CLOUD4C

CASE STUDY

Application Modernization with Azure PaaS



Cloud Optimized and Automated Application Management for A Major Airport in Middle East

Transforming the Web Application of a major Airport in Middle East to Azure Cloud Native Services along with DevOps, enabling the organization with improved operational support, agility and flexibility.

About the Client

Running
25+
airlines to international destinations

Managing over
15.4
million passengers annually

The client is a leading airport in the Middle East. An important transit hub for air travel, it hosts more than 15.4 million travelers annually. It is among top 10 global airports, in terms of punctuality and services. More than 25 airlines operate from here, carrying international passengers and cargo to every part of the world.

Intro / Lead in

The client is one of the major airports in the Middle East handling more than 33,000 flights and over 4.5 million passengers annually. The airport authorities are focused on enhancing airport management, adopting advanced technology to gain operational excellence. Providing real-time flight schedules to travelers and helping them gain access to all relevant information at one place, without delay, has been a priority for the airport authorities. This requires robust backend IT infrastructure, optimized on cloud for secure access and ability to scale, aligned to customer traffic.

Cloud4C deployed Azure PaaS to modernize airport management applications. A number of websites running on different platforms were consolidated on Azure. Our solution also streamlined data management by integrating client infrastructure with Government and third-party applications.

The Challenge

Application Up-time and scalability

The client had an on-premise infrastructure, hosting a number of web applications. The workloads were distributed across platforms and servers. This impacted application performance and uptime. The heterogeneous environment had limited ability to scale up and down, as per end user access pattern.

Content updates and information management

The workloads spread across multiple servers managing different websites for DGCA made it difficult to refresh and update content on time. The process had high dependency on developers as each update had to be coded afresh. This made it difficult to keep the websites up to date with latest information.

Integration with Government and third-party applications

The client being a nodal entity required to assimilate data from other government applications and systems. The airport websites needed to interact with various airlines and service providers to collate complete, relevant and latest information for the passengers. The airport operations applications, thus, had to be integrated with multiple sources for seamless information management.

Maintaining security standards and business continuity

The airport operations management application dealt with sensitive data. Any risk to the IT infrastructure could impact not just business as usual but lead to loss of reputation. The client required robust security and proactive risk mitigation to safeguard their operations. They also needed to ensure business continuity with a robust DR solution.



The Solution

Cloud4C migrated client's on-premise workloads to Azure PaaS for ease of maintenance and access to latest updates. The critical application workloads running multiple websites for the airport, were categorized in a 3-tier microservices architecture. This comprised a Web Based frontend hosted in Azure Application Service, a middle Kubernetes based application tier and a backend Database tier residing on SQL Managed Instance. Airport application management lifecycle was completely automated with AIOps and DevOps integration. The client gained high performing applications and easy scalability with a pay-as-you-grow model of pricing. The swift 3 week delivery won customer delight and accelerated the larger cloud migration and infrastructure modernization roadmap.

Application Modernization with Azure PaaS

Cloud4C teams moved the multiple workloads run on different platforms on Azure for ease of management and high availability. We configured Azure Application Services to consolidate web hosting for various customer facing websites. This ensured segregation of Production and Staging environment while inbuilt load balancers provided for efficient deployment. The client gained better control of build and release of applications with integration of Azure DevOps. Our 24/7 monitoring and robust managed services delivered 99.9% application uptime under single SLA.

Streamlined operations with container-based architecture

Cloud4C designed and developed Azure landing zone for workload deployment on microservices architecture. Our experts created a blueprint of client environment and assessed the readiness for Azure migration with Cloud Adoption Framework (CAF). We deployed Azure Kubernetes Services (AKS) for secured, scalable orchestration for containerized applications. This helped the client gain integrated continuous integration and continuous delivery (CI/CD) experience for application lifecycle management. As a result, the application updates were simplified and the client was able to keep their websites updated with the latest information. The solution architecture ensured seamless integration with multiple third-party applications.

Secure and scalable infrastructure with AIOps based automation

The on-premise workloads were moved to Azure for enhanced security and easy scalability. We ensured foolproof network security with VNet integration and Firewall settings to protect against any malicious intrusion through public internet. Our SOC experts configured SSL certificates for end-to-end encryption of transit data, while Azure Container Registry provided for encryption at rest. The Azure native security tools along with third party monitoring tools powered by AIOps automated threat apprehension and remediation. Threshold capacity alerts ensured system scalability in the event of higher load. Our experts provide compliance control mapping to keep the IT environment audit ready for regulatory requirements.

Robust DR hosted in Azure region for business continuity

We configured DR in Azure region to ensure business continuity in the face of any exigency. The clear line of vision on roles and responsibility and bi-annual drills kept the infrastructure alert and agile for zero impact on business as usual. We configured stringent RPO and RTO ensuring no data loss, keeping the client environment fully functional at all times.



Key Accelerators

- **Azure Benchmark and Services** delivered secure and scalable web hosting, application modernization and automated application lifecycle management
- **Compliance ready processes** kept the client IT infrastructure audit ready for region and industry specific regulation requirements
- **AI Ops powered services based on ITIL** delivered continuous improvement and streamlined IT services, with end to end ownership under single SLA
- **DevOps and CI/CD processes** accelerated development and deployment cycles
- **As Azure Expert MSP** Cloud4C brought in industry best practices and delivered highest uptime

Results

99.9%
Application Uptime

Efficient
operations with automated application lifecycle management

Optimized
cost with pay as you grow pricing

Robust DR
in Azure region with stringent RPO/RTO for business continuity

Testimonial

"Cloud4C delivered a robust application modernization solution within a strict timeline. Their expertise and focus on quality delivery with complete ownership has strengthened our trust, taking us one step ahead in our cloud journey."

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