CASE STUDY

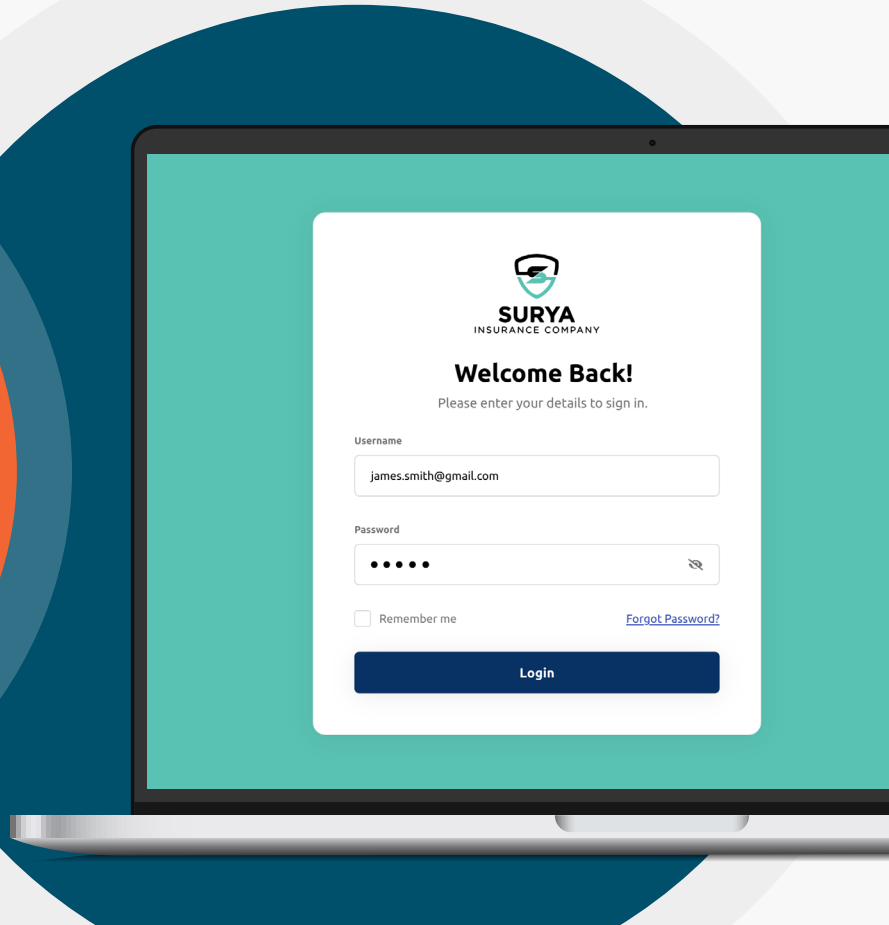
SURYA
INSURANCE COMPANY

See How Inadev's AI/ML-Powered Solution Enhances Efficiency and Accuracy for Surya Insurance!

Transforming Insurance Form Processing
for Efficiency, Cost Reduction,
and Error-Free Operations.

Capabilities covered:

Artificial Intelligence and
Machine Learning (AI/ML)
Amazon Web Services (AWS)
Infrastructure as code (IaC)
and CI/CD



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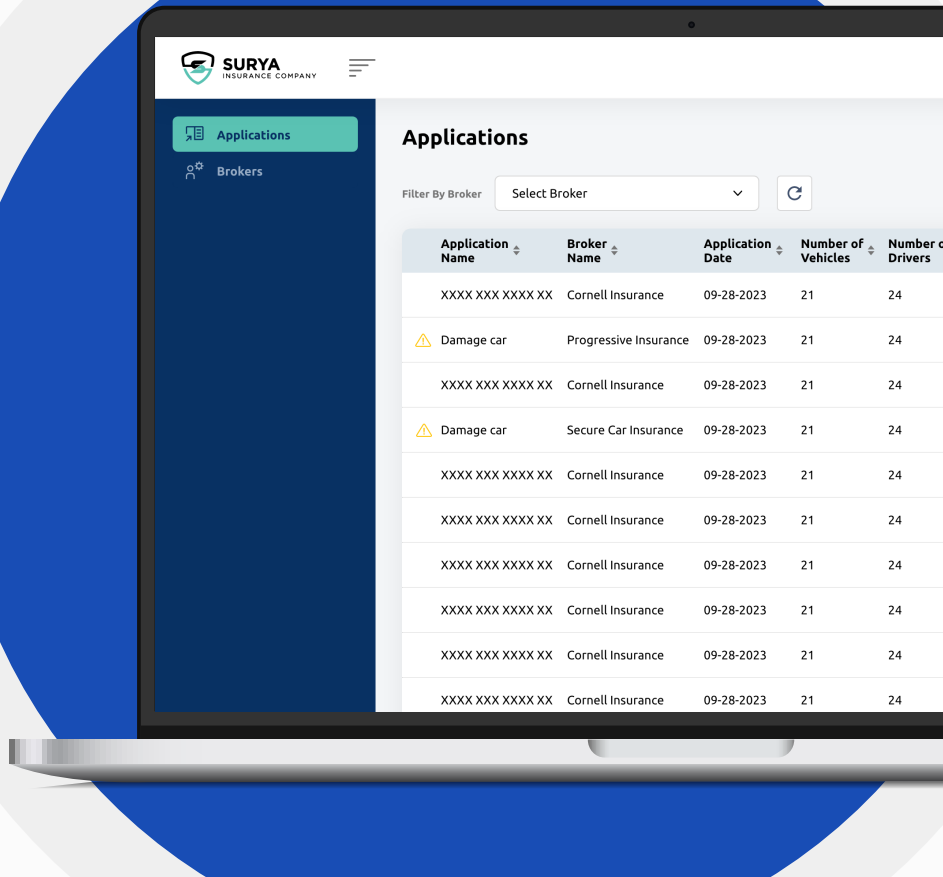
Surya Insurance Company (SIC), Inc., RRG employs a sophisticated risk management protocol that allows the company to minimize insurance costs for its clients.

They also specialize in providing commercial automotive liability insurance for the commercial auto industry. The credibility and riskcapacity of their clients are bolstered through strategicpartnerships with reinsurance companies.

SIC's flexible business model for commercial automotive liability insurance serves various sectors, including public livery, limousines, NEMT (Non-Emergency Medical Transportation), and other non-trucking vehicles.

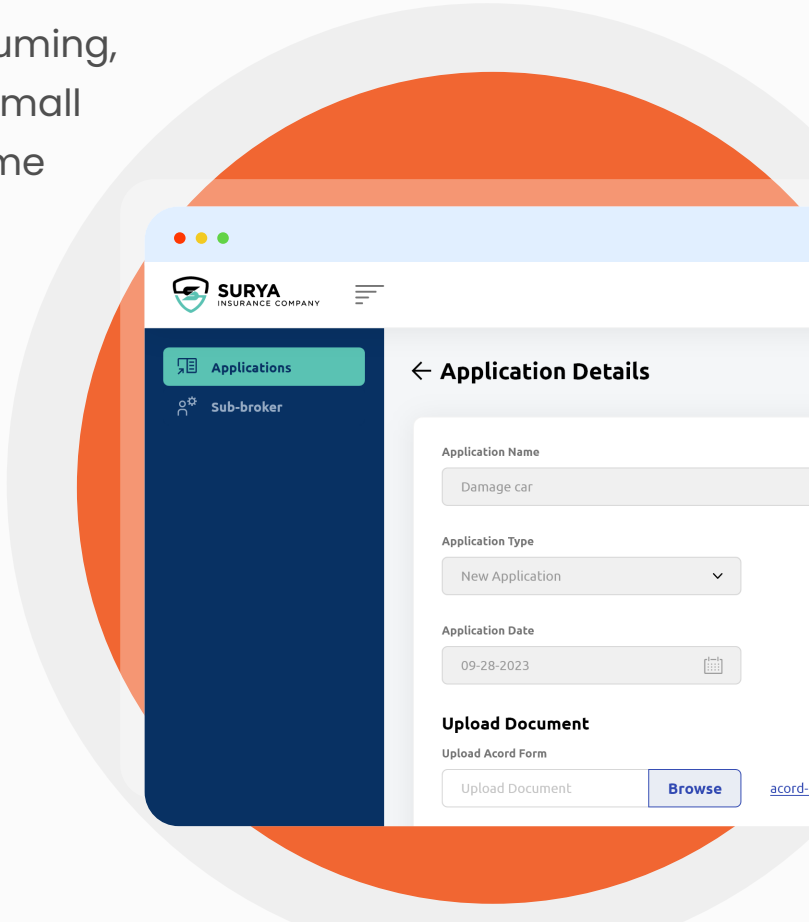


SIC relies on brokers to assist clients in completing insurance forms.

Brokers sent completed forms to SIC via email, and the data from these forms was manually entered into SIC's system. The manual data entry process was the method used to update and record the information provided in the insurance forms.

SIC encountered several challenges in its process of handling insurance forms with broker involvement. These challenges are as follows:

- Time-Consuming: The manual data entry process was time-consuming, making it inefficient for handling a large number of forms. Only a small number of forms could be updated in the system within a given time frame, resulting in delays and operational bottlenecks.
- Increased Person/Hour Costs: Since details from the forms were entered into the system manually, SIC incurred higher financial costs in terms of workforce. The manual data entry process was not cost-effective and strained the company's budget.
- Infrastructure security & scalability: The company needed scalable infrastructure to support a burstable workload and a secure development and deployment pipeline to ensure data integrity and compliance.

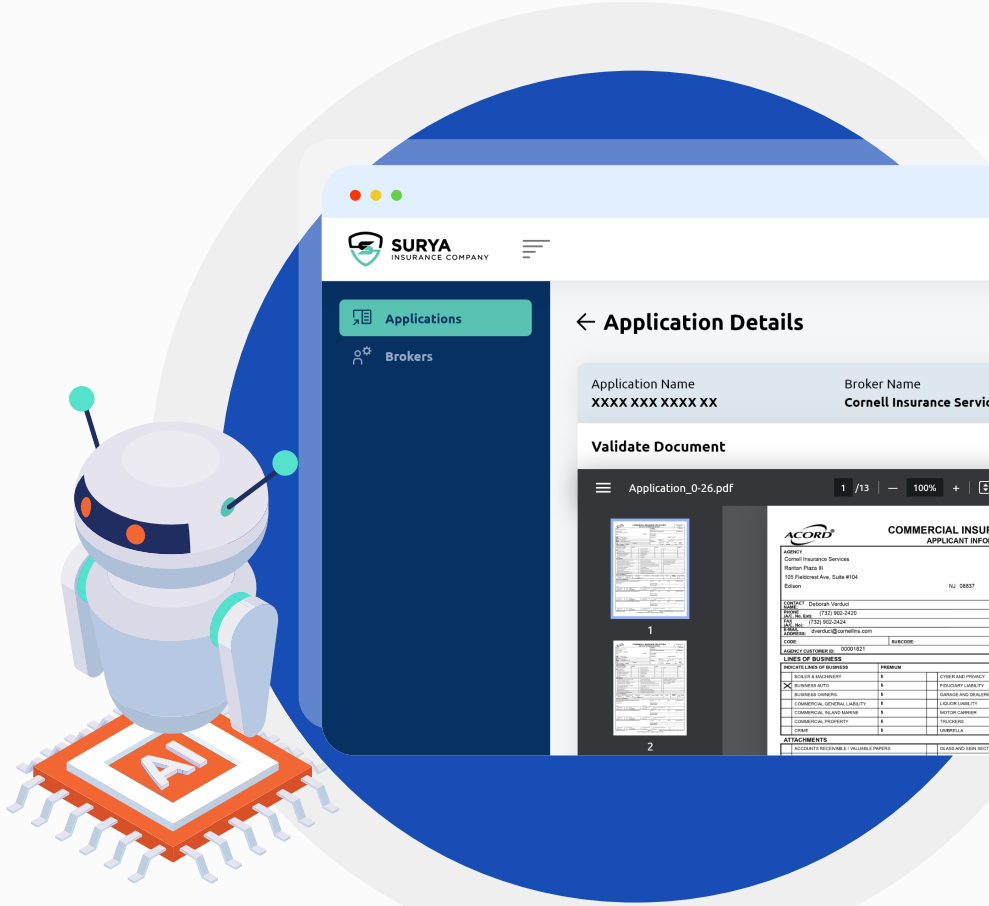


Scalability Issues: Manual data entry was not a scalable solution. This led to operational inefficiencies as the business grew.

Erroneous Data: The manual data entry process was susceptible to human error, including typographical mistakes, omissions, and inaccurate data entry.

To solve the challenges above, Inadev implemented a solution which utilizes Artificial Intelligence and Machine Learning (AI/ML) algorithms, AWS Cloud, Terraform IaC and DevSecOps tools.

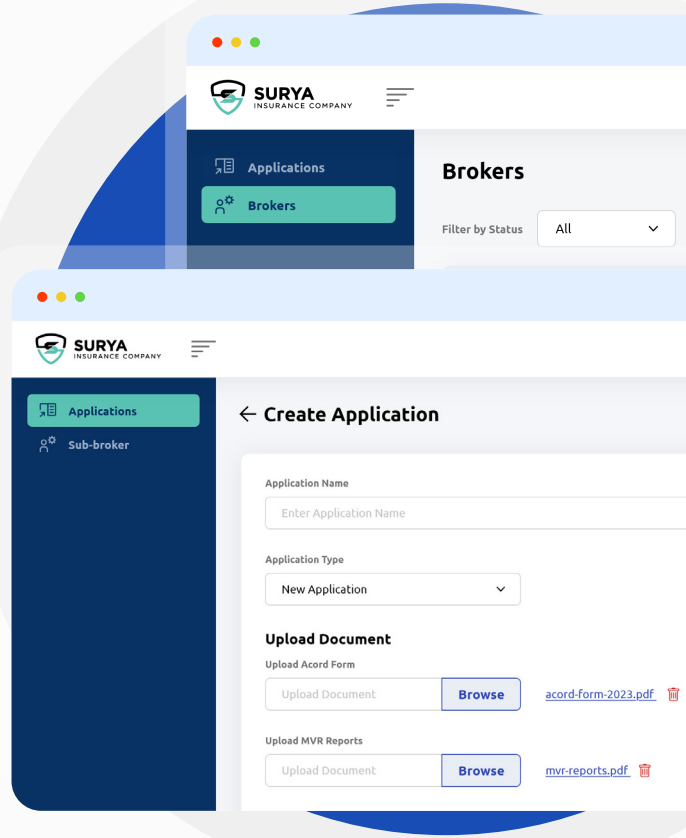
In this solution, brokers upload insurance forms through a dedicated portal. These forms were then processed by the OCR(Optical Character Recognition) system, which automatically extracts the information from the forms. The extracted data is structured and transmitted to SIC systems.



The solution comprises of two portals, one for brokers and another for Surya administrators. Brokers upload the forms through their portal, and Surya administrators review and approve or reject them via the dedicated administrator portal.

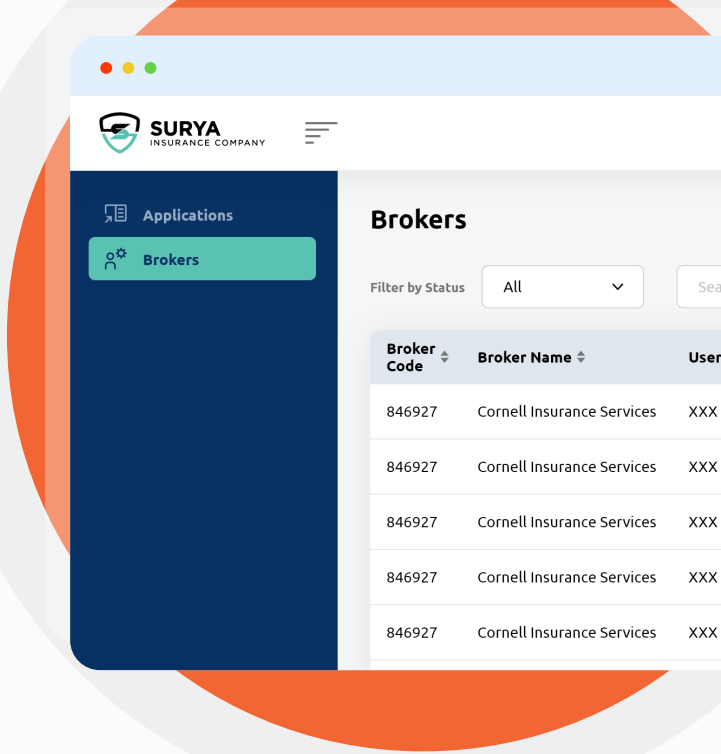
The entire solution is hosted on Amazon Web Services (AWS), leveraging its cloud infrastructure and native services.

We utilized Amazon Elastic Kubernetes Service (EKS) to create a scalable and managed Kubernetes cluster, providing a flexible platform for deploying and managing containerized applications. Amazon Elastic File System (EFS) offered a fully managed file system for Kubernetes PVC requirement, providing shared storage for the application containers. Amazon Simple Storage Service (S3) was used for object storage, storing insurance form data and other files. Amazon Relational Database Service (RDS) provided a managed relational database for storing and querying insurance data.

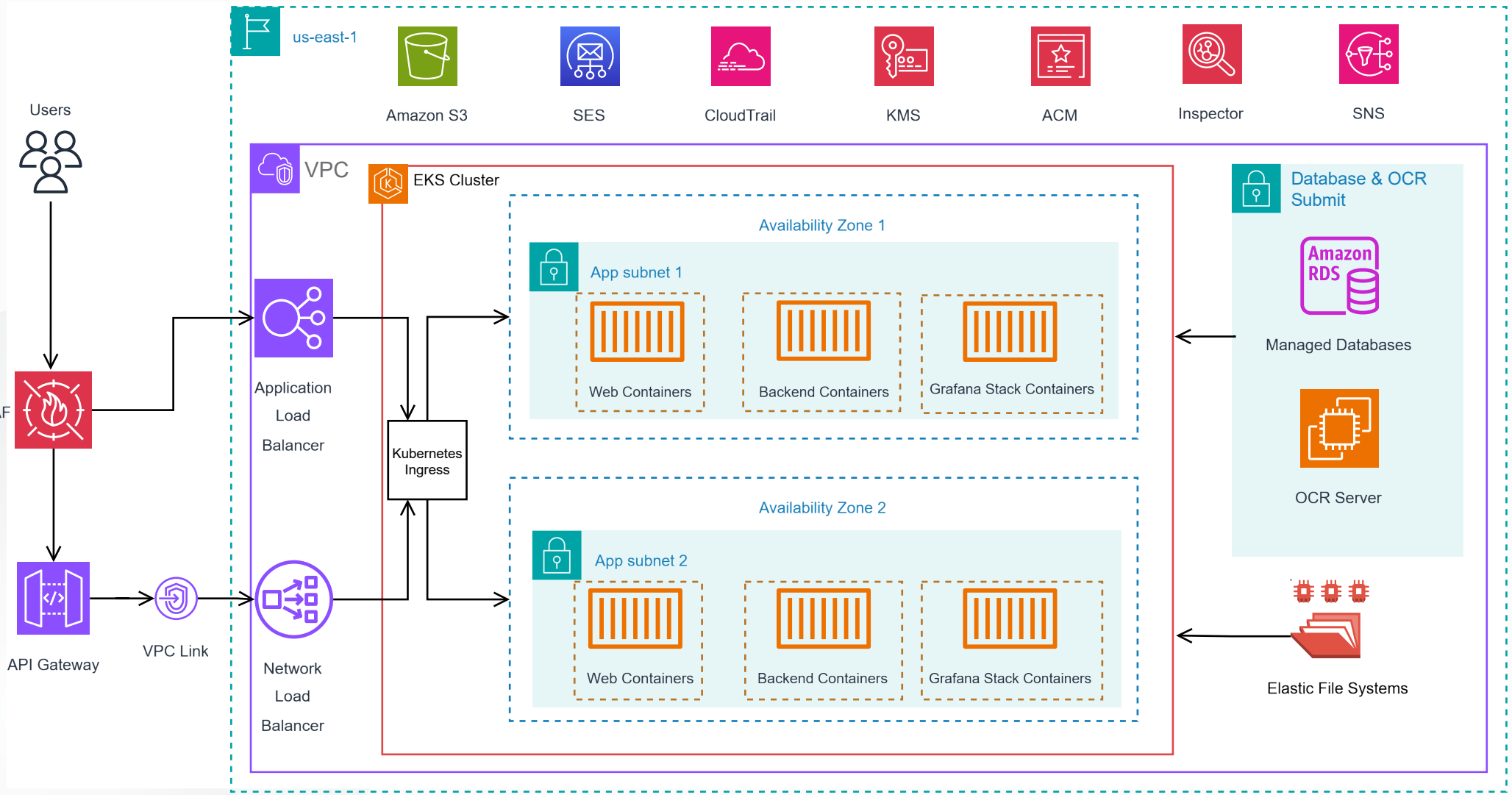


To create a secure and efficient API layer, we deployed Amazon API Gateway, allowing for the creation and management of RESTful APIs. Amazon Web Application Firewall (WAF) was implemented to protect the application from common web exploits. To ensure secure development practices, we integrated AWS Inspector, a vulnerability scanning service. For messaging and notifications, Amazon Simple Notification Service (SNS) was used. To automate infrastructure provisioning and configuration, we utilized Terraform, a popular Infrastructure as Code (IaC) tool.

For continuous integration and continuous delivery (CI/CD), we hosted Jenkins, SonarQube, and Spinnaker on EKS, enabling pipelines for building, testing, and deploying the application. These tools helped automate the development and deployment process, improving efficiency and reducing the risk of errors.



Architechtural Diagram:



ⓘ Note: This diagram is for reference only. Please reach out to our sales or support for more information!

Adopting AWS Cloud based services offered numerous benefits:

- Easy access in the portal for broker and Surya admin user roles.
- OCR and automation in the form processing workflow for enhanced scalability vital for accommodating business growth and fluctuations in the client volume.
- Infrastructure-as-code (IaC) minimized human error in infrastructure provisioning and standardized infrastructure configurations across environments.
- DevSecOps embedded security throughout development, finding and fixing vulnerabilities early.
- Streamlined data entry reducing the need for manual data input and minimizing errors.
- Faster and more accurate data transfer into the SIC systems, improving insurance form and client information management efficiencies.

The solution enabled SIC to accomplish the following:

80% improvement in operational productivity, enabling Surya Insurance to handle up to 5X growth with the same OPEX.

Increased capacity by 60 insurance forms per day with significant reduction in customer wait time with cloud-based OCR and automated business processes (STP).

Efficient IT systems, scalable business processes, and improved customer satisfaction enabled SIC to target new customer segments and geographies.

Realized significant cost savings of 60% in development and test environments through the efficient use of IaC and AWS automation.

50% faster, more secure releases with fewer delays caused by late-stage security checks.