

● CLOUD MIGRATION · AWS · REGTECH

Driving RegTech Business Growth & Operational Efficiency Through **AWS Cloud Migration**

99.99%

Application availability, up from 90%

30–40%

Cost savings vs. on-premises

3_x

Faster application deployments

60%

Reduction in deployment downtime



Executive Summary

THE OPPORTUNITY

As the customer's business expanded, its **on-prem infrastructure began to constrain growth and agility**. Rising infrastructure costs, slow provisioning cycles, limited scalability, and minimal visibility into system health made it increasingly difficult to support evolving financial-services workloads. The absence of a robust disaster-recovery approach added operational risk, impacting both reliability and confidence in day-to-day operations.

This case study highlights how the customer **transitioned from an on-prem environment to the AWS Cloud** to address these challenges. It outlines the migration journey, the key technical and operational hurdles that were resolved, and the measurable business outcomes achieved — improved performance, reduced operational overhead, better observability, and the ability to scale seamlessly as business demands continue to grow.



About the Customer

The customer is a **RegTech solutions provider** delivering anti-money laundering (AML), KYC, and compliance platforms for financial institutions.

With deep domain expertise and a configurable, scalable product offering, the organization helps clients **automate compliance workflows, manage regulatory risk, and adapt quickly** to evolving regulatory requirements.

CUSTOMER PROFILE



INDUSTRY

RegTech — compliance for financial institutions



PLATFORMS

AML, KYC & regulatory compliance



STARTING POINT

Entirely on-premises infrastructure



CRITICAL NEED

Secure, scalable, cost-effective cloud



The Customer Challenge

LEGACY HOSTING LIMITS

While operating **entirely on-premises**, the customer faced rising infrastructure costs, limited scalability, and reduced operational efficiency. The lack of a flexible disaster-recovery solution increased the risk of service disruption, while legacy systems limited agility and innovation. To address these challenges, the customer required a **secure, scalable, and cost-effective cloud solution** to support long-term growth and digital transformation.



Rising infrastructure costs. On-prem hardware and maintenance overhead grew steadily as the business scaled, eroding operational efficiency.



Limited scalability. Static, on-prem capacity could not flex to support evolving financial-services workloads or growth.



No flexible disaster recovery. The absence of a robust DR approach led to greater risk of service disruption and reduced confidence in operations.



Minimal visibility. Limited insight into system health made proactive detection and fast remediation difficult.



Legacy systems limited agility. Slow provisioning cycles and manual processes constrained innovation — the customer needed a modern foundation for long-term growth and digital transformation.



Why AWS?

SCALE · SECURITY · RESILIENCE · COST

AWS provided the **managed-service ecosystem, native automation, and enterprise-grade security** the customer needed — enabling growth across four decisive dimensions.



Scalability & Flexibility

- Application availability improved from **90% to 99.99%** with AWS Auto Scaling and Application Load Balancers
- Multiple **Availability Zones** ensured resilience and elastic scalability



Security & Compliance

- Posture strengthened with **IAM, KMS encryption, CloudTrail, Security Hub, and WAF**
- Enabled compliance with financial regulations — **Bank Secrecy Act and AML laws**



High Availability & DR

- Multi-AZ and multi-region** capabilities ensured business continuity
- Directory Service Enterprise Edition enabled smooth **region-to-region migration** during disasters



Cost Optimization

- Reserved instances, autoscaling groups, and consolidated billing
- AWS Cost Explorer & Cost Categories drove **30–40% savings** vs. on-prem



Proposed Solution

AWS REFERENCE ARCHITECTURE

Crest Data migrated the RegTech platform to a **secure, multi-AZ AWS architecture**. All inbound traffic is routed through WAF, an Application Load Balancer, and Cognito into auto-scaled EC2 instances running the RegTechOne application, backed by a **Multi-AZ database with automatic failover**. Monitoring runs on Nagios and Amazon CloudWatch, with multi-region disaster recovery, centralized security & governance, and Terraform-based infrastructure automation underpinning every environment.

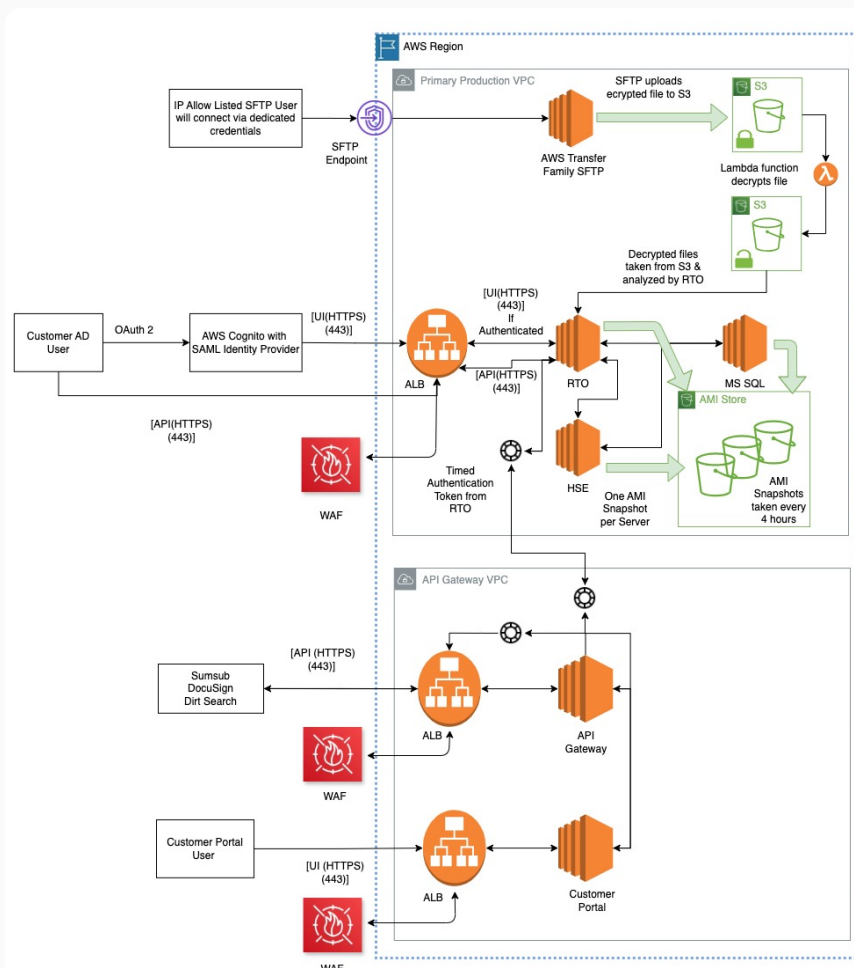


FIGURE 1 RegTech platform on AWS — edge security (WAF + ALB + Cognito), auto-scaled RegTechOne app across Availability Zones, Multi-AZ RDS, Nagios & CloudWatch monitoring, and a cross-cutting foundation of DR, security governance, and Terraform automation.

ARCHITECTURE AT A GLANCE

- Amazon EC2 (Auto Scaling)
- Amazon RDS (Multi-AZ)
- Application Load Balancer
- AWS WAF
- Amazon Cognito
- AWS IAM
- AWS KMS
- CloudTrail
- Security Hub
- Secrets Manager
- Directory Service
- Terraform
- Amazon CloudWatch
- Nagios
- PNP4Nagios
- AWS Cost Explorer



Alongside the architecture, Crest Data delivered **infrastructure automation and proactive monitoring** — ensuring every environment is repeatable, observable, and secure by default.



Infrastructure Automation

- All environments — **Dev, Test, Prod** — provisioned using Terraform templates
- Ensures repeatability and compliance
- **Zero manual console changes**



Monitoring

- Provided by **Nagios and AWS CloudWatch** in each environment
- Dedicated Nagios EC2 server monitors the RegTechOne app & infrastructure
- Nagios collects metrics per server; **PNP4Nagios** aggregates them into dashboards



Security Best Practices

- **Version-controlled** infrastructure code
- Regular OS patches carried out
- Secure secrets management with **AWS Secrets Manager**

FOUNDATIONAL PRACTICES APPLIED

- ✓ **Terraform IaC** across all environments for repeatable provisioning
- ✓ **CloudWatch** metrics & alarms in every environment
- ✓ Regular **OS patching** for a hardened baseline
- ✓ Dedicated **Nagios EC2** + PNP4Nagios dashboards
- ✓ Version-controlled infrastructure with full change history
- ✓ **AWS Secrets Manager** for secure, centralized secrets



Outcomes & Success Metrics

AGILITY · SECURITY · EFFICIENCY · DR



Agility & Faster Deployments

- Terraform automation **reduced provisioning cycles**
- **3x faster** application deployments vs. on-prem cycles
- **60% reduction** in downtime during deployments



Enhanced Security & Compliance

- IAM, KMS, CloudTrail, Security Hub & WAF strengthened posture
- **Zero compliance breaches** during data exchange
- **100% encryption** of sensitive files in transit & at rest; 100% inbound via WAF + ALB + Cognito



Operational Efficiency

- Comprehensive visibility via **CloudWatch and Nagios**
- Reduced **Mean Time to Detect (MTTD)** for faster remediation
- **100% monitoring coverage** for CPU load, uptime, SSL & availability



Disaster Recovery Readiness

- Resilience improved via AWS **multi-region backup & recovery**
- Reduced risk of service disruption — business continuity & compliance assured
- **Recovery objectives met** — faster restoration during failover

3x

Faster application deployments

60%

Less downtime during deployments

100%

Encryption in transit & at rest

30–40%

Cost savings vs. on-premises



About Crest Data

AI-FIRST · CLOUD-NATIVE

Crest Data is a data and AI-first product engineering and technology solutions provider with deep expertise in **cloud and AI, cybersecurity, observability, data analytics, and workflow automation**. In this case study, Crest Data applied its **CloudOps and DevSecOps capabilities** to help the customer migrate from on-prem infrastructure to a secure, scalable, and cost-efficient AWS environment, supported by infrastructure automation and proactive monitoring. With **1,000+ experts** and a track record of **5,500+ successful projects across 175+ global customers** — backed by partnerships with AWS, Google, Microsoft, Datadog, Dynatrace, ServiceNow, and NetApp — Crest Data delivers outcome-focused solutions that strengthen security, improve platform reliability, and enable sustainable digital growth.

MIGRATE TO AWS WITH CONFIDENCE

Ready to move off on-prem and scale on AWS?

Talk to Crest Data's CloudOps and DevSecOps engineers about a secure, cost-efficient AWS migration — multi-AZ resilience, infrastructure automation, and proactive monitoring tuned to your workloads.

Talk to Our Experts →

www.crestdata.ai/contact



EXPLORE
CLOUDWATCH

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