cloudthat | MedPay Connected Care Network

A CloudThat Success Story!

How a **Connected Healthcare network organization** was able to scale up their release cycle with nil downtime!

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What to expect from this **Case Study?**

MedPay - an AI-based platform that facilitates insurers' communication and transactions with healthcare providers. They were looking to update their applications and implement containerization to improve deployment, security, scalability, and autonomy of applications to reduce the downtime and to enhance overall business operations.

CloudThat's assessed the customer's AWS environment to produce Highly Available, Secure, Cost-effective, and Efficient solution implementing VPC design, EKS cluster, CI/CD, monitoring, and security measures to ensure high availability, scalability, and security.

About **MedPay**

MedPay is a tech company creating an API platform named MedPay® Connected Care Network (CCN) that connects healthcare service providers with insurers. This network allows for real-time insurance payments and a cashless claims process for the insured. MedPay provides Healthcare IT services, including provider payment software, invoicing, bill processing, provider applications, insurance payments, loyalty programs, and other tools and services to providers, patients, and payers. These offerings are accessible through an application on the point of sale/payment device.

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. As an AWS Advanced Consulting Partner, and AWS Partner for DevOps Services Competency we have helped small, medium, and big organizations to migrate to the cloud and reap the benefits of cloud adoption. Through our Cloud Data Platform service, we have helped organizations to have efficient Data storage, processing, transformation, and modelling strategies.

The MedPay **Challenge**

Client wanted to modernize their applications and containerize for better deployment and had below critical requirements -

- Achieve a robust and scalable containerization solution for an EKS cluster, implement a CI/CD pipeline for automated and efficient software releases.
- Isolated AWS accounts for different environments to reduce the risk of data breaches.
- EKS migration using microservices architecture for management of the application.
- Implementing auto-scaling and load balancers to handle varying traffic loads efficiently.
- Protect unauthorized access by Data encryption.
- Cost optimization strategies such as resource monitoring, cost-efficient resource allocation, and cloud infrastructure optimization.

About CloudThat

CloudThat Team evaluated the customer's AWS configuration and highlighted opportunities for improvement.

- Applications on Elastic Bean Stalk lacked AWS account separation and automated CI/CD.
- Best practices for containerization and microservice, as well as infrastructure performance monitoring, alerting, and logging at the container level.
- Security concerns about storing sensitive data in plain text were also raised.
- Security best practises like as restricted access, private subnets, dedicated IAM roles, and authentication to EKS using security best practises from code build.

Overall, the assessment found areas for improvement in order to optimise the customer's AWS setup for DevOps best practises and security.

Business Objective

- Reducing costs by migrating microservices from Elastic Bean Stalk to AWS EKS.
- Ensuring high availability and auto scaling as the client base evolves.
- Quickening the introduction of business features to suit client need
- Using an automated monitoring and alerting system to improve troubleshooting efficiency

The CloudThat **Solution**

Following an initial assessment and analysis of the client's requirements, our specialists developed an architecture model that is highly available, secure, cost-effective, and efficient.

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- Provisioning and implementing VPC design following security best practices and network requirements for stage and prod environments
- Provisioning an EKS cluster for high availability and autoscaling of microservices in different environments with load balancing using the right instance types.
- Implementing a CI/CD architecture for better management of builds in both stage and prod environments.
- Deploying continuous delivery process for applications using Argo CD and Argo CD Rollouts.
- Implement monitoring and alerting system by using Prometheus and CloudWatch to monitor CPU and memory utilization of nodes, as well as infrastructure monitoring on EKS.
- Implementing OpenSearch stack for centralized log aggregation with CloudWatch logs.
- Implementing container security using the grype tool to scan and check Docker images for vulnerabilities before pushing them to ECR, with image tagging in place.
- Deploying required configs using configMaps for Data encryption and secure storage.
- Implementing auto scaling for pod and nodes based on custom metrics.
- Implementing secure EKS cluster with restricted access, private subnet, dedicated IAM roles and service accounts, secure authentication, and image vulnerability checks.

AWS Services **Used**

- Amazon EKS
- Amazon VPC
- Amazon EC2
- Application Load Balancer
- AWS IAM
- AWS WAF
- Amazon OpenSearch
- AWS Lambda
- Amazon API Gateway
- Amazon DynamoDB
- AWS Code Pipeline
- AWS Code build

Third Party **Applications Used**

- Prometheus
- Grafana
- Argo CD
- elastic stack
- grype

A Successful **Outcome!**

- Deployed multi-environment setup to meet organizational SLAs and process framework.
- Highly available, scalable, and secure application built to handle high customer traffic.
- Successfully incorporated microservices with DevOps practices in collaboration with developer teams.
- Zero downtime feature releases and fast deployments achieved with best DevOps practices.
- Easily deployed on mobile applications to support a wide range of customers and promote business growth.

Our **Journey**

CloudThat pioneers cloud consultancy services with more than a decade of experience. We are an AWS Advanced Services Partner and an AWS Partner in DevOps Services Competency. We facilitate our clients to build an extremely secure network, keeping any fraudulent activities at bay 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. We are driven by a 150+ cloud-agnostic and tech-heavy dedicated team facilitating organizations to accelerate cloud adoption.

Why You Should Choose **CloudThat Consulting Services**

We are an AWS Advanced Consulting Partner and a House of All-Encompassing IT Services on the Cloud. With our 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 Multi-Cloud Security & Compliance, Cloud Enablement Services, Cloud-Native Application Development, OTT-Video Tech Delivery Services, and System Integration.

Services to 100+ happy clients across the globe.

Our
Industry Partnerships

aws PARTNER Advanced Tier Services

aws PARTNER DevOps Services Competency

aws PARTNER Advanced Tier Training

aws PARTNER Amazon QuickSight Delivery

Thank you
For exploring this Case Study with us

Eager to know about our AWS Services?

Connect with us Now...

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