

## STANDARDISED, SCALABLE CLOUD INFRASTRUCTURE BREATHES NEW LIFE INTO HEALTH INSURER'S DIGITAL BUSINESS PLATFORM

*nib standardises its cloud infrastructure across business units, enabling automation and improving its risk and compliance posture*

- **Lack of platform automation hampered new business creation**
- **IT operations needed efficient and scalable platform which was also secure and resilient**
- **CMD Solutions delivered a secure, resilient AWS platform with standardised, infrastructure-as-code methodologies**
- **New Red Queen Platform scales dynamically using DevSecOps processes without compromising security**

Leading health insurance company nib needed a new platform to enable its digital innovation programs. New business creation had been hampered by a lack of platform automation and, more crucially, an absence of standardisation in deployment and testing practices. Each business unit was focused on its own project requirements, and there was no sense of an overarching, organisation-wide platform requirement.

nib commenced its Amazon Web Services (AWS) journey in early 2015, completing a proof of concept that determined AWS was to be the Infrastructure-as-a-Service (IaaS) platform of choice. A business case to transition the digital footprint of nib's business to AWS was approved, and the migration program commenced in earnest in December 2015.

nib required specialist assistance to build a robust AWS environment and ensure the platform incorporated the appropriate controls to comply with its governing standards and guidelines.

### nib at a glance

- **Industry:** Health insurance
- **Founded:** 1952 as Newcastle Industrial Benefits
- **Headquarters:** Newcastle, NSW

### Cloud was viable, but optimisation challenges remained

Moving to cloud was established as part of nib's strategic direction and the company formalised its cloud migration work in a new program dubbed the "Red Queen Platform".

*"Working with CMD Solutions to build Red Queen Platform on AWS has given our business the ability to operate a highly secure, scalable and robust operating environment and allowed us to further drive business agility, growth and maturity"*

*Brendan Mills, Chief Information Officer,  
nib health funds limited*

### GOING CLOUD AT nib



The decision to go cloud was established in 2015



Business units lacked a standard platform for new services



Skills were needed for large scale migrations

nib engaged Australian Advanced AWS consulting partner CMD Solutions to perform an AWS platform review and enablement project focused on building in the necessary security and compliance controls.

CMD Solutions co-founder and director, Adam Durbin, says nib stakeholders needed confidence the appropriate controls and guardrails were implemented into the new platform to provide an implicitly secure environment for application development.

There were strong business drivers for cross-functional application delivery teams to migrate existing .NET applications to AWS, but there were no detailed migration patterns. Furthermore, nib staff lacked AWS architectural skills or expertise for undertaking large-scale migrations.

### Cloud technologies and services used at nib

- Defence in depth multi-account and VPC architecture
- Automated cloud infrastructure provisioning
- Full high-availability, auto-scaled architecture
- EC2 Container Service
- Elastic Beanstalk
- RDS PostgreSQL
- Cloudwatch, CloudTrail, Config and Trusted Advisor
- GitHub Enterprise
- BuildKite
- Nessus
- Sumo Logic

## A cloud architecture for all areas of the business

The IT operations team at nib needed a more efficient and scalable platform that was also secure and resilient.

*“Adhering with nib’s regulatory industry standards while creating a scalable and dynamic public cloud environment was challenging. CMD assisted us with creating a secure and scalable platform that ensures security controls are baked into the DevSecOps automation pipelines along with a robust cloud network architecture”*

*Mat Finch, Head of Emerging Technology,  
nib health funds limited*

CMD Solutions performed a gap analysis and created a strategic AWS adoption roadmap to help nib transform from the existing platform state to a mature, production-ready environment. The team then followed through from the initial advisory and design work to deliver DevSecOps-focused implementation and consulting services designed to ensure nib was ready to meet any business demands placed on the platform.

“Our project team created an automated, secure and highly resilient platform with the aim of making cloud services easier for all business units to adopt and manage through the use of standardised infrastructure-as-code methodologies,” Durbin says.

“In addition to reducing operational costs compared to the existing on-premises model, the goal was to reduce risk by adopting a highly secure and resilient architecture. As an added benefit, the AWS implementation provides business flexibility by allowing nib to scale platform resources dynamically to meet demand.”

## A highly available design for mission-critical workloads

Insurance and other financial services companies cannot afford downtime and moving to the cloud must not compromise the availability of revenue-generation services.

*“We have numerous use cases across the nib group where we know that without leveraging Red Queen Platform we would have severely hampered the speed to market and quality of solutions deployed”*

*Brendan Mills, Chief Information Officer,  
nib health funds limited*

To ensure stakeholders were confident growing nib’s business in the cloud, CMD Solutions created a highly available, resilient AWS architecture across three availability zones, drawing on its extensive experience in the finance and insurance industries.

CMD Solutions co-founder and director Andre Morgan, says thanks to production-grade security controls and processes, the Red Queen Platform can be scaled dynamically using automated DevSecOps deployment processes without compromising their security compliance position.

“We designed and implemented a cloud platform that provides high availability and business continuity using various AWS and third-party security controls in a low-cost, consumption-based, pay-as-you-go model,” Morgan says.

Among the many benefits that the project has delivered to nib, is a much stronger risk and compliance posture than had been evident previously, thanks to enterprise-grade security controls embedded into the architecture.

“We provided regulatory bodies with evidence the Red Queen Platform did not present any significant security vulnerabilities,” Durbin says.

In addition, the scalable architecture supports rapid development of new business initiatives across the group, enabling a faster time-to-market for new applications and supporting strategic organisational changes.

The design ensures the Red Queen Platform is fault-tolerant and resilient by eliminating any single point of failure and embedding security controls at all layers of the stack.

*“Our key innovation initiatives that differentiate us are all underpinned by our highly resilient AWS platform. There’s never been a more exciting time at nib, we’re changing the face of health insurance”*

*Mat Finch, Head of Emerging Technology,  
nib health funds limited*



Business units can deploy new services



Existing cloud service optimised and improved



Platform resources can scale dynamically