

Nominee: VNS3 by CohesiveFT

Nomination title: Bridging Africa's splintered telco markets with VNS3

Overlay networking has begun disrupting traditional approaches to networking, both inside data centres and as a connection across clouds. By defining the networks in software, network designers can now operate, control, and configure networks without physical access to the hardware. Enterprises of all sizes can benefit, from telcos operating the networks to small SI firms using networks to connect with customers. Effectively, software-defined networks free enterprises from the underlying hardware and geography.

With CohesiveFT's VNS3 product, one of our customers created a partner connectivity network to bridge a segmented telco marketplace. The customer, an SMS integrator based in Lagos, Nigeria, saw the opportunity to build a better network and connect millions of end users with advertisers and mobile technologies. They build their network over top of with cloud infrastructure based in the British Isles. The cloud infrastructure and overlay network instantly made the small SMS integrator "look like a telco" by operating a large, international network at scale.

Use case details: Africa telco markets are segmented by carrier and country

Africa has over 700 million mobile phone users and according to Jamal Saghir, the World Bank Director for Sustainable Development in the Africa Region. He writes, "the Internet and mobile phones are transforming the development landscape in Africa, injecting new dynamism in key sectors." But, it is expensive and challenging to join up the SMS traffic across countries and providers using traditional telco approaches.

In order for African mobile users to connect to SMS with users on other networks customers need to buy service from each provider, often switching SIM cards between a single mobile. The patchwork of national and trans-national carriers makes SMS connectivity between disparate consumers difficult. The patchwork also made brand SMS advertising error-prone and less cost effective.

Our customer, the SMS bridge operator, wanted to eradicate these carrier barriers, integrate the SMS networks, and operate like a global telco without physical infrastructure. Our customer needed to integrate the SMS infrastructure of multiple national carriers throughout Africa, but without the large capital outlay. Our customer's solution had to meet demand needs of the carrier subscribers. The virtual network also had to allow traditional IPsec, BGP peering, and a dedicated block of public IPv4 addresses available as part of the "virtual" LAN infrastructure.

Outcome: Overlay network federates telcom resource

Our customer and CohesiveFT constructed a solution without dedicated physical infrastructure. With the VNS3 virtual networking product, our customer used a public cloud based in the British Isles and constructed a network over top of the cloud network. The overlay network connected the SMS bridge operator to help them look like a global telco giant. They brought an infrastructure solution to market that allows their telecom operator customers to easily and reliably connect. The flexible network allows a remarkably cost effective solution and affords our customer to bring SMS integration services to developing countries across sub-Saharan Africa.

Inside the solution: federated networks with network function virtualisation (NFV)

Central to this solution was the overlay networking solution with network function virtualisation (NFV). Overlay networking allowed the SMS bridge operator to create a joined cloud-based network across public clouds and connect those clouds to existing physical environments. The result is a common, secure connection for customers and partners spread between endpoints. Our customer was able to use the public cloud economies of scale and NFV to separate network location and network identity, which translated into greater agility and mobility for end customers.

Overlay networking uses NFV features to give control over routing, firewalls and VPN end points. This control allows our customer to specify addressing, topology, protocols, and encrypted communications in any cloud or virtualized environment. Overlay networks free users, such as the SMS bridge operator, to deploy practically any hybrid cloud resource across hardware vendors or geographic locations, offering network control that is fully owned, visible, and governed by the user.

Further, overlay networking provides layer 7 and 8 control over the layer 2 and 3 features such as routers and switches. Our customer now uses virtualised networks over top of any type of hardware in any physical location - including unifying physical data centres and cloud-based applications.

Their overlay network, based on a cloud provider's infrastructure, allowed them to bridge the splintered telco market in sub-Saharan Africa. Now, their innovative solution allows end mobile users to connect with ease and discover new worlds of mobile commerce.

Why nominee should win

- VNS's new NFV technologies allow customers to build cloud-only networks previously impossible due to cost and geography.
- Customer use case demonstrates CohesiveFT and VNS3's capabilities in technology and the opportunities for application in emerging markets.

- Technology allows customers to compete and innovate with flexible, customizable software built on top of any virtualised network.
- CohesiveFT and VNS3 are provider, vendor, application, OS and script neutral.
- VNS3 has been helping enterprise customers control security, hybrid cloud federation, manage multicast protocols, and use IPsec encryption in virtualized environments since 2008.