



SaaS IoT Unifies Marketing & Supply Chain Analytics for Global CPG

Case Study



partner
network

SaaS Architecture
Competency

Thinfilm's Multi-tenant SaaS platform transforms discrete hardware devices into coherent and scalable data strategy

Discover how CloudGeometry empowered ThinFilm to unify marketing and supply chain analytics globally, leveraging their CNECT platform and secure multi-tenancy to enable real-time data tracking and digital experiences for the consumer packaged industry.



INDUSTRY

Printed Electronics
Manufacturing, Supply
Chain and Industrial
Systems Management

SOLUTION

SaaS platform for
supply chain analytics
and NFC Tag
Management

CLIENT

Thinfilm Electronics



CloudGeometry

Thinfilm

Now that smartphones everywhere means digital connectivity anywhere, any physical goods you can hold in your hand can become a rich digital experience. Thinfilm NFC makes the connection seamlessly, with sensor technology printed on smart labels, attached to a variety of packages. Anything that can be labeled can be tracked at any and every step from factory to consumers' homes— and in real time. Because Thinfilm labels make every unit secure and perfectly unique, it can create a continuous and complete stream of data every time someone chooses to interact with that unique item.

The Challenge

Creating a unified management and analytics cloud for B2B clients in different industries is a challenge, one that relies on a distributed platform with secure multi-tenancy. The data supply chain has to span different protocols, formats, and usage. Data tracking and management needs to reach myriad combinations of supply chain and consumer distribution networks in all geographies. The common pattern is in enabling high-volume physical goods to emit trackable data, aggregated in real-time, to support digital marketing and merchandising use cases. Security and data isolation are core values, as it spans regional and political boundaries – for example, on both sides of the Great Firewall of China.

**Acquire/Ingest
Any Source
Data**

[Mix/match transactional](#), streaming, batch using Aurora and Redshift, plus Kinesis streaming and routing it selectively to tenant instances via application logic.

**Secure
End-to-end
SaaS Buildout**

Architect and deploy [cloud data pipeline infrastructure](#) designed for ready customization [across B2B and B2C applications](#).

**Production
monitoring,
24/7/365**

Mission-critical [data continuity operations](#) across business and analytic use cases for platform tenants worldwide.

ThinFilm

The Solution

CNECT, ThinFilm's Globally distributed secure multi-tenant platform, provides interactive real-time data streams across a rich digital ecosystem. From its roots in process manufacturing, they pivoted from discrete hardware devices into a global data strategy, turning to CloudGeometry to lead the efforts by [creating an integrated SaaS platform](#). Following re-platforming and migration from standalone databases to [AWS RDS](#) using [Amazon DMS](#), new core functions of the platform were designed and implemented. This gave CNECT a [broad portfolio of configurable services](#) for inventory management and analytics, deployable in various combinations as flexible tenant modules to customize per-client services and interfaces.

CNECT delivers query & data objects with responses rendered in JSON, with granular logging and tagging, writing them to the appropriate database. This allows ThinFilm customers to run BI and other analytics by aggregating event transactions. Many ThinFilm end-customers also need [deep customization of tenant-specific services](#). These range from consumer interactions on tap, custom iOS + Android SDKs to capture data, custom web and mobile interfaces, per tenant custom analytics to provide a deeper glance into company inventory, and more. [AWS Lambda](#) simplified secure customization of the various tenants. For truly global multi-tenancy, CloudGeometry built both the AWS-based global CNECT platform, as well as a secure replica on Alibaba Cloud for China.

The Challenge

Thanks to a [SaaS architecture designed for secure multi-tenancy and granular data management](#) anywhere on the planet, ThinFilm has successfully launched a new market through CNECT smart-label integration platform for CPG.

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Technology Solutions & Services

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



cloudGeometry

TECHNOLOGY SOLUTIONS

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

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

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

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

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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.

aws partner network

Advanced
Consulting
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SaaS

Amazon Kinesis

AWS Lambda

Amazon Redshift

AWS Database
Migration Service



CLOUD NATIVE
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