



# Vodacom Mozambique Keeps the Country Connected with VMware Cloud

With more than seven million subscribers, Vodacom Mozambique is the leading mobile telecommunications operator in that country. Established in 2003, it is committed to delivering a high quality, reliable mobile network to its business and consumer customers.

## Industry

Telecommunications

## Strategic priorities

- Multi-Cloud

## VMware footprint

- VMware vSphere®
- VMware vCloud® NFV™
- VMware Technical Account Management Services
- VMware Professional Services

Vodacom Mozambique has successfully embraced VMware as the premise for its IT and telecommunications clouds, giving it the unified digital fabric needed to scale its services and customer experiences. This makes Vodacom more agile in a highly competitive mobile market and rapidly deliver on business and consumer customer demands, improving voice and data services to its customers.

## About Vodacom Mozambique

Vodacom Mozambique is the leading mobile network provider in the country, with more than seven million subscribers. Its main objective is to deliver a quality, reliable mobile and data network, while introducing new communication technologies to benefit Mozambique as a whole, which it has provided since starting operations in 2003.

Vodacom Mozambique remains at the forefront of product development to satisfy growing customer demand for digitally transformative solutions; its reliance on on-premises infrastructure has limited how quickly it could introduce compelling services to the market. It recognizes that this needs to be addressed as rapidly and cost effectively as possible. With this, Vodacom Mozambique partnered with VMware to modernize its IT and telecommunications-focused data centers to better prepare for the country's future growth requirements.

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“We had an environment that was mostly legacy hardware. People inside the organization kept asking us whether it would be possible to migrate this physical environment into a virtual one. The work we have done with VMware shows that it is not only possible, but it can deliver significant business benefits.”

Eduardo Cid de Morais, IT Systems Manager, Vodacom Mozambique

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## Reducing legacy footprint

Nine years ago, Vodacom Mozambique identified the need to move away from a traditional data center environment – a decision made due to a combination of rack space limitations and the high costs typically associated with upgrading servers. As part of this, the mobile operator sought to find the best possible way to maximize the utilization of its existing rack mounted servers, derive cost savings, and provide the IT systems team the ability to better manage the expanding data center environment.

The mobile market in Mozambique is very dynamic (as is the rest of Africa), requiring operators to respond quickly to competitors' service offerings. If an operator does not have agility in its data center, the extended turnaround time to deliver a competitive service offering may be prohibitive on account of the installation and configuration of telco-unique hardware and infrastructure to maintain relevancy to its customer base and demand.

“We reached a point where we had to build a new, smaller data center and it made sense to go down the virtualization route. Unfortunately, the technology we selected was complex and difficult to use, and it also went down for several hours at a time on an almost daily basis. Because of this, many of the senior managers voiced their concerns about the merits of this strategy,” says Eduardo Cid de Morais, IT Systems Manager at Vodacom Mozambique.

The implementation of a VMware multi-cloud infrastructure provides the quicker restoral of service from a downed virtual machine (VM) by simply connecting from a virtual private network (VPN) and powering it back on. Furthermore, monitoring is enhanced, allowing the organization to view everything from within the operating system and preview how all the VMs are performing while effectively forecasting potential issues.

“Virtualization, therefore, brings with it a level of control and failover which we did not have previously. Moving away from a physical environment makes more sense, especially for mission-critical systems like IT and telecommunications. But we needed to find a partner that could make the virtualization environment work according to our specific requirements,” says Morais.

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“During the first two years of using VMware at a reduced capacity, we had a significantly more stable environment that proved it could comply with the rigorous standards of Vodacom's infrastructure requirements.”

Eduardo Cid de Morais, IT Systems Manager, Vodacom Mozambique

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## Competitive advantage

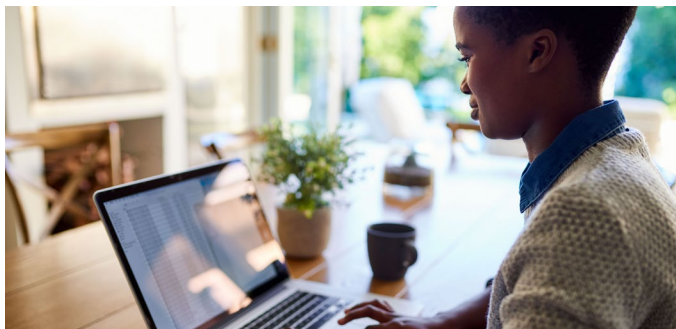
Vodacom Mozambique transitioned from its previous provider to work with VMware on a limited basis to modernize its virtualization stack.

“During the first two years of using VMware at a reduced capacity, we had a significantly more stable environment that proved it could comply with the rigorous standards of Vodacom's infrastructure requirements. So, we decided to transition to the virtualized infrastructure of VMware. This entailed a comprehensive VMware implementation across the IT (production) cloud and then our telco (NFV) cloud,” says Morais.

The entire IT cloud has been fully virtualized to date. However, the desire to scale and shift to NFV was only approved in 2019, with the transition currently in progress. Vodacom Mozambique is the first Vodafone subsidiary in Africa to deploy such a comprehensive virtualization solution for its telco cloud.

He adds that VMware has enabled Vodacom Mozambique to transform its technology and networking approach. Previously, the business was using dozens of VMs, which has subsequently grown to thousands. Scalability like this could never even have been dreamt of with its previous environment.

“The best part is just a handful of people manage this entire virtualized footprint. We have an exceptionally skilled and diverse team that is split evenly across men and women,” says Morais.



According to Morais there aren't many IT shops in Africa that can say their technical team isn't male dominated – whereas at Vodacom Mozambique, it believes in investing in only the best people for the job at hand. The fact that its team is so diverse and inclusive indicates a culture that encourages success without limitations, and it is something it is proud of.

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“VMware has enabled us to have a faster time to market because we can now deploy customer solutions as required. Our team has done tremendous work to come to grips with the technology and provide an integrated experience for our internal clients to develop products quicker.”

Eduardo Cid de Morais, IT Systems Manager, Vodacom Mozambique

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## Enabling business growth

Morais added that while keeping costs as low as possible has been a massive advantage, delivering consistent reporting to assure executives that the technology is growing at the designed rate now ensures that Vodacom Mozambique may remain focused on its core strategic objectives: delivering digitally superior voice and data solutions to its growing customer base.

The unified, consistent digital infrastructure across both the IT and telco cloud production environments enables the company to accommodate the development of more products.

Morais' team says that from a people and skills perspective, the rollout of its IT cloud was straightforward, but when it began work on the telco cloud with NFV, a whole new skill set was required.

“The team is now virtualizing networks; it's a big jump for a traditional infrastructure team. But such has been their commitment and willingness that the transition has been more seamless than anticipated. The team is also excited about the new skill sets they are adding to their portfolios. Yes, it was daunting at first – but I am exceptionally proud of how they have risen to the challenge and now own that domain too.”

## Looking ahead

Vodacom Mozambique will use the virtualized environment to introduce more sophisticated technology, for example, Kubernetes, for more flexible and agile development. Its orchestration layers can now also manage both the IT and telco clouds.

“Looking ahead, we see opportunities to add public clouds to our virtualization efforts if the need arises as we are continually examining our roadmap for the future and adding technology to it. Having this foundation in place means there is potential to accommodate future business growth and upgrade to where we see the most demand,” says Morais.

Vodacom Mozambique embraced all the new VMware technology and architectures, and the IT systems team has made a significant success of the implementation. The team has migrated multiple environments and has been managing them very successfully. The company has demonstrated that it is not afraid of using the latest technology and integrating it into mission-critical processes to provide a platform for future growth.

“Because our IT systems team has been so successful with this implementation, we have become the go-to team for the company when it comes to all things VMware and virtualization. And that, for me, is something we can be incredibly proud of,” concludes Morais.

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“We can now experiment with additional innovative feature sets that contribute to the company's core growth and future roadmap. It has also provided customers with space in our data centers to host their servers and manage them within our infrastructure. Remember, data is the future of Africa, and it places us firmly on the global stage as a competitive business, so the provision of data and cloud services to our clients is critical to Vodacom.”

Eduardo Cid de Morais, IT Systems Manager, Vodacom Mozambique

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