



CLIENT CASE STUDIES

For ABot 4G/5G/ORAN Network Protocol Tester & Analyzer



Client:
Capgemini

Industry:
Telecommunications

Technology Service:
System Integrators

Scope:

Network slice use case analysis of multi-vendor ORAN & 5G NF on a distributed network for E2E call flow debugging

Challenge:

1. Generating e2e call flow of multi-vendor DU, CU, 5G Core control & user plan NFs deployed on different networks
2. Generating a holistic view of the call ladder diagram with SUT logs/PCAPs mapped on it
3. Monitoring Infra/Mobility KPIs and identifying failures for different network slice use cases in a multi CNF topology

Solution:

1. ABot Analytics' rapid adaptability & REST API support enables seamless integration with any third-party vendor stacks
2. Customization capabilities of ABot Analytics helped to process and analyze test cases triggered from third party tool
3. After test execution completion Casa ORAN & Microsoft 5G Core DUT's logs and PCAPs were accessed for analysis
4. ABot Analytics processes the test results to generate artifacts and produce reports with RCA & correlated KPI automatically

Outcome:

ABot Analytics end-to-end call flow generation and failure identification helps integrate multi-vendor ORAN and 5G Core CNFs on distributed network.



Client:
Redhat

Industry:
Telecommunications

Technology Service:
Cloud Platform

Scope:

Comprehensive solution for optimal ORAN workload placement and performance benchmarking with functional validation on the RedHat Openshift platform

Challenge:

1. Determining the ideal deployment environment for optimal CNF and O-cloud combination to deliver the best performance & value
2. Validation of O1 interface with multi-vendor CNFs running on different O-cloud infrastructure
3. InterOp testing and E2E validation of different ORAN CNFs running on distributed network

Solution:

1. ABoT 4G emulated nodes and extensive REST API enabled easy integration with other test tools.
2. Call-flows were authored easily with SmartEditor without any scripting knowledge.
3. Including new IEs to the relevant feature files, customizing them, and monitoring KPI enabled validation of different use cases. The orchestration capability of Aarna network's SMO and cluster validation capability of VoerEir's touchstone are used for determining optimal O-Cloud combination
4. ABoT's simulation capability of CU, DU, RIC and 5G Core provided a complete ORAN end-to-end test bed
5. ABoT's ready-to-use ORAN WG-compliant test cases helped to validate CNF level testing
6. Same ABoT test cases can be used for InterOp testing against real nodes
7. ABoT RESTCONF interface helped to validate the O-CU, O-DU components via SMO over O1
8. ABoT Analytics provided various mobility and Infra KPIs for determining CNF performance

Outcome:

ABoT exhaustively validated ORAN CNFs on different infrastructures & O-Clouds to select the optimal combinations based on performance & cost





Client:
Aarna Networks

Industry:
Technology

Technology Service:
OEM

Scope:

Streamlining multi-vendor DU, CU, RIC & SMO components validation on the C/U/M plane in a cloud-native way

Challenge:

1. Validating, managing and orchestrating the multi-vendor ORAN NFs with different test topologies against C-plane, U-plane, and M-plane
2. Optimizing the ORAN test cycles and minimize troubleshooting efforts with the ease of automation

Solution:

1. ABoT's ready-to-use ORAN test suite can be integrated by Aarna AMCOP SMO for multi-vendor ORAN NF testing
2. ABoT's highly scalable test suite helps to validate different DU, CU, RIC & SMO combinations with F1, O1,O2, E1, E2 Support
3. ABoT can simulate any of the missing ORAN NFs to build wraparound topology
4. ABoT AI-driven test result analysis and failure identifications helps in debugging, RCA and KPI correlation
5. ABoT and Amcop enables an e2e Compliance, conformance, performance & capacity validation for the C/U/M plane of ORAN stacks
6. ABoT BDD driven test cases allowed easy inclusion of new IEs and customization for SUT's requirement
7. ABoT is completely cloud native, highly scalable and supports both on-prem and cloud deployments

Outcome:

ABoT and AMCOP delivers a vendor-agnostic, cloud-hosted ORAN validation solution with ready-to-use highly scalable ORAN test suite, DU, CU, RIC, SMO, 5G Core simulation support, and a "pay as you go" model.