



Irembo Builds Digital Government Services With Percona

The challenge

Irembo is a technology company that delivers digital services online using a range of open source technologies, customer service and modern web application design techniques. The company works with the government in Rwanda on IremboGov, which allows citizens to apply and pay for more than 100 public services online with improved experiences, faster delivery and reduced costs. Irembo offers a combination of automation and online service provision to support its vision of becoming the Pan-African catalyst of transformation through technology.

As part of its approach to service delivery, the Irembo team uses open source software and cloud-native approach to take advantage of the latest developments and innovations that are available. Using open source, the company can build and operate digital services for the public without being locked into any specific solution.

To deliver these digital services, the Irembo technology team needed to support cloud-native data platforms that could cope with the scale, size and speed requirements that Rwandan citizens required. While open source technologies could meet these requirements from a technical perspective, the team at Irembo wanted to get additional support and expertise to help in their build processes.

The solution

Elly Kadenyo, Database and Data Consultant at Irembo, led the team responsible for the company's cloud and data platform strategy. Kadenyo looked into who could support the company's approach and help them to be agile, nimble and fast to deploy, as well as ensuring that any deployments could scale up to the workload levels that the Irembo team expected their applications to deliver.

The team decided it would need multiple different databases to support their applications and service requirements, as well as implementing them on Kubernetes. The team at Irembo chose Percona as its partner for database deployment, operations and management as the company could support multiple databases on Kubernetes with one team, rather than having to work with multiple support providers.

Working with Percona

The Percona team supported Irembo in designing and implementing its database workloads in containers to support how citizen services are delivered in IremboGov and IremboPay. The team uses PostgreSQL and MongoDB for specific workloads within these applications, and Irembo could automate deployment for these databases in containers with Percona Operators. This made it easier to develop applications across the whole lifecycle for applications, from development, testing and staging through to deployment and production. The operators offered out-of-the-box high availability for both MongoDB and PostgreSQL to ensure a high level of uptime for the supported applications.

CASE STUDY

The Irembo team is able to support multiple environments with uniform configurations that are easy to reproduce using Helm charts. Once database instances are deployed using Helm, the Irembo team uses Percona Operator for PostgreSQL and Percona Operator for MongoDB for container management and orchestration.

This consolidated approach makes it easier for the Irembo team to build and operate applications and database infrastructure together, and scale those workloads up to meet citizen demands around performance and availability. Irembo's DevOps team can manage database instances effectively, improving their speed of delivery and performance as a team. This has made it easier for IremboGov to continuously add more services and functions for citizens over time, while also making it easier and more cost effective to handle payments for those services.



*When we started working on IremboGov, we wanted to deliver the best possible experience to citizens around how they interact with public services. **The IremboGov service has enabled the Rwandan government to go paperless on almost 300 distinct services** and in the process lessened the time it takes citizens to acquire the automated services. We have also **reduced the cost** to deliver payments for those services with IremboPay, making the process efficient and seamless as opposed to when IremboGov used to rely on external payment providers. **We get the best of open source and we are not locked into any single database, and we get the best possible support and service for our database clusters with Percona.***

Elly Kadenyo

Database and Data Consultant at Irembo

Irembo delivers public sector services for the people of Rwanda, supporting them with almost 300 digital services that citizens can use and pay for what they need. The company is expanding its service catalog across Rwanda's public sector, supporting dozens of organizations with their digital service delivery projects.

The project delivered the following results:

- Cloud-native database support for PostgreSQL and MongoDB
- Percona Operator for MongoDB and Percona Operator for PostgreSQL for these databases streamline and automate deployment of applications
- Support for MongoDB and PostgreSQL database systems from the world's leading open source database experts

About Irembo



Irembo is a technology company founded in Kigali in 2014 to make Rwanda a digital society. In July 2015, it launched its first product in partnership with the Government of Rwanda, IremboGov. As a Digital Services Partner of the Rwandan Government, Irembo delivers services and innovative digital solutions that enable public agencies to process millions in revenue digitally and help citizens access public services efficiently. Irembo is part of the Smart Africa Alliance, contributing to the development of the digital economy in Africa and collaborating with other stakeholders on the continent to capitalize on the various opportunities available in the African market.

Contact Us

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