

Orange Sonatel launches new services in weeks with Red Hat OpenShift



Software and services

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Orange Sonatel, Senegal's leading telecommunications service provider, needed to speed service delivery to maintain its competitive advantage. The service provider decided that a cloud-native, DevOps-based approach would provide the efficiency and scale needed. By building a new platform, Malaw, with Red Hat OpenShift and Red Hat Ansible Automation Platform, Orange Sonatel can quickly migrate and build core applications. Now, the service provider can deliver new services to customers across Africa within weeks.



Telecommunications

3,500 employees
15 million customers

Benefits

- Cut application deployment time from days or weeks to minutes
- Improved developer productivity with self-service IT environment and automation
- Reduced compute resource requirements by two-thirds

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Moussa Wade

Head of Center of Excellence, Orange Sonatel



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James Kokou Gaglo
DevOps Engineer, Orange Sonatel

Maintaining telecommunications market leadership

Orange Sonatel was created when Orange SA purchased a controlling stake in Société Nationale des Télécommunications du Senegal (Sonatel), Senegal’s leading telecommunications service provider. Its mission is to provide quality, affordable services, including fixed-line, mobile, internet, television, and corporate telecommunications services across the Economic Community of West African States (ECOWAS). The service provider is constructing fiber-optic networks across Africa and manages 2,200 kilometers of fiber cable in Senegal.

To stay Senegal’s preferred telecommunications service provider, Orange Sonatel needed to deliver high-quality, highly available services at the speed of customer demand. However, using the community version of Docker on virtual machines meant deploying a new application took the service provider’s team days or even weeks. Delivering a new developer environment took at least three weeks.

A highly motivated team of young engineers at Orange Sonatel began exploring new technologies to help the company maintain and extend its market leadership. The service provider decided to implement a cloud-native, microservices-based technology strategy and adopt a DevOps approach.

Migrating core applications to an enterprise container platform

To adopt this modern technology and approach, Orange Sonatel sought a solution that would combine the fast-paced innovation of open source technology with enterprise support and security.

“We plan to migrate at least 88% of our applications to the cloud. Such an aggressive plan needs a stable, secure, and supported enterprise platform,” said Moussa Wade, Head of the Center of Excellence at Orange Sonatel. “But we wanted an open-source-based platform, because it is cost-effective and the community is very responsive.”

Orange Sonatel decided to modernize its IT environment by deploying Red Hat OpenShift, supported by Red Hat OpenShift Container Storage and Red Hat Ansible Automation Platform.

“We selected Red Hat OpenShift because of its leading position in the market and because of its competitive pricing and features,” said Wade. “We were impressed by the results of an internal proof of concept that showed how its automation capabilities could help us accelerate our delivery process.”

Red Hat OpenShift is an enterprise Kubernetes application platform that unites IT and developers to support faster, more reliable development, deployment, and management of container applications across cloud and infrastructure. OpenShift Container Storage provides block, shared file, and object data storage for containers and manages the OpenShift registry, logging, and metrics. Red Hat Ansible Automation Platform, an enterprise automation solution for complex deployments, automates patch and update management at the scale required for telecommunications networks.

Working with local partner BeOpenIT, Orange Sonatel deployed its new Red Hat software on a virtualized infrastructure to create Malaw, a cloud platform named for the horse Lat Dior, a key Senegalese historical figure that represents strength, bravery, loyalty and competitiveness. The service provider currently runs 15 applications on Malaw, with plans to migrate another ten applications in the next six months.

“Some of the apps we’ve successfully migrated include a self-service application for B2B [business-to-business] customers and a global shareholder assembly app created for remote voting during COVID-19,” said Seynabou Niang, Cloud Architect at Orange Sonatel.

Speeding time to market with efficient self service

Reduced application deployment time from weeks to minutes

Orange Sonatel has used Red Hat OpenShift and Red Hat Ansible Automation Platform to automate time-consuming manual deployment processes. Now, the service provider's teams can deliver new services and features to customers faster and with two-thirds less staff.

"Before Red Hat OpenShift, an application or feature deployment required at least three steps. We had to configure the infrastructure and environment before we could deploy the application," said Wade. "We mainly use virtual environments, but the isolated nature of teams within our organization meant requesting resources was a time-consuming process. Red Hat OpenShift provides a ready-to-use environment for production deployment. Now, our developers can deploy an application in a single operation that can be live within minutes."

As a result, Orange Sonatel has reduced its time to market for new services from several months to eight weeks. "Using Red Hat OpenShift helps us spend more time on innovation, such as aggregating mobile payments onto a single platform for all of Africa to create a convenient solution for travelers."

Simplified provisioning and security with automation and self service

With automated, self-service provisioning capabilities now available, Orange Sonatel's developers no longer need to wait weeks for the service provider's IT operations team to build requested environments. Instead, they can use Ansible Playbooks to quickly and independently create environments for testing Java™, PHP, and AngularJS applications.

Together with Ansible, Red Hat OpenShift helps developers use a new DevOps approach to focus on valuable innovation, rather than managing the underlying infrastructure and compute resources needed for a Kubernetes cluster.

"When we previously used community Docker on virtual machines, we needed to set up and monitor the environment. With Red Hat OpenShift, developers don't need to know about the Kubernetes stack underneath, because it's templated," said James Kokou Gaglo, DevOps Engineer at Orange Sonatel.

Using enterprise open source software from an experienced vendor helps Orange Sonatel protect its infrastructure and cloud environments from vulnerabilities and performance-affecting issues. Security-focused deployment is easier, as requirements are already incorporated into the Red Hat OpenShift environment.

Reduced hardware requirements by two-thirds

By adopting Red Hat OpenShift, supported by OpenShift Container Storage, the service provider has reduced its compute resource requirements. With efficient management of memory and CPU (central processing unit) resources, Orange Sonatel needs only one-third of the resources to run its infrastructure, compared to its previous approach of running deployments directly on virtual machines (VMs).

As a result, the service provider anticipates that it will achieve return on investment (ROI) within the next two years.

Focusing on innovation with cloud expansion

After the success of its initial migration to Red Hat OpenShift, Orange Sonatel is migrating more complex applications to the environment. The service provider plans to migrate at least 60 total applications to within the next two years.

“We are already testing the next set of migrations in Red Hat OpenShift, and they are working well,” said Wade. “Our developers are delighted.”

To help its development team enhance their cloud and container technology skills, Orange Sonatel recently launched Cloud-Native Ambassadors, an education campaign to focus on innovation, prepare for hybrid cloud, and optimize Malaw's value.

“Cloud computing is already helping telecommunication operators to change their business model,” said Wade. “Red Hat OpenShift has supported our adoption of the cloud-native strategy that will allow us to diversify our services. There are a lot of new things coming. For us, OpenShift is just the beginning.”

About Orange Sonatel

Sonatel (Société Nationale des Télécommunications du Sénégal) is the principal telecommunications provider of Senegal. Orange SA owns a 42.33% controlling stake. The company is active in fixed line telephony, mobile telephony, internet service, television and corporate telecommunications and is involved in the construction of fiber optics networks in Africa and manages 2,200 kilometers of fiber cable in Senegal.

About Red Hat



Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.



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