services Used

- Cloud platforms and services: virtual machines, managed Kubernetes, managed relational/document databases, object storage with lifecycle/tiers, CDN, autoscaling groups, private endpoints
- Infrastructure as Code: Terraform for landing zone, network, compute, and database provisioning
- CI/CD and DevSecOps: pipeline orchestration with integrated SAST/DAST, container image scanning, SBOM, policy-as-code (OPA), secrets management, signed images
- Observability: centralized logging, metrics, tracing, and APM dashboards; SLO/error budget monitoring
- FinOps and cost management: tagging standards, cost allocation dashboards, budgets and alerts, commitment management, anomaly detection
- Services provided by our team:
 - cloud-migration: standardized landing zone, phased workload moves, network and identity integration
 - devsecops-outsourcing: managed pipelines, security automation, governance, and ongoing platform reliability support
 - cloud-cost-optimization: rightsizing, scaling automation, commitment strategy, storage and data transfer optimization, FinOps operating model

1.7 Conclusion

By combining disciplined FinOps practices, targeted cloud migration into a governed landing zone, and a mature DevSecOps operating model, we delivered material cost savings without compromising performance or reliability. The client now operates a leaner, more secure cloud platform with automation that continuously aligns capacity to demand. With 40% lower monthly spend and improved engineering velocity, the organization is better positioned to scale connected-vehicle services and analytics initiatives while maintaining financial control.

This engagement established a repeatable playbook—assessment, governance, automation, and continuous optimization—that can be applied across additional portfolios. As a next step, we are partnering with the client to extend unit cost reporting to more product lines and to explore additional savings through serverless patterns and data platform consolidation.

About The Origami Corporation

The Origami Corporation is a leading technology consulting firm specializing in cloud migration, DevSecOps, cybersecurity, and digital transformation. We help organizations navigate complex technological challenges and achieve their business objectives through innovative, secure, and scalable solutions.

Connect With Us

Follow Us Online

LinkedIn: [The Origami Corporation](#)

Facebook: [@theorigamicorporation](#)

X (Twitter): [@OrigamiGlobal](#)

Telegram: [@theorigamicorporation](#)

Contact Information

Europe & Americas

- **Email:** office@theorigamicorporation.com
- **Phone:** +359 878 686 627

Asia-Pacific, Middle East & Africa (APMEA)

- **Email:** office.apmea@theorigamicorporation.com
- **Phone:** +41 77 924 2245

Ready to Get Started?

SCHEDULE A MEETING

Ready to transform your technology infrastructure? Contact us today to discuss how we can help your organization achieve similar results.