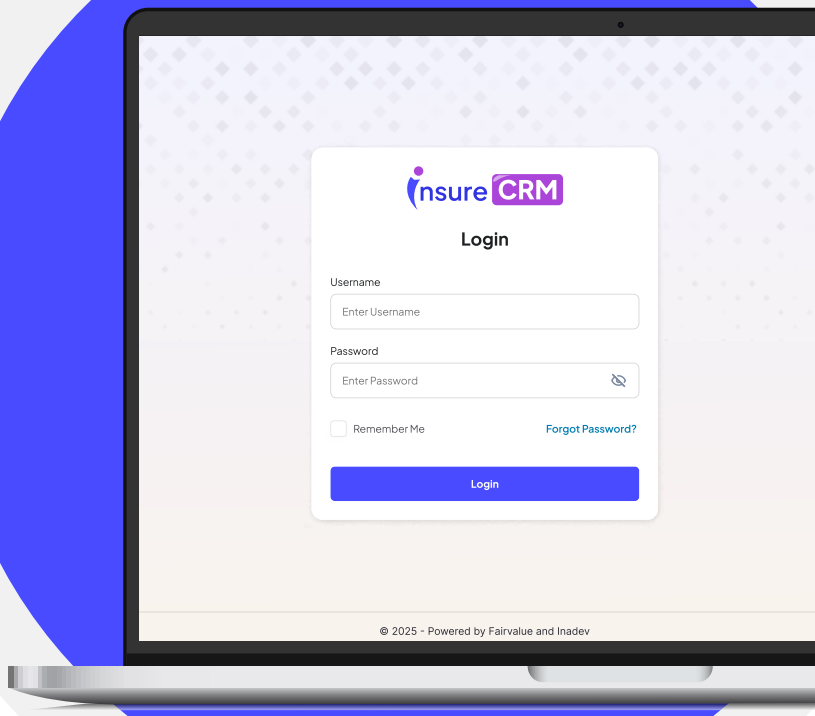
Case Study

# Modernizing **InsureCRM for Scalability, Security, and Agility**

## Client Overview

**Fairvalue Insuretech Private Limited** is a next-generation insurtech startup focused on transforming the insurance ecosystem, with a strong emphasis on life insurance. The organization aims to address long-standing industry challenges by introducing modern, digital first platforms that improve customer engagement, renewal efficiency, and operational agility.

As part of its growth strategy, Fairvalue Insuretech initiated the design and development of **InsureCRM**, a modern cloud-native platform to support insurance renewal, retention, and customer lifecycle management.



# Modernization Overview

- **Engagement Type:** Private
- **Modernization Nature:** Brownfield
- **Approach:** Refactor and Replatform
- **Scope:** Application and Infrastructure

## Technology Stack

Amazon RDS

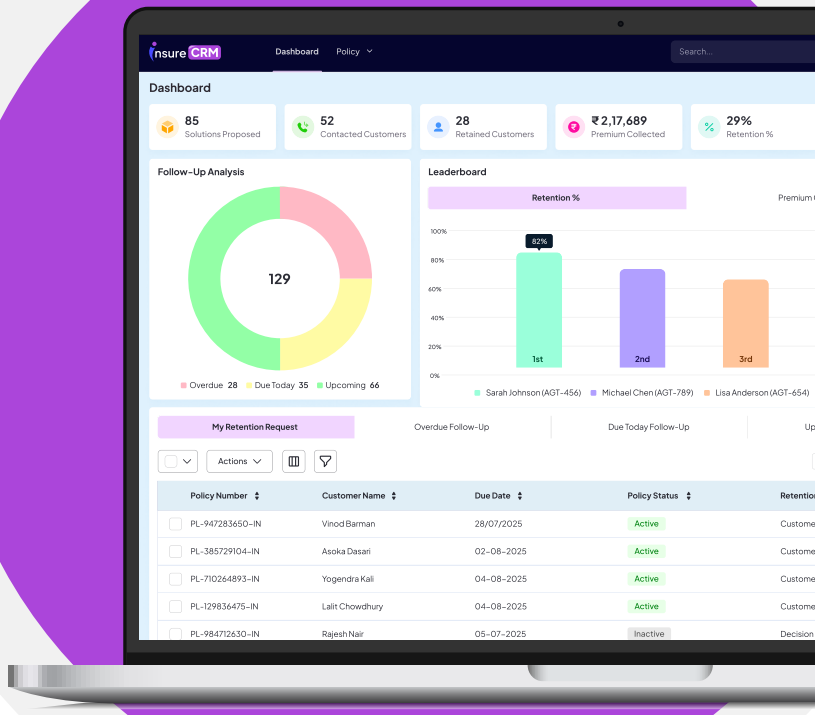
Amazon S3

Amazon CloudWatch

Amazon EC2

HashiCorp Terraform

Jenkins

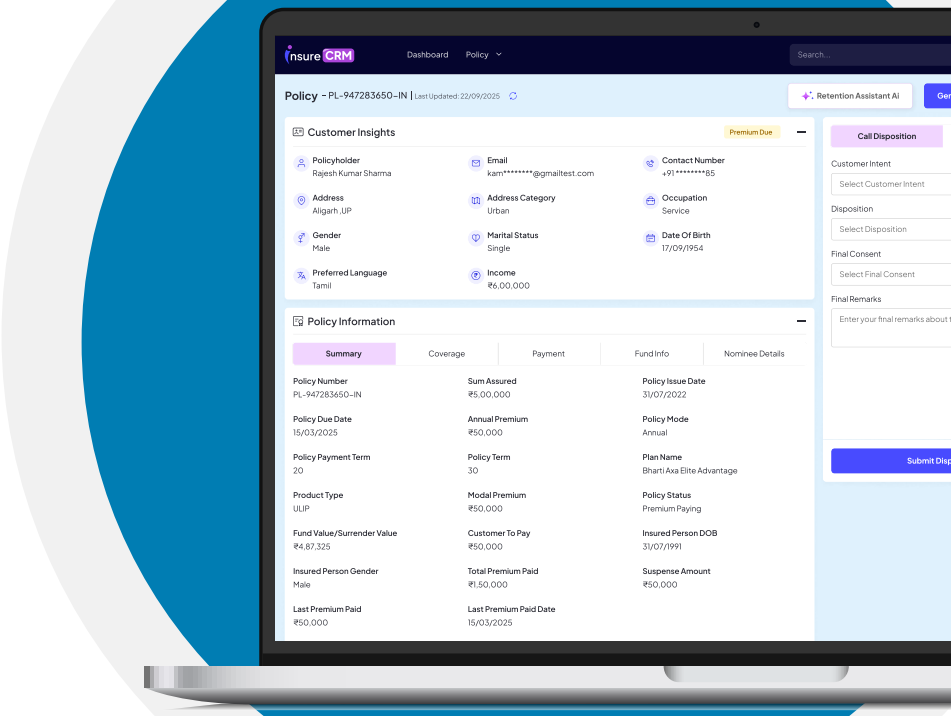


# Problem Statement

Fairvalue Insuretech required a scalable and secure CRM platform capable of supporting rapid business growth, evolving insurance products, and variable workloads driven by renewal cycles. Key challenges included:

- **Need for a flexible architecture** to support frequent product and workflow changes
- **Handling renewal-driven traffic** spikes without performance degradation
- **Ensuring strong data security** for sensitive policyholder information
- **Establishing a reliable foundation** for future modernization and scale
- **Reducing operational overhead** through managed cloud services

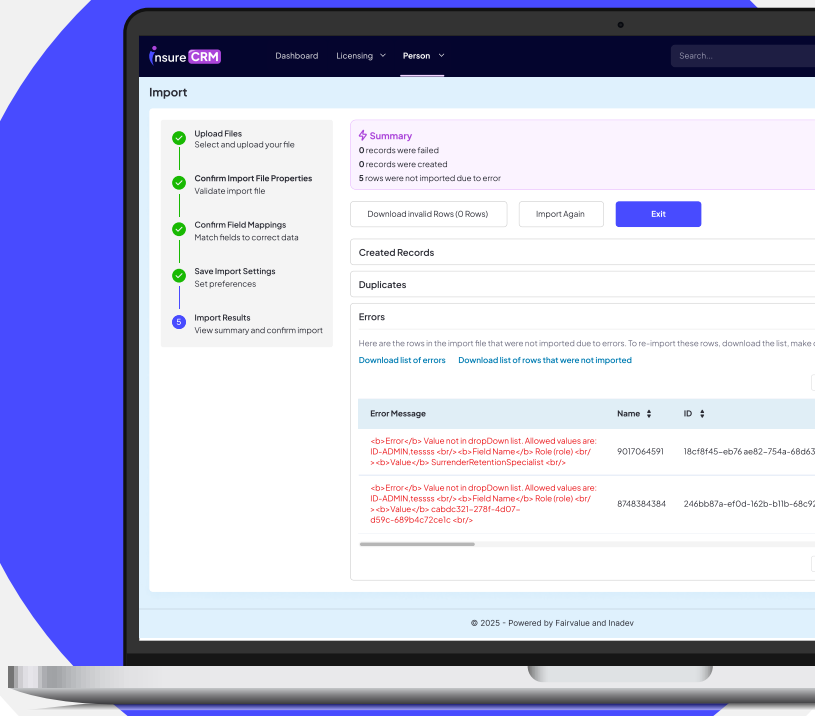
The organization sought an experienced AWS partner to design and modernize the platform using AWS-native services aligned with cloud best practices.



# Engagement Objectives

The primary objectives of the engagement were:

- **Design and build a modern, scalable** InsureCRM platform on AWS
- **Adopt cloud-native architectures** to support agility and resilience
- **Implement strong** security, governance, and compliance controls
- **Enable high availability** and fault tolerance across application layers
- **Support iterative delivery** through agile execution



# Proposed Solution

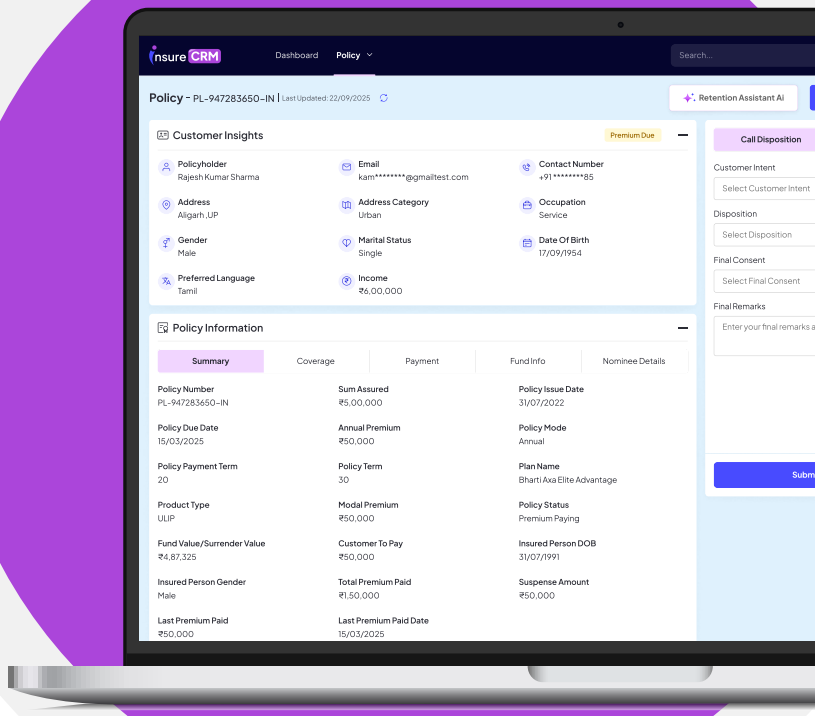
Inadev designed and implemented a **cloud-native AWS architecture** to support Fairvalue Insuretech's InsureCRM platform, following AWS Migration & Modernization best practices.

## Application Architecture

- **Modular, service-oriented** application design to support future extensibility
- **Stateless application** components to enable horizontal scaling
- **Secure integration** between application and data layers

## Deployment Architecture

- **Amazon VPC** with strict network segmentation
- **Public subnets** for controlled ingress via Application Load Balancer (ALB)
- **Private subnets** for application and database workloads
- **NAT Gateway** for secure outbound connectivity
- **Multi-AZ deployment** for high availability

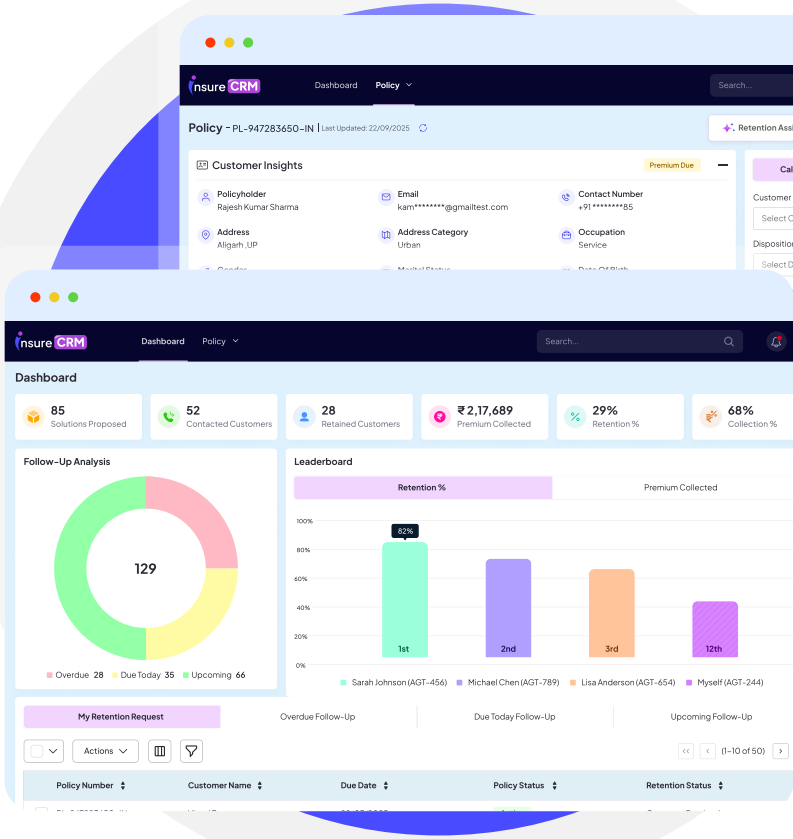


# Security & Governance

Security was embedded into the platform design from day one:

- **Least-privilege** IAM roles and policies
- **Encryption of sensitive** data at rest using AWS KMS
- **Secure network boundaries** using private subnets and security groups
- **Controlled ingress and egress** via ALB, Internet Gateway, and NAT Gateway
- **Centralized logging** and monitoring for auditability

These controls aligned the solution with regulatory expectations common in the insurance industry.



# Migration & Modernization Outcomes

## Operational Impact

**Enabled elastic scalability and operational resilience**, ensuring consistent performance during peak insurance renewal cycles.

**Accelerated feature release velocity** by adopting Agile delivery and cloud-native AWS services.

**Minimized downtime and service disruptions** through multi layer high availability and fault-tolerant design.

**Strengthened data protection and customer trust** with end to-end encryption for sensitive policy and customer data.

**Lowered operational effort and infrastructure management costs** by leveraging fully managed AWS services.

# Migration & Modernization Outcomes

## Enterprise-Grade Security Controls

**Established strong network isolation** using Amazon VPC to reduce attack surface.

**Protected critical workloads** by deploying application and database layers in private subnets.

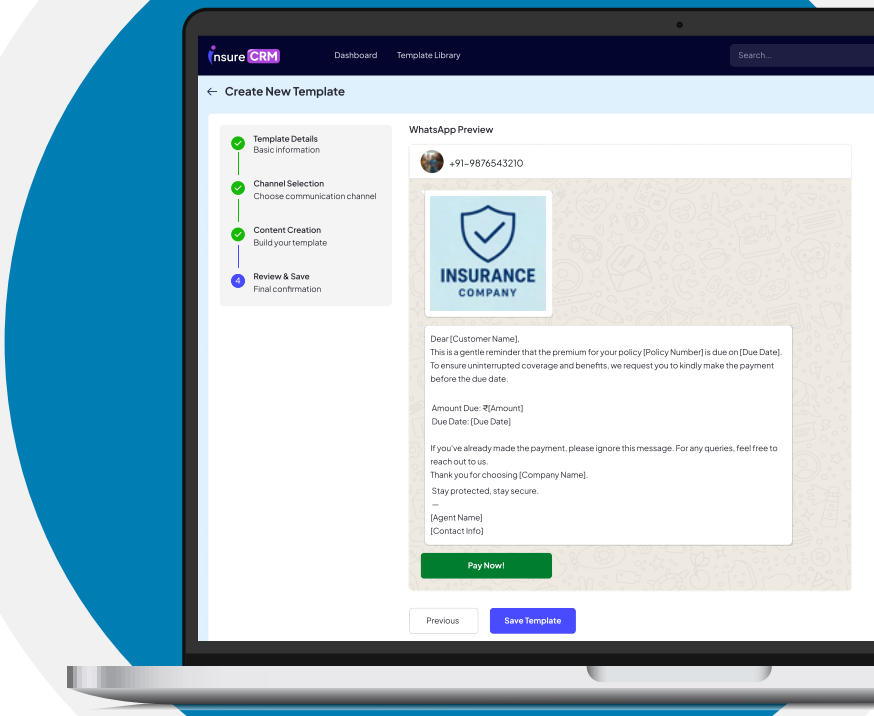
**Ensured regulatory-grade data security** with encryption at rest using AWS KMS.

**Enforced controlled and auditable traffic flows** via ALB, Internet Gateway, and NAT Gateway.

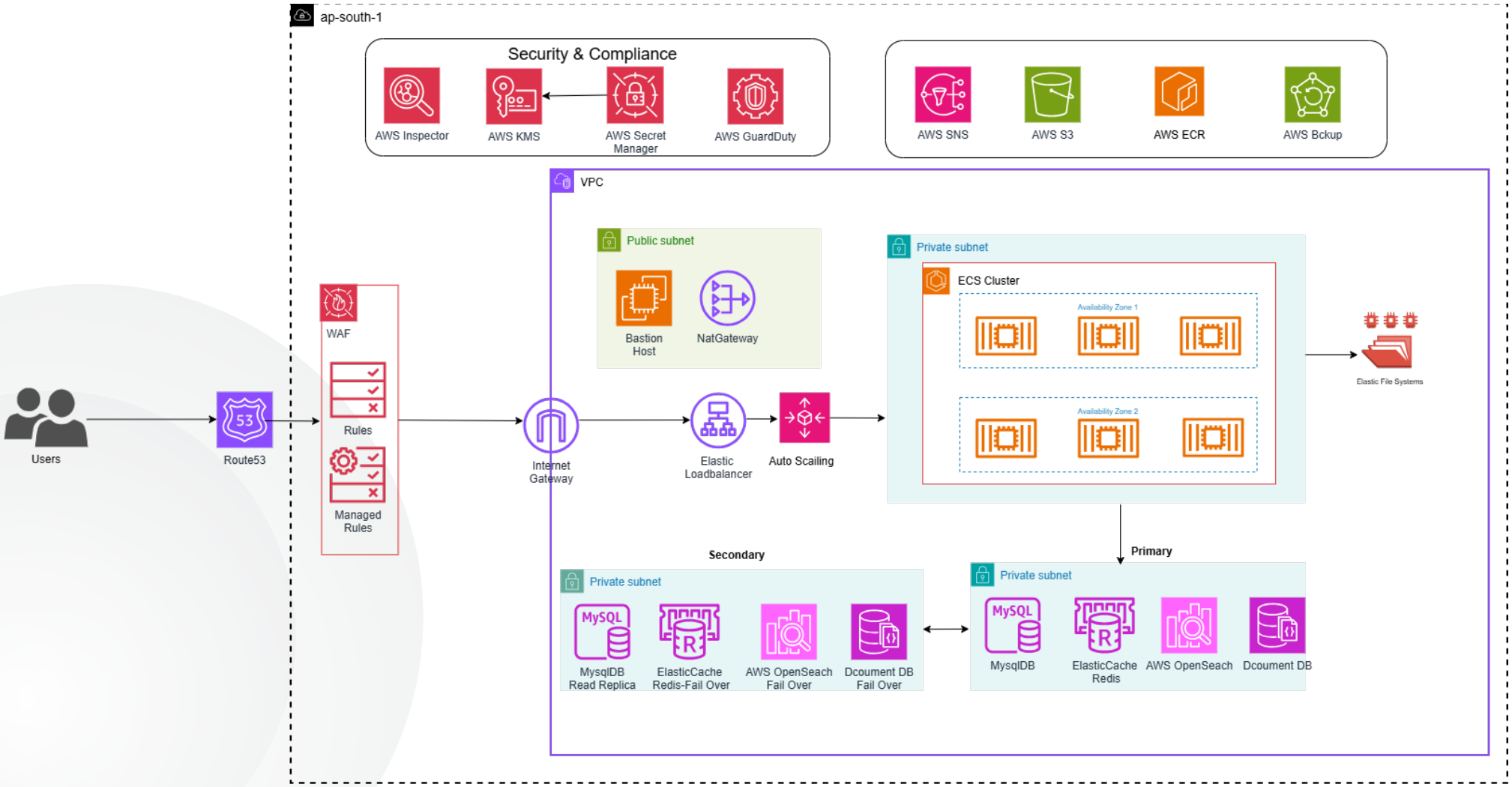
**Improved operational visibility and incident response** through centralized monitoring and alerting with CloudWatch and SNS.

# Business Impact

- **Scalability & Performance**
  Elastic AWS architecture supports 3–5x renewal traffic spikes with no service degradation.
- **Faster Time-to-Market**
  Release cycles improved from monthly to bi-weekly, accelerating rollout of new insurance products and workflows.
- **Operational Efficiency**
  Adoption of managed AWS services reduced infrastructure management effort by 40–50%.
- **High Availability & Reliability**
  Multi-AZ deployment targets 99.9%+ availability, minimizing downtime during critical renewal periods.
- **Security & Compliance**
  Centralized IAM, encryption at rest, and network isolation and audit-ready security with full access traceability.
- **Business Enablement**
  Future-ready CRM foundation enabling faster customer onboarding, improved renewal conversions, and scalable growth.



# Deployment Architecture




*Designed to handle renewal spikes, sensitive policy data, and rapid product changes typical to insurance platforms.*