Clearscale

Automating the Impossible: Tenant Data Segregation at Scale

Clearscale engineered a robust AWS workflow that transformed a fragile, manual task into a secure, scalable process.

Client Profile

Industry SaaS / Transportation

Technology Migration and Modernization Data and Analytics

Overview

A leading SaaS provider faced a major operational bottleneck: manually extracting and segregating tenant data from a shared database. The process was slow, error-prone, and risky, making it difficult to scale and respond to customer needs. Clearscale designed and implemented a serverless AWS workflow that automated data segregation with speed, accuracy, and resilience. The result: greater agility, improved reliability, and reduced operational burden.

Meet Our Hero:

This SaaS company delivers workflow and business process management solutions for large enterprises, helping organizations streamline operations and make better use of data.

A key challenge was tenant data segregation. Each customer required isolated, compliant data, which meant manually extracting, validating, and transferring records from a shared database. The manual process was slow, error-prone, and grew riskier as the company scaled and onboarded more enterprise customers. The team realized it needed automation to ensure data integrity and support future growth.

The Goal

- Replace manual tenant data segregation with an automated workflow
- Ensure data segregation is reliable and repeatable
- Implement a scalable solution that supports growth.

The Challenge

Challenge 01

Manual tenant data segregation was slow and labor-intensive

Challenge 02

Risk of human error threatened data integrity

Challenge 03

Scaling to support new customer migrations was difficult

Challenge 04

Lack of automation delayed projects and strained staff capacity

Challenge 05

Compliance and customer satisfaction were at risk without a reliable solution

The Solution

Clearscale designed and implemented an automated workflow using AWS serverless services.

**Step 01:** Serverless Architecture

- Built workflow using AWS Step Functions to orchestrate tasks
- Leveraged AWS Lambda for data processing and automation logic
- Stored and validated tenant data in Amazon DynamoDB and Amazon RDS

Step 02: Automation & Reliability

- Automated extraction, transformation, and validation of tenant data
- Integrated Amazon S3 for storage and backups
- Implemented AWS CloudWatch for secure access and monitoring

Step 03: Operational Efficiency

- Reduced human involvement in database operations
- Improved reliability by removing error-prone manual steps
- Delivered a reusable framework for future tenant migrations
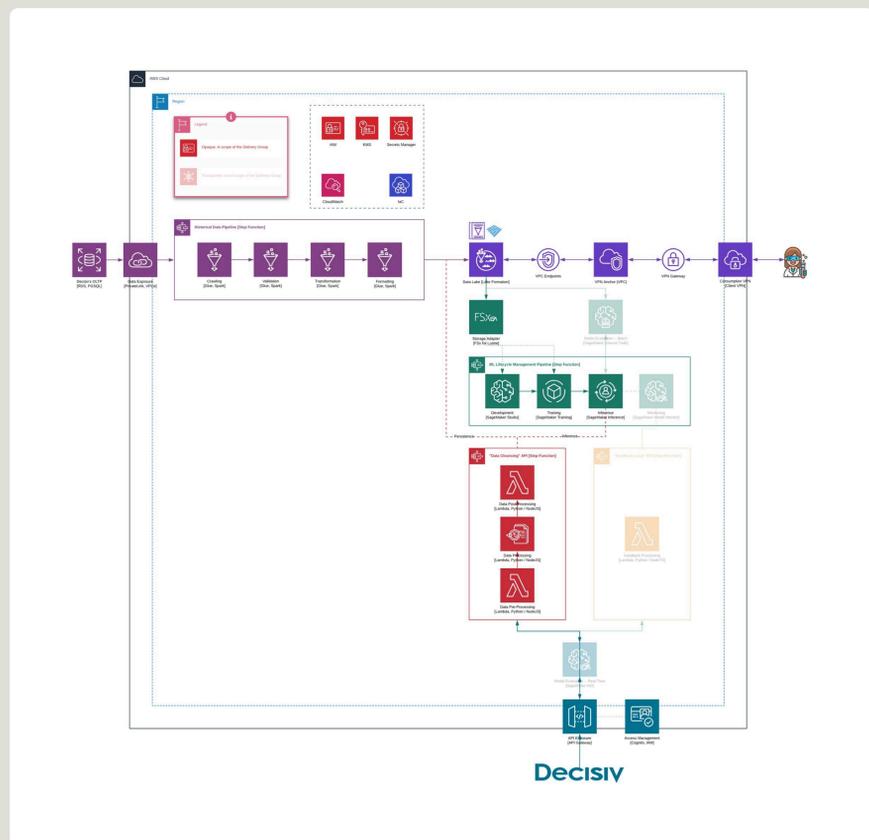
The Impact

Automated data segregation across tenants, eliminating manual effort

Improved accuracy and safeguarded data integrity

Reduced project timelines, accelerating customer onboarding

Enabled scalability, supporting growth without increasing risk

Turn Cloud Chaos Into Clear Results On AWS

Clearscale helps SaaS providers break free from cloud chaos and experience clear results on AWS by automating complex operations with cloud-native workflows that boost confidence, reduce risk, and scale with demand. If your business needs cleaner, faster data management, let's build the solution together.

Talk to an Engineer