The Open Group INITIATE Enterprise Architecture Competition for Students 2025

Data centre efficiency through Cloud Migration

Organization: Capgemini

Project Description

The Problem:
As the largest water company, **AGW** needed to streamline its data center operations and eliminate unnecessary costs.

AGW faces significant challenges, including:

- Complexity in IT landscape Architecture with Isolated Infrastructure and Bottlenecks caused due to Slow /manual Deployments.
- Inorganized Inventory- No proper Configuration Management Database of Inventory (CMDB). Difficulties in tracking company's assets and all the complex relationships between them and its stakeholders
- Still running legacy systems due to APP dependencies
- Shared server dependencies i.e., Shared DB's, Tomcat, MQ, Tibco etc.
- High Operational expenses (OPEX) for day-to-day operations of a business

Proposed Solution:

The partners launched a review of the assets hosted in the existing data centre, which then enabled **AGW** and Capgemini to perform a cloud migration to the Microsoft Azure platform

Objective:
The primary objective is to review the **AGW** application landscape, identify opportunities for rehosting, refactoring, retiring, and retaining, and finally migrate assets to the Microsoft Azure platform achieving Client success with below goals:

- Streamlining the Azure & Data centre operations and eliminate unnecessary costs.
- Achieving greater simplicity in Design and decreasing carbon emissions
- Scalability, flexibility, and cost-efficiency

Implementation Approach:

- Capgemini and **AGW** 's estate to assess & gather data that could be used with a decision tree encompassing business rules and logic to determine the most effective approach with each asset.
- Based on these data-based judgements, **AGW** and Capgemini identified those applications that could be hosted on a cloud platform and performed the necessary planning and designing the migration plans using Common methods include lift and shift, refactoring, and replatforming etc.
- Throughout this project lifecycle, the companies utilised an Agile Architecture methodology rather than the more traditional waterfall approach

Impact on Enterprise Architecture: [Only for the Post-Graduate category]
The project will have a profound impact on **AGW**'s enterprise architecture by:

- Streamlining Digital Operations with increased ROI
- Reduced Application or Database downtime with Cloud resiliency
- Effective **business continuity** and **disaster recovery** (**BCDR**) with Azure ASR
- Improved CMBD in Azure
- Greater Security & compliance with Azure: IAM (RBAC), Azure Security benchmark, Defender, SIEM etc.
- Enabling the adoption of emerging technologies such as cloud computing & DevOPs to drive innovation and efficiency.

Deliverables:

- Project Executive Summary
- High-level overview of the problem, solution, and expected outcomes.
- Data centre efficiency through cloud migration to the Microsoft Azure platform.
  Reduce 50% of assets hosted in the data centre.
- EA Artifacts
  - A Cloud migration strategy
  - DDDQs for Application Discovery and assessment
  - Baseline Architecture Models:
    - Current Business Processes and IT Systems Overview.
  - Target Architecture Models:
    - Business Logic & Application Architecture
    - Technology Architecture: Reference Architecture Azure Landing zone; CAF and WAF models for Cloud adoption and migration, Reference Architecture for BCDR, Designing High -Availability for APP and Data Residency using Azure Native solutions etc.
  - Opportunities for Improvement and Solutions
    - Identified gaps in the Infra Deployment by ***Azure Advisor.***
    - Further innovation and improvement in streamlining Operations: Use IaC or CI/CD automation for Quality and consistency.
    - Migrate to Azure in phases and modernize for faster innovation and a higher return on investment (ROI).
  - Governance Framework
    - Policies for EA adherence, Technical and Architecture Governance – TOGAF/ Scaled Agile Integrated Architecture Framework, Azure CAF, and Azure WAF etc.
- Implementation Roadmap
  - Phased deployment strategy with milestones and timelines.
- Final Presentation
  - Demonstration of the architecture and its alignment with organizational goals.

***** Additional levels of detail for these artifacts would be required in post-graduate category applications. These levels should be clarified during EA knowledge orientation session.

Description of Tools/ Technology:

The project will leverage a combination of technologies, including:

- Microsoft Cloud Adoption Framework for Azure
- Azure Well-Architected Framework
- Azure Cloud Strategy and Architecture Services
- Tools: Azure Migrate - Cloud Migration Tool, Azure ASR- for DR and key migration services available on Azure
- Collaboration and communication platforms (Outlook/MS Teams, Webex etc)

Problems and Limitations:

Potential challenges and limitations of the project include:

- Resistance to moving to Cloud and lack of expertise
- Budget constraints - Azure migration can be expensive.
- Adapting to evolving IT Trends and Technologies
- Oversee Technical complexity & Vendor dependencies.
- High Performance – ability to deliver with quality & greater efficiency