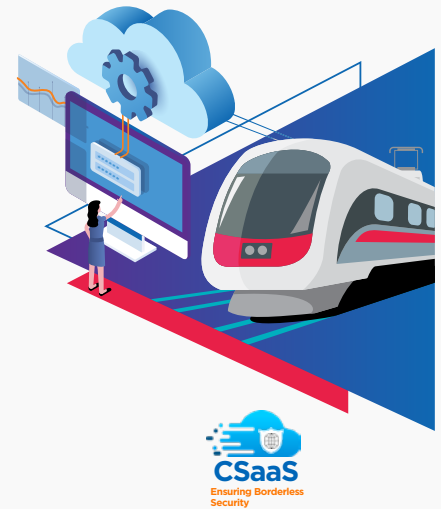


# Driving cloud transformation for application resilience

A case study by HCL for a rail service operator in Australia



## About the Client

The customer is a rail services operator for the Australian government that provides passenger rail services across a major metropolitan region. They own and maintain a hybrid urban-suburban rail network and provide access to other passenger and freight operators in the area. In its 8-year history, the operator has managed a railway network of over 800 km., across eight lines and 170 stations, and serves nearly 400 million passengers annually.

## Customer Goals

Our client was a legacy service provider that operated in a highly dynamic business landscape. To keep up, they urgently needed to improve customer experience and modernize their existing application infrastructure. This meant that they needed to enhance operational agility and resilience, and comply with regulatory standards in a way that was efficient and effective. Specifically, their core goals included:



**Application resilience:** The client required wholesale transformation of their digital architecture. This included the re-hosting of applications and related infrastructure on to a secure and hardened multi-cloud infrastructure on the AWS and Azure public cloud platform.



**Compliance Standards:** The transport agency aimed to deploy a Greenfield Cloud Security design for their multi-cloud environment that assured 360° security to meet the standards of the Cloud Security Alliance (CSA).



**Cloud Security:** The client wanted to adopt a cloud security design that would leverage the use of cloud native services in a completely secure manner.



**Secured DevOps:** They needed to undertake a ground-up reformation of their application development process by building a secure DevOps environment.

## Solution

The customer turned to HCL's CyberSecurity-as-a-Service (CSaaS) to help them achieve their goals and manage the complexities of advanced applications security and migration. This required HCL to deploy a broad range of solutions that included:

- AWS Native Solutions: AWS IAM, Amazon Inspector, Amazon GuardDuty, AWS Security Hub, NACL, Security Groups, AWS Shield Adv, Cloud HSM / KMS, AWS WAF, Cloud Watch etc.
- Azure Native Solutions: Azure AD and RBAC, Azure DDoS, Application Gateway & WAF, Azure Key Vault, Azure Security Center etc.
- Third Party Solutions: FW, CWP, DAM, VA, and Splunk

HCL created an optimal application transformation and security strategy with an integrated approach across three key stages—assessment, planning, and building.

### Stage I: Assessment and Consulting



- We designed a security framework and solutions to cover all aspects of IT infrastructure, application, and data security, in compliance with CSA standards.
- Our team created a Security Zoning Model and Security Control Matrix which were aligned with the client's requirement.
- HCL conducted a thorough evaluation of AWS native security controls and the Azure public cloud platform to identify all capabilities and gaps. We also conducted a comparative analysis of equivalent third-party solutions.

### Stage II: Architecting and Migration Planning



- HCL deployed innovative, server-less technologies like AWS Lambda to automate and integrate third-party solutions with native solutions for better visibility, a faster response, and a seamless information exchange.
- HCL established a DevSecOps pipeline to ensure continuous monitoring, scanning and deployment, and integrations.

### Stage III: Build and Migration



- Our build strategy included using native "Infrastructure as a Code" services such as AWS Cloud Formation template and Azure Resource Manager (ARM) templates to achieve maximum build phase automation capabilities.
- We then planned the migration of existing workloads to the newly designed IT architecture.
- The HCL team helped set-up a centralized Security Incident and Event Management (SIEM) solution to ensure continuous monitoring and alerts across a multi-cloud environment.
- HCL developed the stated security controls using industry best practices.
- The team then managed and executed the migration of all existing workloads to the new platform.

## Business Benefits

With HCL CSaaS, the client was able to migrate their existing application workload into a multi-cloud environment in a seamless and efficient manner. With round-the-clock support from skilled architects, HCL's next generation security solutions and framework ensured that all customer data and workloads were protected with continuous assessment and transformation and active across a seamless delivery model. Overall, HCL was able to help the customer achieve its goals of fail-safe applications resiliency and security across its cloud environments.

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