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Global Hosting Strategy Empowers a **Digital Services Leader to Boost Savings**

◢ Case Study

Overview
Consolidating operations and costs

A global provider of digital experiences, using a variety of cloud host providers, was facing challenges with consolidating operations and costs. The company wanted to explore opportunities to streamline IT infrastructure management and optimize costs with a global hosting strategy.

Zensar's brief:
- Shortlist the cloud platform best suited for the client's IT ecosystem.
- Plan and migrate two applications, chosen after considering key factors.
- Verify tangible improvements in terms of operations and costs after the migration.

Beyond the brief:
We migrated one application to find opportunities to fine-tune the process. Using the learnings from the first migration, we optimized the migration process for the second application and future migration projects.

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Challenges

Lacking a long-term hosting strategy

The IT department did not have a formalized hosting strategy. The absence of a long-term hosting strategy resulted in too many tactical decisions that led to issues with operational efficiency and cost optimization.

Solution

Migrating seamlessly to a single cloud platform

Phase 1: Choosing the right cloud platform

We employed the following processes, in collaboration with the client's in-house team, to arrive at a decision on the cloud platform most suitable for the client's environment:

- **Diagnosis:** We thoroughly assessed the issues with the organization's hosting solution.
- **Policy:** We defined the requirements and business priorities in choosing the hosting platform.
- **Shortlisting:** We narrowed down the cloud hosting options.
- **Technical proof of concepts (TPoC):** We explored how the shortlisted options would work for the client's ecosystem.
- **Gap analysis:** We determined the gaps that the client would need to solve for the shortlisted options.

At the end of the process, Google Cloud Platform (GCP) was chosen as the strategic hosting platform. Further, a decision was made about the client's IT department owning its deployments, in line with the preferences of the client's Senior Developers, Tech Leads, and Principal Engineers.

Top four reasons to pick GCP

1. GCP is much more intuitive for a developer to use with no prior knowledge, compared to other cloud platforms.
2. GCP's documentation is clearer, compared to other cloud platforms.
3. GCP Cloud Run's pricing and scaling model makes it easier to predict spending, compared to models offered by other cloud platforms.
4. The client team already had some knowledge and experience of using GCP.

Phase 2: Planning the migration

These were the key tasks involved in planning the migration of applications:

- Investigate if a couple of chosen apps were good contenders for the migration.
- Explore functionalities of GCP and, more especially, GCP Cloud Run.
- Probe the GCP Secret Manager capabilities.
- Examine authentication into GCP Cloud Run apps, leveraging Akamai.
- Deploy scripts/steps in Octopus to deploy to GCP.
- Determine which docker images are in use, leveraging GCP command line interface (CLI).

Phase 3: Executing the migration

Leveraging the findings and preparations from the planning phase, we migrated the applications with five pre-determined steps:

- **Step 1:** Add secrets to GCP Secret Manager.
- **Step 2:** Add the GCP base variables set for the project.
- **Step 3:** Enable GCP steps in Octopus Deploy.
- **Step 4:** Deploy to GCP and test the application.
- **Step 5:** Update Akamai configurations to route to GCP.

Solution highlights

- **Artifact Registry** was used to store app images, which Cloud Run uses to spin up new instances of apps.
- **Cloud Run** was used to deploy apps, as it offers many useful features:
  - Auto scaling
  - Quick deployment and managing of services
  - Efficient container workflow
  - Security around secrets

- **API Gateways** were used to make requests to apps as well as enable access to external URLs and the Cloud Run service.
- **Secret Manager** was used to store secret values that can be configured on app deployments.
- **Identity Access Management (IAM)** was used to manage permissions for all resources within GCP, leveraging capabilities to lock down resources and create very granular permission sets for users and service accounts.

Impact
Enhanced agility and savings

- Better understanding of the gaps and control of the methods to address them, without the compromise of a service-wrap approach that requires agreement with another team
- Full control of the flow of applications from development through to production, without dependence on another team
- Ownership of the roadmap for tooling and processes, in addition to the infrastructure

Business outcomes: The solution enabled greater control over the migration and consolidation process — making deployments faster, services more reliable and easily scalable, and IT spending more predictable and efficient.

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