

Rea Vaya | South Africa | Transport and Logistics | Intelligent Infrastructure

Rea Vaya take their entire ticketing platform to the cloud

Client profile

Rea Vaya is a bus rapid transit system that links the Johannesburg CBD and Braamfontein with Soweto. As one of the first bus rapid transit systems in Africa, the construction of Rea Vaya was one of the most ambitious projects undertaken by the City of Johannesburg. Since its launch in 2009, the project has been creating vibrant spaces and connecting previously unlinked economic nodes across the city and there are plans in place to expand the system towards Sandton, Rosebank and Midrand.

Rea Vaya currently has 48 stations and 10 median key stations that are operational on 59km of trunk routes. To date, Rea Vaya has a fleet of 277 buses and the Phase 1C bus fleet will consist of 240 to 260 buses.

As part of their first systems upgrade in five years, they needed to seamlessly migrate and replace legacy IT infrastructure that was experiencing performance issues.

Summary

The partnership between Rea Vaya and Dimension Data has taken Johannesburg one step closer to becoming a true smart city that delivers technology solutions to improve the lives of its residents. When the infrastructure underlying Rea Vaya's electronic ticketing system needed an upgrade, it was clear that a long-term solution would be preferable to add-ons and patches. Rea Vaya approached Dimension Data to assist and agreed the best way forward would be to move the ticketing system to the cloud through our Cloud Managed Hosting solution, Virtual Data Centre (VDC). Offline testing reduced the cost and risk of the project, and the migration was completed in five months with no interruption to services. The move to the cloud has also enabled Rea Vaya to save on the expenses normally associated with self-managed IT.

Vision

A first-class electronic ticketing upgrade

Rea Vaya uses an electronic ticketing system and, as part of their first systems upgrade in five years, they needed to seamlessly migrate and replace legacy IT infrastructure that was experiencing performance issues as it quickly reached end-of-life. Ad hoc hardware add-ons and software upgrades would have patched the electronic ticketing system to some degree in the short term, but this was not an adequate solution for such an important transport network.

They were faced with a dilemma: the system was in dire need of an upgrade to ensure ongoing service to commuters, but how could they upgrade the system while still keeping it fully operational? Uninterrupted electronic ticketing – including loading of funds to cards and accurate reading of those cards – is essential to the smooth running of the Rea Vaya network and, by extension, traffic flow throughout the city.

Halting electronic ticketing while a new system platform was tested and installed was simply not an option. Rea Vaya approached Dimension Data to assist with a feasible solution. After in-depth consulting, a rollout plan was developed to move the ticketing system to the cloud through our Cloud Managed Hosting solution, Virtual Data Centre (VDC).

The entire ticketing system's cloud migration project was completed in just five months, from cloning Rea Vaya's existing system to testing the compatibility of the existing device IP addresses with the new system – all without interrupting the current services.

Transformation

Full cloud migration in just five months

The entire ticketing system's cloud migration project was completed in just five months, from cloning Rea Vaya's existing system to testing the compatibility of the existing device IP addresses with the new system – all without interrupting the current services. Our team worked closely with Rea Vaya at every stage of the engagement to deliver end-to-end success.

Provisioning a development environment was an important new feature of the Rea Vaya system for testing during the transition phase, as was a scalable, managed cloud service to protect against future system outages. We built the test environment to mimic Rea Vaya's existing system, using the same IP address range that is hardcoded into existing hand-held card scanners.

Testing was completed offline without reconfiguring or replacing the devices, significantly reducing both the cost and the risk of the project.

Results

Partnering on the road to innovative change

By deploying robust virtual server technology, we future-proofed the Rea Vaya system and made sure it can scale up and down as it evolves. This helps them manage costs, human resources and, most importantly, passenger needs.

This cloud migration helped Rea Vaya reduce its need to purchase servers or operate data centres. This presents significant savings on hardware, personnel, utilities, and other expenses required from self-managed IT. Resources previously stored on servers at Rea Vaya premises are also now hosted with us, taking advantage of our scale and on-site support.