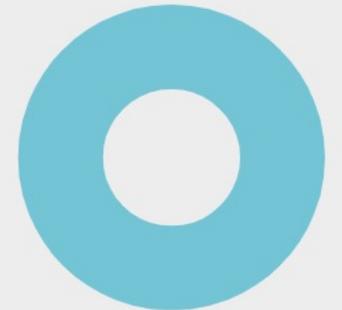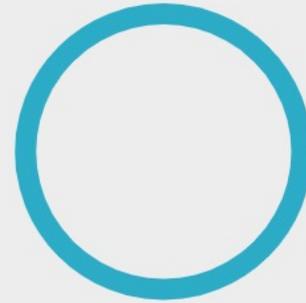# Hospitality Management SAAS application implementation and delivery

Case Studies - 1

Introduction

The client's head office is based in South India with satellite offices and representation in most parts of Asia, Middle East, Europe and Oceania. Unlike traditional hospitality software products that are tied to hardware solutions the application consists purely of a combination of various but seamlessly integrated individual software modules. This gives the end user the ability to combine any number of modules with a hardware platform of their choice. Being a boutique software solution provider we take pride in the level of customer service that we are able to provide where as a customer you are not just another number.
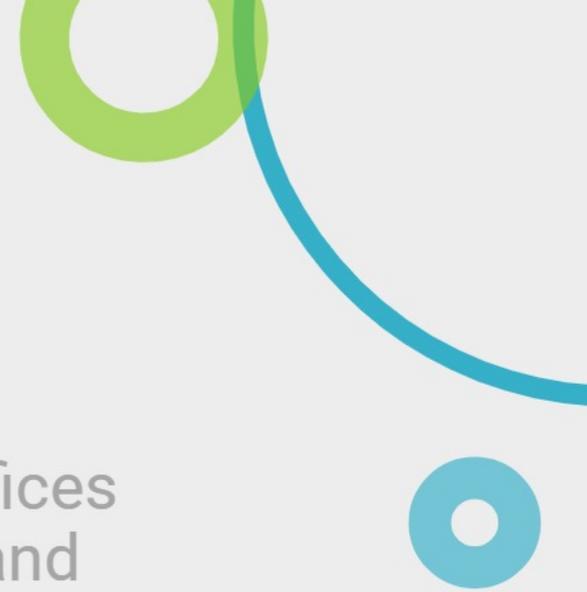
Challenges

- The client is a well known software providers who delivering their services in On premises. Since the customer grown globally they could not manage the environment in On premises. So we got reference from the AWS team and required highly skilled professionals to execute the project.
- They were extending their business in Gulf Countries and Singapore, hence they could not serve the needs of the client abroad with on-prime servers.
- They faced difficulties in maintaining the physical servers and they felt it was not reliable when connecting in a different location.
- They were unable to provide reliable service during peak traffic periods and unable to predict the workload.
- Elasticity is one of the challenges they faced during upgrading the infrastructure.
- Productivity was toughest for them and they were about to answer their customers for the downtime.

Our Solutions

Our expertise in providing the right solutions to customers brought us together. We designed them with a resilient architecture where it could withstand and be recovered with minimal downtime.

We offered them highly available and cost effective solutions as below.

- Virtual Private Cloud created in AWS with Private and Public Subnets with Multiple Available Zones.
- Application developed in DotNet and it supports Windows Platform.
- Created Primary Database server with Windows for MS SQL Server Standard BOL (Bring your Own License) in Private Subnet and Application Server deployed in public Subnet.
- Configured AutoScaling for Highly available and scalable solution with Application Load Balancer to meet the demands.
- CloudFront distribution created for ease of user experience with AWS Edge locations which gives low latency and WAF is configured for Security.
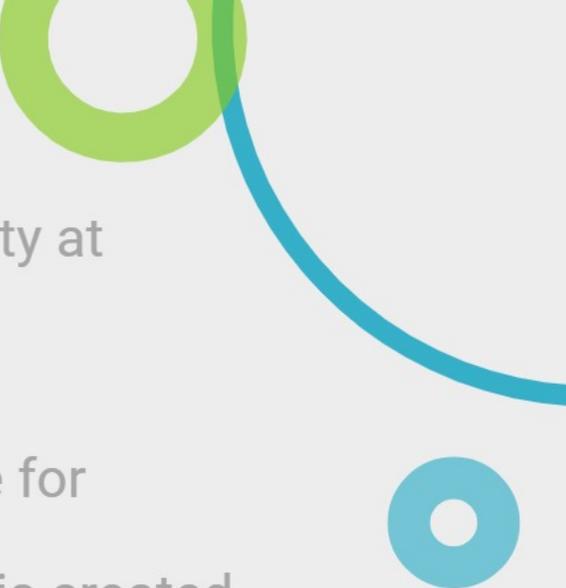
- SSL Certificate created in ACM (Amazon Certificate Manager) for security at Transit.
- EBS volumes are encrypted for the security Data at rest.
- RDS instance created in Mumbai Region for Database DR.
- Same setup created in Bahrain and Singapore region with RDS database for Highly available and scalable solution.
- Database backup is automated to store in S3 Bucket and VPC endpoint is created to connect the S3 bucket locally.
- VPC peering established between Mumbai and Singapore Region for internal RDP access as the public RDP access restricted.
- Bastion host deployed to access the Servers internally in Private via VPN Service.
- DLM (Data Lifecycle Policy) configured to automate the snapshot and AMI of the servers and retain them for a certain period to recover the data, incase of any instance failure, data loss by accidental delete. Thus can meet the RTO (Recovery Time Object) of an incidents.
- CloudWatch monitoring is configured to mitigate the incident response alters on the resource usages like, CPU, Memory, Disk Usage, Network I/O, Instance status check error.

Benefits

- Optimizes costs with an overall reduction of 28%.
- Highly available infrastructure with above 95% SLA.
- High Scalable infrastructure in nature within short time.
- Improved user experience.
- Saved human time to maintain the infrastructure and reduced business downtime for maintenance activities.
- Real time monitoring is straightforward.
- Backup and retrieval process made simpler.
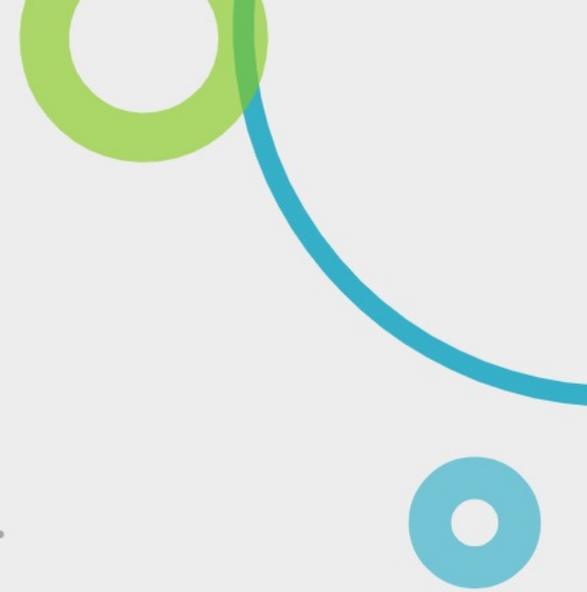
Services Used

- AWS Virtual Private Cloud.
- AWS Elastic cloud compute.
- VPC Peering
- AWS CloudWatch.
- Data Lifecycle management.
- Relational Database service.
- AWS Simple Storage Services.
- AWS CloudFront.
- AWS Web Application Firewall.
- AWS Flow Logs
- VPC Endpoint
- AutoScaling
- Application Load Balancer / Network Load Balancer