Welcome to O-RAN Part 4: RIC and Apps

5G_113d | On-Demand | 5G Access | Express
Course Duration: 1 hour

This course provides a technology introduction to RAN Intelligence Controller (RIC) Apps and external enrichment in O-RAN operations. You will learn the role of xApps and rApps in O-RAN and the benefits and use of external enrichment data in O-RAN operations. You will also explore how O-RAN can use AI/ML to improve the performance of the RAN.

Intended Audience

This course is designed for a broad audience of personnel working in the wireless industry.

Objectives

After completing this course, the learner will be able to:

- Describe the benefits and role of apps in O-RAN operations in Non-RT RIC and Near-RT RIC
- List role and operations of rApps and xApps in O-RAN management
- Explain RIC operations for O-RAN performance improvement
- Describe O-RAN operational use cases

Course Prerequisites

No Prerequisites

Outline

1. RIC and Apps in Open RAN
1.1 Distribution of Intelligence and Control in O-RAN
1.2 Benefits of Distributing Intelligence in the RAN

2. RIC Architecture and Interfaces
2.1 Functionality of RICs and Apps
2.2 Non-Real-Time RIC and the R1 Interface
2.3 Near-Real-Time RIC Architecture
2.4 The A1, E2, O1, and O2 Interfaces

3. Open RAN Control Loops
3.1 Open RAN Control Loops
3.2 Power Savings: Open Loop and Closed Loop Examples
3.3 DDoS Prevention using the E2 Interface

4. RIC and App Operations
4.1 Implementing a Policy In Open RAN
4.2 AI/ML in Open RAN
4.3 Sample Apps: Network Slicing in Open RAN
4.4 O-RAN Alliance Use Cases

Final Assessment

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