Welcome to O-RAN Part 1: Open RAN and O-RAN in 5G

5G_110d | On-Demand | 5G Access | Express
Course Duration: 1 hour

This course provides a technical introduction to open RAN in 5G Radio network and describe the role of O-RAN alliance in defining 5G RAN architecture. You will identify key drivers and benefits of virtualized and Open RAN initiatives supported by O-RAN Alliance.

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:

- Identify key drivers for virtualized and open RAN
- Show examples of virtualized gNB components like vCU, vDU
- Sketch O-RAN architecture and identify O-RAN components
- Identify the role of SMO, RIC and their interfaces to RAN components
- Identify role of artificial intelligence and external apps for RAN analytics
- Sketch the RAN slicing possibility using O-RAN

Course Prerequisites

No Prerequisites

Outline

1. Open RAN in 5G
1.1 5G RAN components - gNB-CU, gNB-DU, RU
1.2 Key drivers for virtualized and Open RAN in 5G
1.3 Role of O-RAN Alliance

2. O-RAN Architecture and Operations
2.1 O-RAN architecture overview
2.2 Role of Service Management Orchestration (SMO)
2.3 Role of RAN Intelligent Controller (RIC)
2.4 Role of rApps and xApps in O-RAN
2.5 O-RAN open fronthaul split option 7-2x
2.6 RAN slicing using Open RAN

Putting It All Together