OVERVIEW
ALTEN Calsoft Labs was responsible for the development & testing of an SDN & NFV Orchestration platform designed to automate, orchestrate, and manage the lifecycle of virtualized services across data centers and WAN.

THE CLIENT
The client is a leading provider of packet-optical transport products, and industry leading Software Defined Networking (SDN) platform that is driving network transformation for Carrier Ethernet services.

THE CHALLENGE
The client wanted ALTEN Calsoft Labs to develop and test their SDN & NFV Orchestration platform. The key challenges of the project were:

- Development of SDN applications for Network Management, End-to-end Service Provisioning and Service Assurance for Carrier Ethernet services
- Implementation of Element Adapters for third-party devices
- Development and integration of vendor-neutral NFV orchestration capabilities in to the SDN platform

THE SOLUTION
ALTEN Calsoft Labs engineering services for the orchestration platform included development of element adapters for various third-party devices.

Development and maintenance of various SDN applications was another key highlight of the project. SDN apps developed included:

- Auto discovery
- Topology management
- Load Balancing
- QoS management
- Ethernet Service Provisioning
- OAM (Y.1731, Y.1564)
ALTEN Calsoft Labs also developed SDN applications targeting use cases such as cross-connect support and service creation (P2P & multipoint (MP) services).

ALTEN Calsoft Labs engineering services for the SDN & NFV Orchestration platform included:

- Development of new “device adapters” for multiple 3rd party routing/switching products (SNMP / CLI / Netconf / TL1 / OpenFlow interfaces)
- SDN application maintenance and new application development over this SDN controller platform - (a) as per the product roadmap, or (b) new requests from the field (apps that are specific to a service provider)
- Test planning and scenario-based testing in a multi-vendor environment, bug fixing and release management
- Test automation development

**KEY ENGAGEMENT HIGHLIGHTS**

- Our client gained greater competitiveness in the market by reducing engineering costs by over 50%
- Achieved faster time-to-market for new technologies and products as the core engineering team was able to focus on new products, while the offshore teams took care of sustenance engineering & service requests from the field
- Enabled the client to add specialized engineering talent within a short time-frame by leveraging ALTEN Calsoft Labs’ global talent pool
- Engagement nearing its 3rd anniversary: Continuing to improve efficiency and competence level of the ODC to be just like an extension of client’s own R&D centres

**TECHNOLOGY AND RESOURCES**

- Linux/Windows development, Test automation based on Sikuli and Python scripts
- Git for source repository, JIRA for defect tracking & project management, TestRail for test management
- Continuous integration based on TeamCity
- Lab infrastructure and Code Repository at Client location in USA, Remote access through secure TPC (VPN with redundant links)