KPA invests in ICT infrastructure

The Kenya Ports Authority (KPA) has continued to invest heavily in technology and automation to boost efficiency and position the Port of Mombasa as a world-class regional hub. Information technology is at the heart of this effort, including its core SAP software and specialist applications for handling port activities such as docking schedules and manifests.

KPA's ICT Manager Mr. Edward Wahome says that having earlier built a primary and backup center to house its core systems, in late 2019, the Authority initiated further plans to upgrade its network to ensure reliability, resilience and better security. Mr. Wahome adds that an American computer networking company, Arista Networks, was given the job to upgrade the network. The American company teamed up with a major partner in Kenya to upgrade the network starting with three core data center sites run by KPA.

"The Arista solution impressed us with its simple architecture using the same operating system and configuration across every network element," says the ICT Manager.

Principal Network Officer Eng. Luke Matere says that when combined with the real-time network telemetry and the open nature of the systems, it was clear that the new network offered a very good fit for KPA's current data center and campus needs and a path towards automation that matches the long-term strategy. Matere explains that the upgrade was necessitated after it was discovered that the existing legacy network infrastructure was not superior enough to handle full active/active operation.

According to the engineer, the legacy network with its 10G core and 1G data center interconnect was starting to strain under the increased digitalization of port activities.

"We have been growing quickly over the last few years, but the network infrastructure was starting to become unreliable and a bottleneck for growth because any outage would have a massive negative impact on our operations and indeed global shipping," he adds.

Matere further notes that the ideal solution would not only increase bandwidth and performance, but also provide the foundation for improvement of the network side through software defined network automation. The new Arista network has proved to be exceptional, as it runs a 40G core scaling to 100G, and a 40G data center interconnect that can scale to a 100G when needed.

The use of the new network has improved network and application performance. Its consistent extensible operating system (EOS®) which can be used across the entire network has also simplified management tasks not forgetting its reliability and scalability with seamless failover and an open standards-based approach to simplify support, upgrades and automation.