

Telekom Networks Malawi redefines its infrastructure with Managed OpenStack

About Telekom Networks Malawi (TNM)

- Established in 1995, TNM is Malawi's leading telecommunications service provider
- The country's first mobile operator, and wholly Malawian-owned
- Delivers a comprehensive range of services to consumers and enterprises, including both voice and data connectivity

Highlights

- TNM decided to consolidate its diverse infrastructure onto a unified Charmed OpenStack cloud
- Canonical's Managed OpenStack service enabled rapid time-to-market despite shortage of in-house expertise
- TNM has successfully migrated critical workloads to OpenStack, including systems for controlling internet traffic, messaging, and transactions



With systems spread across many virtualisation and cloud platforms, TNM's infrastructure had grown highly complex, and it was facing vendor lock-in challenges from its different proprietary technology providers.

To simplify its operations, TNM decided to centralise onto a single, vendor-agnostic open infrastructure platform that the company could have full control over. Canonical's Charmed OpenStack quickly emerged as the most cost-effective enterprise-grade solution, and TNM chose to deploy it as a managed service for the fastest time-to-market. The platform now hosts some of the most mission-critical systems that underpin TNM's success.

Challenge



TNM's network spans 88% of Malawi, serving millions of customers. Delivering telecommunications services at this scale is a tremendous technical undertaking, involving a host of interconnected IT infrastructure components. Managing and maintaining such a complex ecosystem would be difficult enough in its own right, but it was made even more challenging by the fact that many of TNM's systems were spread across different virtualisation and cloud platforms.

Macdonald Chamba, Head of Infrastructure and Cloud Services at TNM, explains: "We had so many systems that we were running using different virtualisation software, including different cloud services. Most of these systems were attached to specific vendors who each wanted to drive things their own way, not the way that was best for our business".

Having to maintain numerous platforms multiplied administrative complexity exponentially. It meant that the infrastructure team had to develop multiple skill sets to support different environments, maintaining the systems was immensely time-consuming, and licensing numerous proprietary solutions was unnecessarily costly.

"We wanted to consolidate onto a single, open platform", continues Macdonald Chamba. "That way we wouldn't be tied to a single vendor, and we'd be able to change parameters at will. The goal was to develop our skills so that we could work with any partner in one cloud environment".

“Canonical offered the most attractive licensing model for enterprise OpenStack support. Whereas other vendors wanted us to licence every OS we spun up in our environment, Canonical only charges per node. Particularly in the long term, Canonical’s approach is more cost-effective”.

—Macdonald Chamba, Head of Infrastructure and Cloud Services, TNM

Solution

As the leading open source cloud computing platform, OpenStack was the ideal foundation for TNM’s new unified infrastructure strategy. The company evaluated a variety of OpenStack distributions, looking for one that was flexible, fully open source, and enterprise-ready – and that’s how it found Canonical and Charmed OpenStack.

“Canonical offered the most attractive licensing model for enterprise OpenStack support”, confirms Macdonald Chamba. “Whereas other vendors wanted us to licence every OS we spun up in our environment, Canonical only charges per node. Particularly in the long term, Canonical’s approach is more cost-effective”.

Since this was TNM’s first time using OpenStack, the company lacked in-house expertise to build and operate the new cloud. To bridge this gap, TNM opted for Canonical’s Managed OpenStack service. Canonical engineers designed and deployed the cloud and operated it on TNM’s behalf until the internal team developed the necessary skills to take over.

The managed service approach enabled TNM to upskill its team without delaying time to market for the new platform. When the organisation was ready, it was able to seamlessly take control, with Canonical stepping back to deliver ongoing commercial support.

Results

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—Macdonald Chamba, Head of Infrastructure and Cloud Services, TNM

TNM has onboarded several mission-critical workloads to OpenStack. For instance, TNM has moved its Policy and Charging Rules Function (PCRF) system to the open-source private cloud platform. This system controls internet traffic in real-time, determining network speeds, how customers will be charged, and the types of internet services that are available.

Similarly, TNM has successfully migrated services to OpenStack for managing its messaging systems, as well as its Unstructured Supplementary Service Data (USSD) system that enables web browsing, mobile banking, prepaid mobile recharging, and other key services.

These systems represent fundamental components of TNM’s operations, and the company can now run them at a lower cost and with a finer degree of control on OpenStack. Looking ahead, when the OpenStack migration is complete, these benefits will extend to TNM’s entire ecosystem.

“The relationship with Canonical has been very positive”, concludes Macdonald Chamba. “From the end-to-end support we received through the managed service, to the enterprise support we’re enjoying now, the journey has been good. We have assistance and guidance whenever we need it”.

