The client is a leading provider of business and mission-critical communication products and services to enterprises and governments.

The client wanted ALTEN Calsoft Labs to do the following for them.

- Engineering activities include bug fixing and new feature enhancements such as:
  - VRRP Support
  - FIPS-140-2 and CC Support
  - Authentication & Security
  - LBS and Analytics
  - Performance Enhancements
- Participation in:
  - Functional Testing
  - Integration Testing
  - System Testing
  - Regression Testing

Technology Used

- Wi-Fi: 802.11 a/b/g/n/ac standard porting and its verification
- Routing Protocols: OSPF, BGP, Policy-Based-Routing
- Security Protocols: TLS, PKI, IPsec, IKE, 802.1x, 802.11i
- Cryptographic Algorithms: AES, HMAC-SHA, RSA, DH-14
- Authentication Mechanisms: 802.1x Authentication (EAP, PEAP, LDAP)
- WAN Protocols: PPPoE
- NMS/EMS: NETCONF YANG
- L2/L3 Protocols: IPv6, NAT, MPLS, VRRP
- High Availability: VRRP, Critical Resource Monitoring, 3G WAN Backhaul
- Protocol Features: DHCP Server, DHCP Relay, NAT Overloading, IGMP Snooping
- Networks: Wireless Mesh Networks, WMM
**SOLUTION DELIVERED**

ALTEN Calsoft Labs’ expert team did the following to shape the client’s requirement.

- **Manual Testing**
  - Review of Functional Specification Document
  - Writing Test Plans based on Functional Specification
  - Execution of Functional/Performance/Scalability Test Areas
  - Debugging Failures
  - Involving in Defect Life Cycle
  - Filing and Verification of bugs
  - Reproducing Customer Bugs
  - Resolving Field Queries

- **Integration Testing**
  - Testing modules integrating with main trunk
  - Filing bugs earlier in the test cycle before releasing to system test
  - Resolving Integration Issues with Developers

- **System Testing**
  - Setting up Lab Test Environment
  - Building System test bed with deployment configuration
  - Testing and Isolation of failures in deployment scenario
  - Validating bug fixes

- **Test Automation and Test Framework Development**
  - Writing automated test scripts
    - Preferably in TCL, Perl and Python
    - By default with Shell Scripts
  - Development and Enhancement of Test Automation Framework
  - Writing tools to improve automation testing

- **Regression Testing**
  - Execution of automated regression scripts
    - Running Test Suite to verify already validated cases
    - Smoke testing for major features
    - Sanity test before major releases
  - Debugging failure
  - Fixing script errors
  - Filing bugs with necessary information
    - Working with Manual Test Engineers to isolate issues
    - Proactive in fixing automation scripts

**BUSINESS BENEFITS**

- Premier Tech Support
- Enhanced Patch Management
- Improved Productivity

***ABOUT ALTEN CALSOFT LABS***

ALTEN Calsoft Labs is a next gen digital transformation, enterprise IT and product engineering services provider. The company enables clients innovate, integrate, and transform their business by leveraging disruptive technologies like mobility, big data, analytics, cloud, IoT and software-defined networking (SDN/NFV). ALTEN Calsoft Labs provides concept to market offerings for industry verticals like education, healthcare, networking & telecom, hi- tech, ISV and retail. Headquartered in Bangalore, India, the company has offices in US, Europe and Singapore. ALTEN Calsoft Labs is a part of ALTEN group, a leader in technology consulting and engineering services.