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INTEGRATION EXPERTS

Optimus supports world-leading NHS cloud migration project

Optimus IT Infra is playing a central role in the world-leading cloud migration project at NHS North West London ICS, where four separate trust integration engines (TIEs) are being migrated onto the InterSystems HealthShare® Health Connect Cloud™ platform.

Better information sharing between trusts, clinicians and patients is a fundamental part of the vision for integrated care outlined in the NHS Long Term Plan. NHS North West London Integrated Care System (NWL ICS) is working with Optimus IT Infra on a world-leading cloud migration project that will boost collaboration and speed up data flow between health and care settings across the region.

Background

NHS North West London ICS provides health and care services to a population of 2.4m across North West London. The region includes four acute trusts – London North West University Healthcare NHS Trust, The Hillingdon Hospitals NHS Foundation Trust, Imperial College Healthcare NHS Trust and Chelsea and Westminster Hospital NHS Foundation Trust.

Each trust is looking to collaborate on the service integration taking place in health and care across the region. Enhancements to data sharing and technical infrastructure were essential.

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Challenge

Each organisation used a separate on-premise trust integration engine (TIE) to share data and connect to multiple internal and external systems. While each trust was using a separate TIE, there was an opportunity to look at more efficient ways of working in the development and maintenance of interfaces between systems across the ICS. The plan was to combine the four separate TIEs into a single Health Connect Cloud running on the AWS Cloud platform, in line with the NHS' cloud-first policy.

The trusts were managing 395 different interfaces and processing 129m messages per month between them, so consolidation and rationalisation were priorities. Collaborating on interface development would enable a 'build once and reuse' approach. Additional drivers included plans to move to a single instance of the Cerner electronic patient record (EPR) in 2023 and to consolidate on downstream clinical systems where it made sense to do so.

"Moving to a single integration engine provides the foundation for efficient real-time data sharing across different care settings," said Matthew Kybert, Deputy CIO for System Solutions at Imperial, Hillingdon and London North West NHS trusts. "We are able to develop and deploy interfaces at scale and more efficiently across the ICS."

Solution

Consolidating each integration engine into a single cloud-based TIE was a complex task that involved moving current infrastructure to the cloud.

The Optimus team was asked to support the NWL TIE Programme to develop and migrate the necessary interfaces as part of an ambitious programme that is believed to be a world-first in the sector for the technologies involved.

Optimus has provided integration development expertise in conjunction with in-house teams, working with the four acutes on digital projects since 2015. It has consistently delivered high-quality support in strategy, development, testing and maintenance.

Optimus is a certified partner for the InterSystems product and has specialist development skills on the Health Connect platform.

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Matthew Kybert
Deputy CIO for System Solutions at Imperial, Hillingdon and London North West NHS trusts

Experience and insight drive progress

Using its extensive expertise in healthcare IT and integration, Optimus has tailored the migration programme to meet individual trust needs. After analysing the InterSystems product and interface architecture, Optimus reviewed multiple migration options with each trust and InterSystems. All parties agreed on the target architecture and how work would be phased and interfaces prioritised.

Optimus has created a migration approach where interfaces are optimised and then moved from on-premise environments to a new development environment on the cloud. From there, they move to a test environment before going live. Three interfaces were put live in October 2022, and progress has been rapid since then.

Rigorous testing is helping ensure a smooth transition. Optimus has put in place methodologies that ensure that the different network infrastructures communicate correctly so that messages are consistent and no data is lost. And as message volume increases exponentially as new systems move to the cloud, it also checks that the new platform has the necessary capacity.

Collaboration key

Optimus is working closely with InterSystems to ensure the migration runs well. Optimus has created bespoke adapters so that non-conventional interfaces could connect individual trust data to the cloud-based integration engine. It has also introduced middleware it had used on an earlier NHS project to synchronise data between on-premise and cloud systems without exposing internal folders.

Benefits realised

Information can now be shared more easily between trusts and with external systems. Optimus is on course to consolidating the 295 interfaces to under 150 and has introduced innovations such as GitLab to enable more robust version control. Upgrades and patches are done once and applied to systems across each trust. Capacity can be flexed using scalable cloud architecture.

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What next

At the start of 2023, all four acutes are connected to a cloud environment. The lessons from this programme will be invaluable to the many other trusts looking to move to a consolidated cloud-based integration service. The ICS has been able to draw on the rich technical knowledge of Optimus to help trusts come together to deliver a world-leading healthcare cloud migration.

"The use of InterSystems HealthShare Health Connect Cloud at North West London is a visionary innovation. We want to help realise the benefits of the cloud for our NHS customers and this is an excellent example. Optimus played a key role in this collaboration, and I am grateful for the speed at which they became accredited for implementing and supporting our cloud-based digital health platform and their very professional overall approach to our partnership"

Chris Norton
Managing Director of InterSystems UK and Ireland

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Contact us

To find out more about the programme, and how Optimus can help, please contact:

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