Open RAN in an Hour

CONTENTS

This course provides a quick overview of the general reasons for Open RAN and outlines the technical architecture and principles for O-RAN. It establishes important technical concepts and terms, and puts Open RAN into context by relating it to use cases and current technological trends.

This condensed Open RAN course is the perfect way to kick-start your path on the Open RAN journey, regardless of your end goal. Perhaps you are aiming for expert level of knowledge, and this is your first stepping stone, or you just want to keep up with the buzz and learn what is going on at the current forefront of the mobile evolution.

Open RAN in an Hour provides enough foundation to be able to navigate the technical terms commonly used to discuss the Open RAN concept. It gives you the framework necessary to formulate relevant questions and understand how the major puzzle pieces of Open RAN fit together.

PREREQUISITES

General technical knowledge of computing as well as experience from Tele and/or Data communication is beneficial but not necessary.

NOTE: This course is not delivered with the FoldOut methodology.

What is Open RAN and why?

- What is the meaning of an “Open” RAN?
- Which are the technical and business drivers for Open RAN?
- Who is the O-RAN Alliance and how does it relate to 3GPP?

O-RAN Architecture and Principles

- The Management Layer
  - What needs to be managed in a RAN
  - Service Management and Orchestration (SMO)
  - Non-RT RIC (RAN Intelligent Controller) and rApps
  - Near-RT RIC and xApps
  - The A1 interface

- The gNB and its Interfaces
  - Lower Layer split of the gNB
  - 3GPP interfaces: F1-C, F1-U and E1
  - O-RAN interfaces: Open FH, E2, O1

- The O-Cloud
  - Cloud and Virtualization basics
  - RAN Network Functions in Regional Clouds and Edge Clouds
  - The O2 interface