Deploying SDN & NFV Faster with Cloud Sandboxes
Changing the Network Status Quo

Software-defined architectures are rapidly changing how networks are built and operated in the application economy. For the enterprise data center, SDN brings API based network programmability that promises more responsive, granular, and secure packet forwarding. SDDC, SD-WAN and Network Virtualization are bringing new ways of increasing network agility for datacenter, campus and WAN architectures. Likewise, for service providers, NFV is promising new levels of service agility through scalable, on-demand, virtualized network functions and cloud based service chaining. While the benefits are apparent, the proliferation of vendors, complexity of architectures, and interoperability with legacy networks makes the transition to SDN & NFV both challenging and risky. Being able to model and blueprint these new environments holistically and exposing them to architecture and Dev/Test groups can allow for rapid adoption of SDN and NFV with significantly lower risk and cost.

Quali’s Cloud Sandbox Solution

Quali’s CloudShell cloud sandboxing software allows data center and WAN architects and service provider network engineers, testers, and third party vendors on-demand access to replicas of production network environments. Rapidly model full network blueprints that can include a mix of physical/legacy equipment, virtual components (VNFs, SDN apps), cloud resources, and test tooling. Publish those blueprints to a web-based self-service catalog for on-demand deployment. Quali’s powerful automation and orchestration handles all the provisioning – from configuration of network equipment and network connectivity, to deploying VNFs and SDN applications, configuring tools, and setting up test equipment. All of this means your network labs become more agile, DevOps enabled, and ready to deliver new services much faster. Integration, businesses can deploy truly “full-stack” production-like environments across dev and test and get full confidence that they meet all their application compliance requirements before deploying into production.

**KEY BENEFITS**

**Deliver Network Services Faster**
Dramatically reduce network test and certification times with automated provisioning of full end-to-end network environments.

**Scale out Your Network Labs**
Consolidate and scale your network labs. Offer network lab resources “as-a-service” to testers, engineers, and vendors.

**Enable DevOps**
Integrate with CI/CD and test tools to create a full network DevOps practice.

**Optimize Efficiency and Reduce Costs**
Maximize the utilization and effectively manage network lab resources for optimal cost efficiencies.
Orchestration for SDN, NFV, & Cloud Architectures

CloudShell makes it easy to rapidly certify SDN applications for the enterprise data center. Model SDN applications via CloudShell “app modeling” feature and seamlessly deploy those apps onto SDN controllers. CloudShell supports SDN controllers like OpenDaylight, HP, Huawei, Juniper, Big Switch, and others.

Similarly, end to end NFV network service chains can be easily modeled in CloudShell. Deploy VNFs like vCPE, vEPC, vFW, vPGWs alongside legacy network equipment to certify end-to-end SLA’s and NFV vendor compliance. Support for cloud platforms like OpenStack (Neutron and Nova), as well as AWS and Azure allows you to validate new architectures across various cloud platforms.

Partner Snapshot
Okinawa Open Labs

Okinawa Open Labs uses CloudShell as the network DevOps orchestration platform for integrating and validating new NFV, SDN, and cloud based network architectures.

“OOL uses Quali to enable the broader ICT community to achieve and transform cloud computing, SDN, and NFV”

Technology Lead, OOL Technology Group

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Key Features

Self-Service End-To-End Network Service Modelling

- Easily model complex end-to-end network environments
- Publish environments as blueprints to web-based catalog
- On-demand deployment of network blueprints for Dev/Test

Remote Network Lab Access and Consolidation

- Multi-tenant to access network lab resources
- Consolidate multiple labs into a single super lab
- Optimize access to lab resources across geos

Provision Legacy Equipment alongside SDN, NFV, & Cloud

- Support for all major network equipment vendors: Cisco, Brocade, Ericsson, Huawei, HP, etc.
- Full Layer 1 Connectivity automation allows zero-touch dynamic re-provisioning of lab equipment connectivity
- VLAN, VXLAN, IPSEC VPN, and other L2/L3 connectivity
- Model NFV and SDN apps and deploy on cloud platforms

DevOps Tool Integration

- Integrate with CI/CD tools like Jenkins or Team City for enabling DevOps and Continuous Test initiatives
- Native support for Ansible; support for other configuration management like Chef and Puppet

Intelligent Automation and Provisioning

- Automated save and restore of network environments
- Full network environment setup and teardown
- Visual automation authoring, Python, or Ansible

DevOps Tool Integration

- Integrate with CI/CD tools like Jenkins or Team City for enabling DevOps and Continuous Test initiatives
- Native support for Ansible; support for other configuration management like Chef and Puppet

Reporting and Analytics

- Web based, sharable analytics dashboards provide immediate insight into network lab usage
- Track who and how resources are being used and what equipment is over/under utilized
- Get better insight into resource planning and scale out