EVONET gains a competitive edge in cloud services

EVONET Belgium NV is a telecommunications service provider (SP) with a strong presence in the Belgium market and plans to expand to the Luxembourg and Netherlands markets.

Business benefits

Levels the Playing Field with Larger SPs

Nuage Networks Virtualized Services Platform (VSP) enables SPs, whether they are regional or very large providers, to leverage their innovations in services and operations. In addition to breaking vendor lock-in, Nuage Networks VSP enables differentiation based on tailored services for each customer, rather than just on the overall size of the SP.

Performance SLAs without Penalties

Nuage Networks VSP's virtualization capabilities provide scalable network capability and consistent, reliable and predictable network performance, enabling EVONET to reliably meet SLAs.

Growth to Millions of Endpoints without Disruption

Nuage Networks brings scalability in capacity and in markets. EVONET estimates that their network can scale out to multiple thousands and even millions of endpoints. Each datacenter can be expanded approximately 100-fold without disruption or the need to re-architect the approach.

Needs

EVONET's customers require "uncompromised performance" in terms of speed, capacity and capability across server, network and storage. As a result, they demand a Service Level Agreement (SLA) that encompasses total end-to-end performance.

While server and storage virtualization could provide predictable capability, legacy network technologies were not able to do so. Without a Software Defined Networking (SDN) platform, EVONET's core business strategy of scaling capacity while expanding to the Benelux market was difficult to realize.

EVONET's approach

EVONET innovated an architecture that packages both flexible compute resources and SDN from Nuage Networks. EVONET's virtual Platform Optimized Design (vPOD) architecture provides a fully capable dedicated or shared datacenter environment contained in one rack or a multitude of racks:

- A vPOD rack includes:
  - An OpenStack orchestration server
  - Virtualization environments, including hypervisors
  - Nuage Networks VSP components:
    - The Virtualized Services Directory (VSD) serves as a policy, business logic and analytics engine for the abstract definition of network services. Using its GUI or RESTful APIs, the VSD enables EVONET administrators or customers to define network services policies.
    - The Virtualized Services Controller (VSC) serves as the robust control plane of the datacenter network. Through network APIs, the VSC can program the datacenter network in abstraction of specific datacenter networking hardware. VSCs federate in order to present a unified network fabric to applications and virtual machines.
    - Virtual Routing and Switching (VRS) is installed on the hypervisor and serves as a virtual endpoint for network services. Through VRS, changes in the compute environment are immediately detected, triggering instantaneous policy-based responses in network connectivity to ensure that the needs of applications are met.
- A Top of Rack (ToR) ultra-low-latency IP switch
- Servers: The rack includes servers of various capacities for processing customer workloads within the committed SLA.

Datacenters are interconnected via EVONET's own DWDM fiber optic network and are also connected to the public Web via top-tier global Internet carriers. In this fashion, EVONET can provide both high performance and cost-efficient shared networking options by customer and by service.

Customers can either receive a virtualized private vPOD with their own copy of Nuage Networks VSP or they can securely share a vPOD. In either case, operations are fully automated and orchestrated via OpenStack.

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"Nuage Networks permits players of all sizes – from huge to smaller/midsize operators – to really leverage the innovations that are in place already. Whatever you are trying to do and whatever you have today, Nuage will help you reach those goals much faster." - Karl Soens, CEO, EVONET

How this approach changes the game

This innovative approach helps EVONET change the game for its customers and its competitors.

Precision SLAs for each Customer

Adding precise network controls to server virtualization and OpenStack orchestration, EVONET's key customer demand of precise, end-to-end SLAs can be reliably delivered, even on shared vPODs.

Consistent Performance Across Datacenters

Similar to server virtualization, network virtualization provides consistent and predictable performance and scaling that can be abstracted from specific datacenter build-outs, hardware configurations and network architectures. This functionality provides full workload portability including load balancing across datacenters.

Fluid Disaster Recovery

Having consistent performance logically abstracted from datacenter build-out will also change the game for disaster recovery. Instead of having idle resources standing by in a dedicated datacenter, a customer's implementation can be stretch-clustered across datacenters for truly fluid disaster recovery. In this fashion, loss of one or even multiple datacenters can be accommodated without disruption to operations.

Effortless Datacenter Scalability

With this architecture, EVONET can scale out to accommodate the needs of each customer just by adding vPODs or by adding racks to a dedicated vPOD. Customers also can easily scale out to 200 times their initial rack count without having to change the architecture or the configuration.

Effortless Scalability to New Service Areas

Datacenters can be interlinked either by leased network lines or the public Web. Further, controller federation enables new datacenters to be added to the network without disruption. As all resources become part of a unified fabric, additions are transparent to customers.

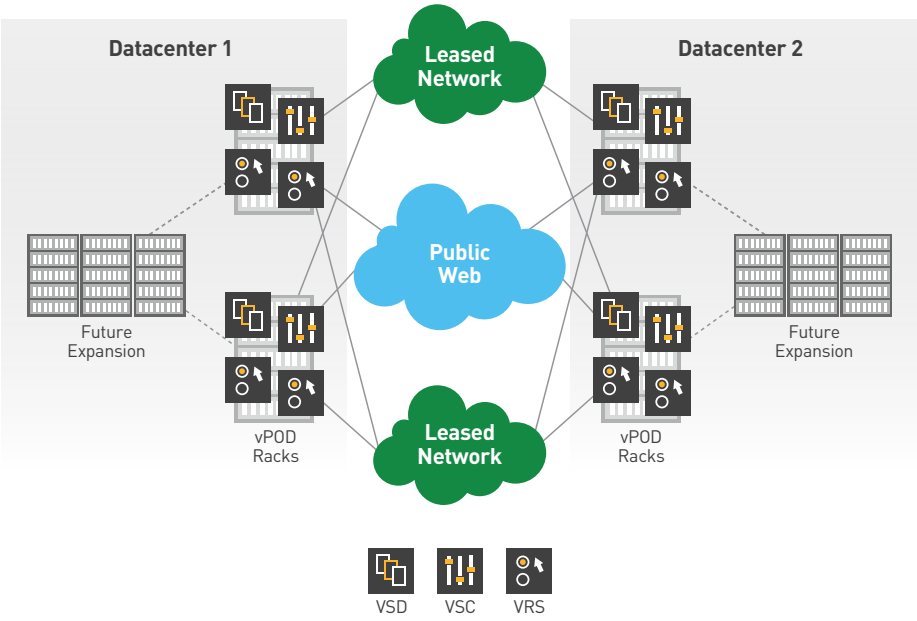
Fast and Non-disruptive Provisioning

Outside of physical racking and cabling, new vPODs can be added in an automated and non-disruptive manner – the entire installation or de-installation process takes only a few hours. New servers can be allocated to a vPOD nearly instantaneously via automation.

Adding it all up

The execution of EVONET's clear business strategy had been hindered by network and network scaling limitations. Nuage Networks not only removed barriers but also enabled EVONET to leverage its current innovations in cloud infrastructure blocks, services and operations. With Nuage Networks, EVONET can confidently grow within and beyond its current markets and customer base.

FIGURE 1. EVONET's architecture maximizes both flexibility and precision



About EVONET

EVONET Belgium NV is an industrial telecommunications Service Provider headquartered in Belgium. With a strong focus on ultra- and industry-grade networking, EVONET has more than ten years of experience in connectivity, datacenter and virtualization solutions.

About Nuage Networks

Nuage Networks (www.nuagenetworks.net) brings a unique combination of groundbreaking technologies and unmatched networking expertise to the enterprise and telecommunications industries. The Silicon Valley-based business has applied radically new thinking to the problem of delivering massively scalable and highly programmable SDN solutions within and across the datacenter and out to the wide area network with the security and availability required by business-critical environments. Nuage Networks, backed by the rapidly growing IP/Optical Networks business of Nokia, has the pedigree to serve the needs of the world's biggest clouds. The cloud has made promises — the mission of Nuage Networks is to help you realize them.

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