

# Southern Cross Healthcare Migrates Critical Patient Records to AWS



As New Zealand weighs up the [introduction of its first national health platform](#), private healthcare providers and IT experts are forging ahead to disrupt the status quo. They believe patient outcomes can be drastically improved by eliminating data silos among practitioners and sharing information beyond hospital walls.

[Southern Cross Healthcare](#) (Southern Cross) is the largest independent private healthcare network in New Zealand, with 10 wholly owned and numerous joint-venture hospitals nationwide. In recent years, the organisation has extended its care beyond its hospitals, into community physiotherapy and rehabilitation as well as personalised healthcare solutions for New Zealand workplaces. In line with its mission to provide affordable, high-quality healthcare to more Kiwis, Southern Cross is undergoing a digital transformation. It aims to improve clinical workflows and patient outcomes through digitisation of clinical pathways and improving information accessibility.

## Migrating Core Electronic Patient Records System in 5 Months

Since 2015, Southern Cross has engaged with AWS Partner [Orion Health](#) to deliver its Clinical Workstation, an electronic patient record system used by most of Southern Cross's 2,700 employees. Clinical Workstation uses Orion Health Clinical Portal to provide a single view of all patient data and includes a suite of role-based Orion Health applications that streamline processes across the entire patient journey, from admission to discharge and follow-up.

Southern Cross is actively pursuing a paperless strategy through its ongoing development and digitisation projects. Per the recommendation of Orion Health, Southern Cross began migrating its Clinical Workstation from on-premises servers to AWS in late 2020.

"Our digital strategy is predicated on leveraging cloud-based infrastructure and services for resiliency and access to evergreen capabilities. We're now designing and building new customer experience capabilities using cloud services, in turn providing flexibility to move with the business," says Trevor Delany, chief digital officer at Southern Cross Healthcare.

The migration to AWS was completed in five months, including a cutover period during the holiday season from December 2020 to January 2021. A detailed planning, testing, and governance regime was established along with comprehensive migration practices, to ensure that Clinical Workstation—a critical business platform—was operational from day one.

## Assuring Stability and High Uptime Countrywide

With cloud-native tooling and automation on AWS, uptime for the Clinical Workstation has improved to 99.99 percent, from 99.5 percent on premises. [Elastic Load Balancing](#) automatically distributes incoming application traffic across multiple [Availability Zones](#), promoting stability.

Additionally, by leveraging [Amazon Relational Database Service](#) (Amazon RDS) for storage and backup, Southern Cross can access multiple failover zones. This facilitates high availability and code-based disaster recovery, features that were not possible on premises. Consistent access to the Clinical Workstation is vital to guarantee doctors, nurses, and administrative staff across the Southern Cross network can recall patient data at any time. "The experience of our staff in more remote areas of New Zealand's South Island is identical to the staff experience at our largest hospital in Auckland, in [the] North Island. That's an important requirement from a healthcare delivery perspective," Delany says.

## Automating Deployment and Scale-Up

Automation has also improved deployment on AWS. Members of the Digital Services team at Southern Cross have commented on how their release cycle is faster, and subject to far

## About Southern Cross Healthcare



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less disruptions than in their on-premises environment. Scaling during both development and production is now on demand, with source code and configurations automatically retrieved for deployment. As a result, scaling up for new sites or use cases is much less of a concern.

In addition, Southern Cross's CPU utilisation rate on AWS is now 40 percent lower. This ensures plenty of reserve compute capacity for forthcoming development work. A streamlined development environment and deployment process will help Southern Cross achieve swifter development cycles and more frequent innovation post-cloud migration.

#### **Strengthening Security with Cloud-Native Services**

Stronger data privacy and security through robust release governance was another benefit of cloud migration. "We centralised all of our policy-driven management and can better protect our applications with the services AWS offers out of the box," Delany says.

Southern Cross is using [AWS Shield Advanced](#) to prevent distributed denial of service (DDoS) attacks and [AWS WAF - Web Application Firewall](#) to protect sensitive patient data. A rigorous privacy impact assessment was also performed prior to migration. Data is currently stored in the [AWS Asia Pacific \(Sydney\) Region](#), which ensures full compliance with all healthcare-industry data residency requirements.

#### **Reducing Time-to-Insights with Higher Visibility**

Monitoring often goes hand in hand with security, and this has also improved on AWS. Orion Health has enhanced visibility through centralised logging and cloud-native dashboards. "We leverage native AWS monitoring in addition to our internal monitoring tools built on the AWS platform. This gives us an integrated overview and yields more insights into operational stability and user access," says Niru Rajakumar, vice president customer success – APAC at Orion Health.

Orion Health can also retrieve data for reporting much faster than when Clinical Workstation was running on premises. "Communication channels have opened up with enhanced transparency around system metrics," Rajakumar says.

Delany adds, "With our shift to AWS at a governance level, we're starting to see more insights into the Clinical Workstation platform performance that we haven't seen before, and that gives me confidence to carry out data-driven analysis in the future."

#### **Engaging Customers Directly in Health Communication**

On the development roadmap, Orion Health is looking at using AWS services to launch new products for customers like Southern Cross, bringing patients directly into digital healthcare communications for the first time.

Delany concludes, "Our patients and health consumers are expecting significantly greater digitisation of processes and engagement to benefit them. We are listening intently and putting in place platform foundations to move as quickly as possible. With our core electronic patient record system on AWS, we have an agile technology backend in place and a partner in Orion Health who is continuously diversifying to add value to customers like us."

## About Orion Health

Founded in 1993, Orion Health is a healthcare information technology provider whose mission is to advance population health with precision medicine solutions for delivery of care across all healthcare ecosystems. Its technology is currently used by hundreds of thousands of clinicians across the globe and manages more than 100 million patients.

