



Welcome to O-RAN Part 2: Disaggregation of the 5G RAN

5G_111d | On-Demand | 5G Access | ⚙️

Course Duration: 1 hour

This training, part of a multi-part Welcome to O-RAN series, provides insights into how aspects of 5G RAN disaggregation contribute to an open, O-RAN architecture. In this course, you will learn how RAN disaggregation lends itself to an open, virtual, multi-vendor RAN. You will explore open fronthaul (Option 7-2x) for O-RAN and how O-RAN nodes are implemented in the O-RAN reference architecture.

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 key drivers for 5G RAN disaggregation (RAN latency, fronthaul bandwidth, resource pooling)
- Explain the 5G split RAN architecture
- Identify different RAN components and interfaces (CU, DU, RU and Fronthaul, Midhaul, Backhaul)
- Describe the implementation of the 5G RAN in an O-RAN architecture (O-CU, O-DU, O-RU, O-Cloud)
- Explain O-RAN operational interfaces and the need for open fronthaul
- Describe O-RAN management interfaces (O1, O2, E2 and A1) and their operations

Course Prerequisites

No Prerequisites

Outline

1. Requirements for the 5G RAN
 - 1.1 History of RAN Evolution
 - 1.2 5G RAN Requirements
 - 1.3 5G RAN Standards
 2. Building Blocks of Open RAN
 - 2.1 Disaggregating the Protocol Stack (Split RAN)
 - 2.2 Split RAN and Location Flexibility
 - 2.3 Disaggregating the Software Stack (Cloud RAN)
 3. Migrating to Open RAN
 - 3.1 Distributing RAN Intelligence
 - 3.2 Multi-Vendor RAN Management
 - 3.3 Extending the Vendor Ecosystem
 4. Benefits and Challenges of Open RAN
 - 4.1 Summarizing RAN Evolution to O-RAN
 - 4.2 Migrating to Open RAN
- Final Assessment