

Automated Lab-as-a-Service for Open RAN (VALOR)

Best-in-class Lab-as-a-Service facility for Open RAN development and functional testing that leverages the power, flexibility and advanced roadmap of the NITRO® Wireless Portfolio.

Accelerate the Path to Open RAN

VIAVI Automated Lab-as-a-Service for Open RAN (VALOR™) based on the NITRO® Wireless portfolio provides a fully automated, cooperative, open Lab-as-a-Service (Laas)/Test-as-a-Service offering dedicated to Open RAN interoperability, performance and security.

The project is funded by the Public Wireless Supply Chain Innovation Fund.

VALOR addresses major Open RAN testing gaps:

1. Pre-certification, pre-badge development and system verification with ongoing testing
2. As the first Telecom Infra Project (TIP) authorized test lab, VALOR's cloud-based and virtual testing capabilities will be incorporated into TIP's system performance certification program
3. Pre-deployment realistic and commercial grade performance testing



Development/
Validation Testing

Vendor-owned
on-premise tools



Badging and
Certification

OTICs and other
certification labs



Pre-Deployment
Testing

Operator-owned,
on-premise tools

Key Benefits

- **Accelerate Time-to-Market:** streamline development and certification processes
- **Minimize Upfront Investment:** accessible, pay-as-you-go model reduces the need for extensive in-house testing infrastructure
- **Flexible Deployment:** a hybrid physical lab infrastructure and cloud-based LaaS ensures flexible and scalable deployment
- **Realistic, Scalable Carrier-Grade Testing:** comprehensive, on-demand test suite for the entire product lifecycle from functionality to high-capacity stress tests
- **Proven Gold Standard:** VIAVI is a leading supplier for 3GPP and Open RAN test with extensive support for automation
- **Accessible to all Open RAN Ecosystem Players:** from academic institutions and startups to enterprises
- **Complementary to Existing Industry Testing Labs:** VALOR facilitates better readiness for the certification, badging and acceptance tests offered by OTICs and CSP labs. In addition, VALOR is the first Telecom Infra Project (TIP) authorized test lab.

Features

- Large RF anechoic chamber
- Over 500+ Open RAN test cases compliant with O-RAN WG4, WG5, WG11, TIFG and 3GPP Specifications
- Comprehensive WG11 Security Test Validation to safeguard your network

VALOR is a hybrid physical and cloud-based LaaS that enables flexible and scalable deployment on COTS x86 appliances. The lab is equipped with the comprehensive VIAVI TM500 product family to perform functional, interoperability and performance/ capacity testing. In addition, VALOR provides golden Open RAN compliant O-RUs, O-DUs and O-CUs to use in conjunction with the client DUT/SUT and a large RF anechoic chamber. VALOR offers Massive MIMO and beamforming over-the-air (OTA) validation including system-level Massive MIMO performance testing for up to 16 parallel spatial layers.

Access to VALOR is free for academic institutions and NTIA co-grantees, subject to availability.

Main Testing Suite Options Information

Test Type	Supported Test Spec/Standard
O-RU Conformance and Performance	O-RAN.WG4.CONF.0-R003
	3GPP TS 38.141
	ETSI ES 202 706-1 V1.6.1
O-DU Conformance and Performance	O-RAN.WG4.CONF
O-CU Functional and Performance	O-RAN.WG5.IOT
O-RU + O-DU Interoperability and Performance	O-RAN.WG4.IOT
O-DU + O-CU Interoperability and Performance	O-RAN.WG5
E2E Functional, Performance, and Security	O-RAN.TIFG.E2E

Additional Testing Suite Options Information

Test Type	Supported Test Spec/Standard
Massive MIMO/FR2 OTA Testing (using RF Anechoic Chamber)	25' x 35' FR1, FR1, FR3 Chamber

VALOR is enabled by the VIAVI Automation Management and Orchestration System (VAMOS), the newest automation engine for enhanced lab efficiency and effectiveness.

VAMOS brings together RANtoCORE solutions by deploying, configuring and managing multiple products under a harmonized REST API and Web UI framework. The Automation Framework Engine is agnostic to the deployment environment. In addition to providing a standalone solution to manage the VIAVI portfolio to schedule and run test campaigns, it can be integrated with a 3rd party automation framework via REST APIs in CI/CD manner.



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