

AscoTLC, a leading Italian cloud service provider, delivers next-generation SDN and SD-WAN cloud infrastructure with Nuage Networks

AscoTLC is a regional cloud service provider in Northeast Italy. It delivers a broad set of business internet services including Wi-Fi, MPLS VPN, VoIP, broadband internet, and cloud hosting through a high-performance MPLS optical backbone. The networking infrastructure includes AscoTLC's own 2,100 kilometers of fiber optic cables and four regional datacenters used for Infrastructure as a Service (IaaS) offerings, as well as advanced services such as managed video surveillance.



AscoTLC, along with Texor, the systems integrator in charge of the implementation, was interested in delivering next-generation cloud services to its customers based on software-defined networking (SDN) and software-defined wide area network (SD-WAN), allowing it to provide more efficient and agile services ahead of its competition. The company was looking to move away from traditional telecom services to automated and orchestrated telecom and cloud services built on an open and flexible architecture free from vendor lock-in. As business services and cloud technology are in a rapid transformation cycle, time-to-market for the project was crucial, as was the ability to run on the existing underlay network, which was based largely on Juniper gear.

Expected business benefits from the Nuage Networks deployment

- Greater business agility for customers
 - One of the key benefits of the AscoTLC next-generation cloud services will be the ability to deliver services on-demand to customers, through user portals, accelerating service delivery, greater customization and alignment with business needs. As the first in the market to deliver combined SDN and SD-WAN cloud services, this also puts AscoTLC at a distinct advantage over its competitors.
- Lower cost, next-generation VPN services - Through Nuage Networks, AscoTLC will offer businesses a self-service platform to define and order VPN services, including the ability to define forwarding policies, quality, security, traffic shaping and rate limiting policies. With the flexible, lower-cost CPE devices and the greatly reduced operational overhead of managing the WAN connections, AscoTLC customers will realize significant cost savings with accelerated service delivery.
- OpenStack IaaS - Based on the Nuage Networks SDN platform, AscoTLC plans to offer hosted infrastructure using the OpenStack® cloud management software for greater control and automation of the entire cloud infrastructure, including servers and storage. OpenStack is one of the open source cloud management systems supported by Nuage Networks virtual networking for either private cloud automation or hosted IaaS offerings.

AscoTLC adopts Nuage Networks SDN and SD-WAN platform

AscoTLC decided to adopt the Nuage Networks Virtualized Services Platform (VSP) as the next-generation cloud infrastructure for its service offerings. It is one of the first telecommunications service providers to roll out datacenter SDN and SD-WAN cloud services end-to-end, based on a common overlay network infrastructure for greater synergy and end-to-end automation across all their cloud offerings.

The Nuage Networks architecture allows consistent policy-based control and automation of network functions for an on-demand cloud environment from remote sites and branch locations to all applications across datacenters and hosted public cloud offerings. AscoTLC decided to go with Nuage Networks based on provision of a completely open architecture that can work with any cloud management platform, any application infrastructure, and any underlay networking equipment.

The open architecture was particularly important for the SD-WAN service offering, which will deliver an open choice for the WAN customer premises equipment (CPE), in addition to the Nuage Networks portfolio of 7850 Network Service Gateway (NSG) appliances. The Nuage Networks NSG software is uniquely designed to run on any open hardware, including x86 hardware—a virtual platform—allowing customers to select the right form factor, cost and performance trade-offs for their business environment. AscoTLC is also leveraging the open architecture and Nuage Networks ecosystem partner Fortinet to deliver advanced security services as part of the SD-WAN service.

The centralized Nuage Networks SDN and SD-WAN controller will be installed in the AscoTLC datacenter in Santa Lucia, Italy, a facility Tier 3-certified by Uptime Institute. The single policy-based automation system will control networking services across the OpenStack®-enabled cloud, hosting services and all customer WAN sites end-to-end. In the past, many AscoTLC services were VMware-based; with OpenStack and Nuage Networks they are extending their set of services to other platforms without disruption. In two years, AscoTLC expects to connect around 1,000 peripheral customer sites to their fiber optic backbone network and cloud services.

The Nuage Networks solution

The Nuage Networks VSP provides SDN and policy-based automation for cloud deployments. Designed for large enterprises and service providers, it supports clouds of all sizes and architectures, from datacenter private clouds to large enterprise WANs and some of the largest public clouds in the world. The VSP is a centralized policy automation platform for both Nuage Networks Virtualized Cloud Services (VCS) cloud networking, and the Virtualized Network Services (VNS) SD-WAN solution.

Nuage Networks VSP can be used as a virtual overlay network platform for all existing virtual and physical server and network resources. This open SDN and SD-WAN platform helps avoid vendor lock-in. It supports all major virtualization and cloud management platforms, from Docker containers and traditional virtual machines to OpenStack and CloudStack.

Having evolved from telecom-grade network operating system technology used in some of the world's most scalable routers, the VSP uses many of the same principles as AscoTLC's MPLS cloud infrastructure. It unifies the management and provisioning of virtual networks regardless of the underlying network technology, allowing seamless integration of MPLS and broadband internet-connected sites, as well as datacenter hosting sites.

The Nuage Networks SDN platform provides network automation in the context of a complete cloud automation solution, including server and storage resources. The Nuage Networks VSP, through northbound interfaces in the SDN controller, supports leading open source cloud automation platforms, like OpenStack, as will be done for AscoTLC's hosted OpenStack IaaS offerings.

A depiction of the Nuage Networks vision for cloud offerings (not a map of AscoTLC network) combines a single SDN infrastructure for WAN and datacenter. Datacenter overlay networks link all types of application workloads and platforms and extend to remote sites. Integrated SD-WAN services provide end-to-end network automation.

