

HCL 5G O-RAN Solutions and Services

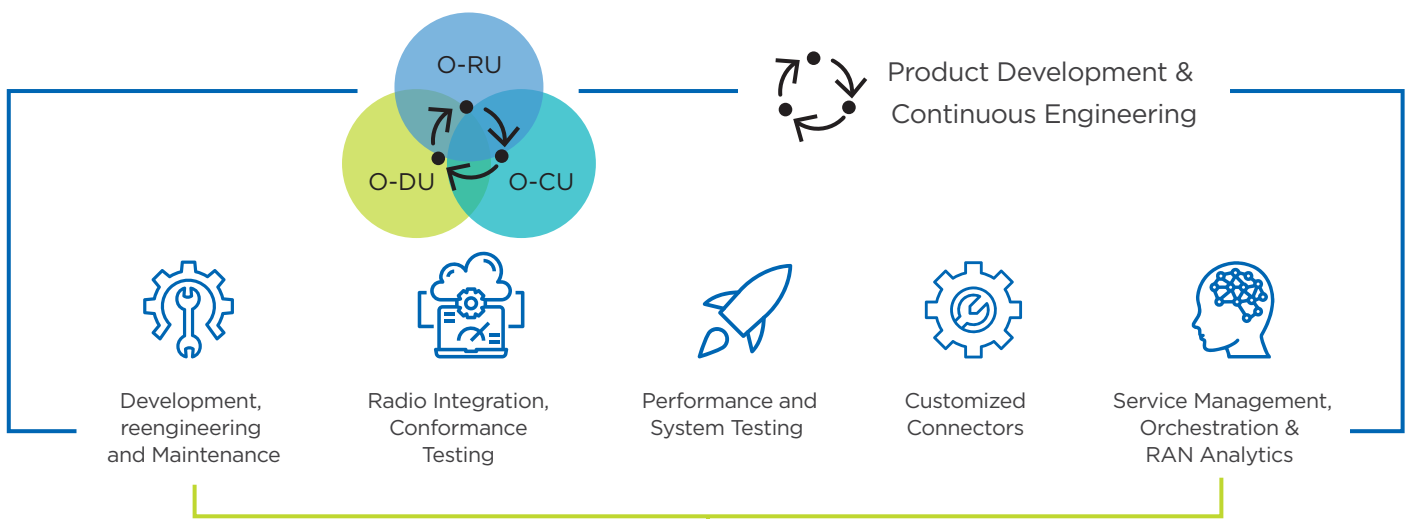
Disaggregation of Radio Access Network | Multiple New Players Infusion of Cloud-Native Technologies

Open-RAN or Open-Radio Access Network is a novel approach to disaggregate the RAN both horizontally and vertically. In the east-west direction, the disaggregation is characterized by: fronthaul, midhaul, and backhaul interfaces for a flexible reach. In the north-south direction, it enables deploying Open-RAN protocol stack in a containerized fashion for scaling and management.

This slicing-and-dicing has enabled newer players such as silicon vendors and cloud computing platform providers to innovate with 5G RAN along with the incumbents, providing an opportunity for engineering services such as interoperability, conformance, verification, and orchestration, for a robust 5G strategy.



HCL Open-RAN member



Differentiators

Catalogue

- Interop Test Spec O-RAN.WG4.IOT
- IoT device profiles as per WG4.IOT
- RCT ref spec: 3GPP
- 4G and 5G SA/NSA architecture
- System test: Mobility/ stability

Vendor Independent Lab

- 5G NR O-CU or O-CU emulator
- 4G LTE MeNB or MeNB emulator
- Test UEs and/or UEs emulator
- Application test server
- Test results and KPI reporting
- FH protocol analyzer
- RF spectrum and beam signal analyzer

Leveraging Expertise from

- Wireless test and RAN
- AI/ML and analytics
- Cloud native
- Service orchestration
- CI/CD Devops

Partner Ecosystem



Service Offerings



Development, reengineering and Maintenance

- 4G,5G eNodeB/gNodeB Development
- New feature implementation
- End-to-end system testing
- Expertise in FOA and field support
- End-to-end product ownership
- Integration & deployment support



Radio Conformance Testing

- RCT in accordance with 3GPP spec
- Support of end-to-end testing scope with combination of real and simulated components
- Option to choose from recommended test suites for RCT
- Radio performance testing



Performance and Stress Testing

- Simulation of end devices, 5G core using industry grade tools / Simulators depending on the use case to cater:
 - Traffic profiles, mobility patterns
 - Throughput
 - Stability
 - Scalability



Radio Integration and System Testing

- Management plane interface testing
- Synchronization plane testing
- Control and user Plane Testing
- FH IOT testing in accordance with specifications
- Front haul stress testing
- E2E system Testing
 - Multiple UEs
 - Varying traffic / mobility profiles
 - Throughput
 - Stability



Re-certification & Validation

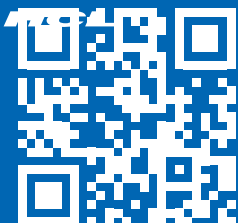
- Option to choose across test suites
- Automated execution of selected test cases saving time and effort

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