



# Cloud Native Upgrade drives Accelerated SaaS Market Success

## Case Study

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DIFFUSION DATA



partner  
network

SaaS Architecture  
Competency

# Cloud Native Upgrade Drives SaaS Success

DiffusionData's real-time data platform unlocks versatility, cuts costs – leveraging cross-platform microservices for both end-customer deployments and the internal product development team.

DIFFUSION DATA

## INDUSTRY

SaaS, IoT, Fintech,  
Retail, eGaming

## SOLUTION

Real-time  
Data Platform  
for B2B & B2C

## CLIENT

DiffusionData



CloudGeometry

# DiffusionData

Since the early days of Big Data, [DiffusionData](#)'s Diffusion intelligent data platform has delivered a powerful solution for real-time analytics and data integration. Across the landscape of rapidly digitizing businesses – ranging from the Internet of Things (IoT), telecom, edge computing, healthcare, energy, end-user messaging and more – the Diffusion platform simplifies the challenge of delivering data from diverse sources to the end users who need it. Its proprietary algorithms combine nimble streaming analytics with easy-to-build, flexible SDKs for the full range of client use cases, supporting enterprise and startups alike.

## The Challenge

Upon transitioning the Diffusion Cloud platform to a microservices architecture, DiffusionData experienced a rapidly broadening influx of feature requests and integration opportunities. Dockerizing the application infrastructure made “last mile” cloud-based service scalability easier to manage, crucial to the SaaS business opportunity.

However, these improvements exposed new bottlenecks in back-end data infrastructure dependencies, particularly in effectively maintaining security policies and existing customer hybrid datacenter integrations. Customers running portions of the Diffusion platform inside the datacenter were not able to leverage the latest DiffusionData product innovations. The Diffusion Cloud product development team faced an accelerating backlog that jeopardized crucial growth opportunities.

### Secure, Automated Key Management

Hashicorp Open Source Vault calls **AWS KMS**, completely automates secrets encryption and authentication processes requiring no human intervention.

### Better granular provisioning of EKS running on EC2

With application K8s pods provisioned via **Helm** distinct from infra **Terraform** modules, developers can more easily enable scaling and application state control.

### Maintain Docker compatibility with on-prem stacks

A single Infra as Code provisioning chain makes new application features compatible **even with non-AWS environments** for legacy customers.

# DiffusionData

## The Solution

As an [AWS SaaS Competency partner](#), CloudGeometry brought a wealth of experience working with startups to uplevel the software development pipeline in pursuit of more efficient release integration and deployment. Adopting the best practices of Infrastructure as Code (IaC), the CloudGeometry team built out complete, modularized provisioning logic, such as in certain cases moving to Helm from Terraform. Adding a single managed service for using Vault relieved application developers on the product team of the burden of redundant roles and policies management originally built into separate back-end data services. By automating all configuration and validation processes on one GitOps pipeline, the DevOps experts at CloudGeometry simplified release of new features to legacy data-center customers who had not been able to enjoy the latest/greatest Diffusion Cloud features.

## The Benefits

Because the Diffusion Cloud infrastructure already ran on AWS EKS, it could quickly leverage the new CI/CD chain as a single source of truth for deployment logic. It eliminated configuration errors between Dev, QA, Pre-prod, and production environments. Quickly put into use, it allowed customers to try new features sooner. Moreover, the product development team could confidently add features to both backend and frontend without having to take the time to debug dependencies previously exposed only at the end of the release process.

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# Technology Solutions & Services

to build, optimize and run your cloud software and operations.



cloudGeometry

## TECHNOLOGY SOLUTIONS

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### APPLICATION MODERNIZATION

Transform Legacy Systems for Future-Ready Innovation

### CLOUD COST MANAGEMENT

Optimize Cloud Spending for Maximum ROI and Efficiency

### AI & DATA

Achieve breakthrough automation and analytic insights via cutting-edge data strategies

### SECURITY AND COMPLIANCE

Reinforce your cloud infra, workload, operations, and development end-to-end

## FOUNDATION SERVICES

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### CLOUD INFRA & OPS

Robust Infrastructure Solutions for Seamless Operations

- DevOps as a Service
- Managed Cloud Operations
- Cloud Spend Optimization
- Resilience, Continuity & Backup
- AWS Well-Architected

### MODERNIZATION & MIGRATION

Smooth Transitions to Modern Architectures with Minimal Disruption

- Application Modernization
- Kubernetes Adoption
- AWS Database Migration
- Data Engineering Operations
- Data Integration
- Data Migration
- Cloud Migration & Adoption

## ADVANCED SERVICES

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### CLOUD-NATIVE DEVELOPMENT

Build Scalable, Resilient Applications with Cloud-Native Technologies

- CI/CD
- Multi- Platform App Design & Development
- Cloud-Ready Teams
- Enterprise SaaS Modernization
- Multi-Tenancy SaaS
- B2B Customer Success Engineering

### CLOUD-NATIVE OPERATIONS

Streamline Operations with Advanced Cloud-Native Practices

- Platform Engineering
- Workload Management
- Monitoring & Observability
- Infrastructure Management

## AI/ML & DATA SERVICES

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### AI/ML & DATA

Leverage Advanced Analytics and Machine Learning to achieve exponential acceleration in the ROI of your data assets

- AI/ML Engineering for Data Analytics
- Generative AI
- Traditional ML for Data Analytics
- AI/ML Development and and Data Science
- Data Engineering for MLOps

San Francisco

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London

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Prague

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Montenegro

Tel Aviv

**CloudGeometry** delivers expert technical services, helping our clients unlock the full potential of cloud-native open source tooling and commercial platform technologies.

With roots in Silicon Valley, we've seen firsthand what works (and what doesn't). Count on CloudGeometry to accelerate application modernization, Kubernetes adoption, developer enablement, secure multi-tenancy, AI/MLOps, DevOps automation and more.

- As **AWS Advanced Consulting** partners, our certified solution architects and platform engineers help address the range of challenges facing enterprise innovators and venture funded startups alike.
- The **Cloud Native Computing Foundation** has accredited us as a **Kubernetes Certified Service Provider**.
- We serve as charter contributors to the **Linux Foundation Data & AI Commons** (LF Data & AI), supporting a diverse, sustainable ecosystem for open source data and AI technologies.

Over the last decade, we've built and deployed hundreds of big, fast full-stack apps with well-engineered cloud infrastructure across industries: Financial Services, Industrial Automation, Healthcare, AdTech, Consumer-grade Mobile, smart devices, and more.

From enterprise upgrades to data engineering to cloud-native scale-out, CloudGeometry helps you plot the shortest path across all dimensions of modern cloud software engineering.

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SaaS

Amazon Kinesis

AWS Lambda

Amazon Redshift

AWS Database  
Migration Service



CLOUD NATIVE  
COMPUTING FOUNDATION

GENERAL MEMBER  
**LF AI & DATA**  
GENERATIVE AI COMMONS



**Expert**  
**Platform Engineering**  
**& DevOps**

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