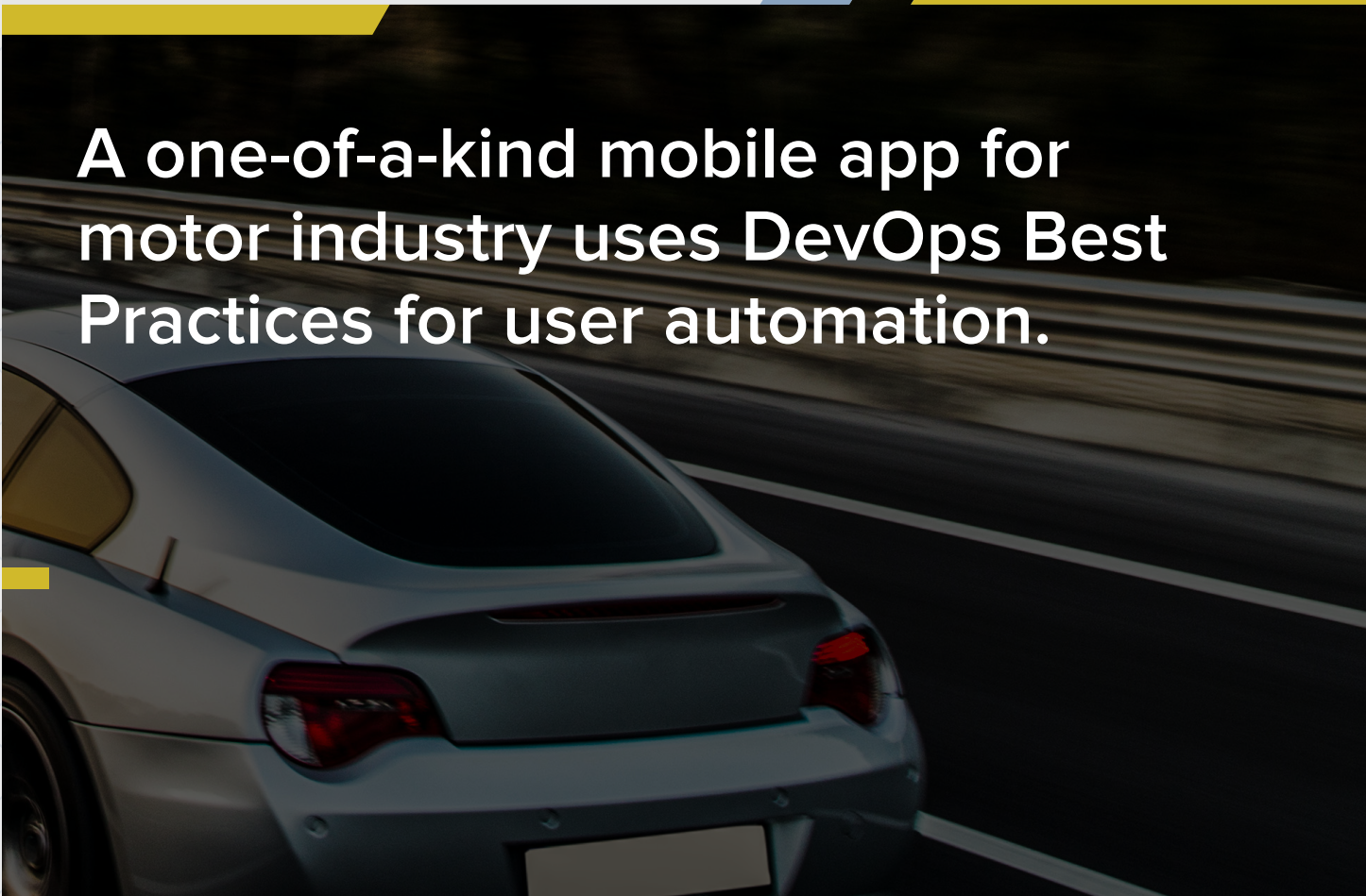




A CloudThat Success Story!

CARSCAN

A one-of-a-kind mobile app for motor industry uses DevOps Best Practices for user automation.



What to expect from this Case Study?



CarScan

A first-of-its-kind mobile app in the motor industry sets up Microservices Architecture using DevOps Best Practices to achieve high availability, scalable, focused, fault-tolerant HA (Highly Available) application hosted on AWS Cloud to scale their business. They also want to introduce automation and thus reduce manual interference for processing 200+ users.

CloudThat's

team assessed the client's requirements to set up their Microservices Architecture using DevOps Best Practices to achieve lower downtime, high availability, and scalable architecture, fault-tolerant HA (Highly Available) application on AWS cloud.



About CarScan

CarScan, a one-of-a-kind mobile app launched in South Africa, uses computer vision and machine learning to scan vehicle damages and provide real-time vehicle health conditions and repair estimates. Founded in 2019, CarScan launched in South Africa and now have plans to reach Europe and Australia soon.



ABOUT CLOUDTHAT

CloudThat is a renowned name in the cloud arena with its consulting & training services since 2012. We have a global presence serving clients from 28+ countries. We are an Authorized Learning Partner for GCP and have been providing cloud services related to it. Our Cloud Data Platform service has helped organizations have efficient Data Storage, Processing, Transformation, and Modeling strategies.

The CarScan Challenge

Key requirement CarScan had was to achieve lower downtime, high availability, and scalable architecture and to run fault-tolerant applications on the AWS cloud.

The issues with their existing architecture were as follows:

01

Requirement of a focused, fault-tolerant HA (Highly Available) application hosted on AWS Cloud to scale their business.

02

Existing monolithic application impacted the e-commerce application that faced severe downtime (about 3-5%) and negatively affected the user experience.

03

Critical need for high availability and scalable architecture on the cloud.

04

With the ever-increasing user base, automation required to reduce errors and manual interference for processing 200+ users.



Our Assessment

Our team assessed the client's current infrastructure running on multiple AWS EC2 instances with Elastic load balancing in place:

- ▶ JAVA application being built manually on local machines used to deploy to EC2 Instances.
- ▶ Huge costs incurred due to multiple EC2 fleets running to serve the application thus overshooting their budgets.
- ▶ Delayed time to market
- ▶ Applications vulnerable to breaches.

CloudThat Business Objectives

- Microservices architecture for rapid build and deployment reliably for their running application seamlessly
- Reduction in overall cost of resources used in AWS
- Setup of Multiple environments for testing and deployment for final delivery
- Security of their application from vulnerabilities
- Building a scalable, reliable, highly available, and automated Microservice architecture
- Increase Visibility across applications and Infrastructure

CloudThat Solution

CloudThat team proposed the following solutions:

Migration of their application services running on AWS EC2 to AWS EKS and leverage Microservices architecture using DevOps best practices.

Dockerize all the JAVA applications for storing and hosting them on AWS ECR and AWS EKS

Automation of the build and deployment of their Java application using Jenkins.

Auto Infrastructure deployment by Terraform

Enabling Multiple environment strategies (dev, staging, prod) with Continuous Integration and Continuous Delivery

Kubernetes configuration management automation

Enabling Helm charts for application management for Kubernetes

Leveraging the power of CloudWatch and Prometheus for Monitoring and logging applications

Third-Party Applications Used



Jenkins



Prometheus



Grafana



Argo CD

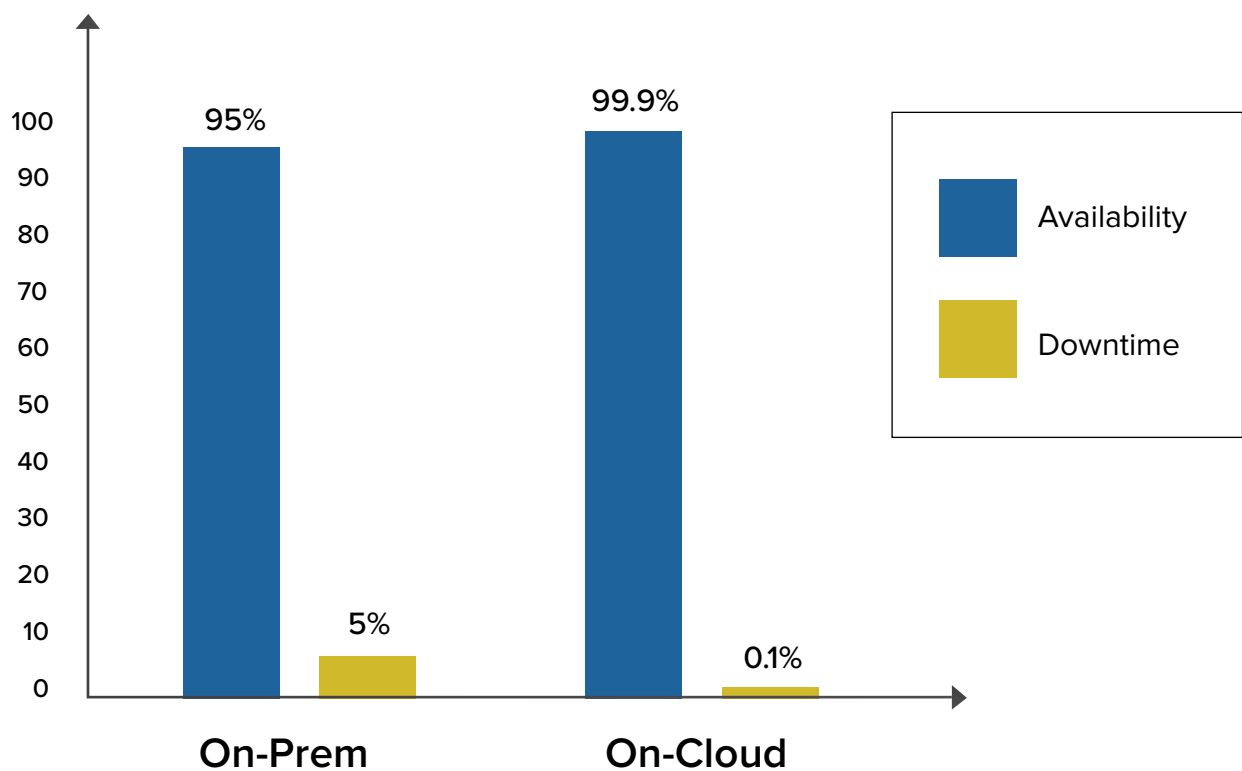


AWS Services Used

- | AWS Elastic Kubernetes service for managed Kubernetes
- | AWS VPC for network isolation
- | AWS ECR as Container registry
- | AWS EC2 for node group instances and DevOps tools
- | Amazon S3 for storing static data
- | AWS CloudWatch for Monitoring and Logging
- | AWS Secrets Manager is a secret store for applications
- | AWS SQS for internal messaging between applications
- | AWS Route53 for routing via public and private DNS zones
- | AWS IAM for access management across AWS Account
- | AWS KMS for the key encryptions

A Successful Outcome!

- Fast, accurate, and highly available, secure application for high customer traffic on the application, which can support up to 1000 requests per second
- Cost minimized by leveraging the infrastructure to achieve cost optimization.
- Helped business growth by setting up multi-environment set up for application to satisfy the given organizational SLAs and internal process framework



Our journey

CloudThat is a pioneer in cloud consultancy services with more than a decade of experience. We are an authorized GCP learning partner. We facilitate our clients to build an extremely secure network by safely migrating their infrastructure to the Google Cloud Platform through our Well-Architected Infrastructure expertise.

Led by **Bhavesh Goswami, Founder & CEO**, with rich experience in implementing challenging projects for Amazon and Microsoft prior to his entrepreneurial journey, ours is a dedicated team helping organizations to accelerate cloud adoption.

Why Choose CloudThat Consulting Services



We are an AWS Advanced Consulting Partner and a House of All-Encompassing IT Services on the Cloud. With over a decade of experience in consulting services, we have helped organizations to define cloud strategy, build solutions, and manage their infrastructure.

We offer vivid consulting services like Cloud Consulting & Migration, Cloud Managed Services, DevOps & DevSecOps Services, Cloud Media Services, Contract Engineering, and Cloud Data Platform Services to 100+ happy clients across the globe.

Our Industry Partnerships



Thank you for exploring this Case Study with us.
Stay tuned for cloud solutions offered by **CloudThat**



Eager to know about our Cloud Services?
Why Procrastinate, **Connect with us Now**

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