

Open RAN - Zero to Zenith (Basic)

Learning Objective:

Upon completing the course, the participant will be able to:

- Understand the concept of Open RAN and its significance in the current market scenario.
- Explore the evolution of RAN technologies including vRAN, cRAN, and Open RAN, and their impact on traditional mobile network architectures.
- Recognize the benefits of Open RAN and identify companies providing services for Open RAN deployment.
- Comprehend the concept of RAN splits, their functions, and the benefits of RAN split architecture.
- Learn important facts about Open RAN and its integration with 5G networks.
- Gain an overview of Open RAN architecture and its implications in private 5G networks.
- Understand traffic steering scenarios and beam-based mobility robustness optimization in Open RAN.
- Explore the role of the RAN Intelligent Controller (RIC) and the functionality of O-CU and O-DU in Open RAN.
- Learn about Dynamic Spectrum Sharing (DSS) and Network Slicing in Open RAN environments with multiple vendors.

Who Should Attend?

- The "Open RAN: Zero to Zenith" e-learning course is designed for a diverse audience interested in understanding and implementing Open RAN technology.

Target Audience:

- Telecommunications Engineers / Network Architects / Network Engineers / RF Engineers
- Network Planners/System Integrators/System Designers/System Administrators/Technical Support Teams

Instructional Method:

- Lectures in Classroom, Virtual Classroom training, Discussion, Questions & Answers. All participants will also receive comprehensive course materials.

Course Outline:

1. Introduction to Open RAN and its current market scenario

- Open RAN Executive Summary
- Open RAN Alliance Organizational Structure Nutshell
- Organizations Driving Open RAN.

2. Evolution of vRAN, cRAN and Open RAN

- History Of RAN
- The evolution of HW/SW Disaggregation
- Traditional base station
- Contemporary base station

- Traditional mobile network architecture
- cRAN
- vRAN
- Open RAN

3. Benefits of O-RAN, companies providing services for O-RAN

- Open RAN Benefits
- Open RAN Service Providing Company for Baseband Hardware, Cloud, Core OSS, NFV

4. RAN splits, Functions, and their benefits.

- RAN Split functions.
- RAN split logical views.
- The Benefits of RAN Split Architecture
- Description of Open RAN Functions
- O-Cloud Management, Orchestration, and Workflow Management.

5. Important facts about Open RAN and 5G

- Open RAN 5G
- Important Facts about Open RAN and 5G

6. Open RAN Architecture overview and implication in 5G Private Networks

- Open RAN Architecture
- Open RAN Deployment scenarios in private 5G Networks.

7. Traffic Steering Scenario and Beam-based Mobility Robustness Optimization in Open RAN

- Traffic Steering Scenario in Open RAN
- What is Beam-based Mobility Robustness Optimization in Open RAN?

8. RIC and functionality of O-CU And O-DU

- Uu Interface for Open RAN Components and O – eNB
- Non – RT RIC
- Near – RT RIC
- Functionality of O – CU – CP
- Functionality of O – CU – UP
- O – DU

9. Utilizing DSS and Network Slicing IN Open RAN with Multiple Vendors

- How does DSS work in Open RAN?
- How is Networking Slicing accomplished in an Open RAN with multiple vendors?

10. Workgroups and White box

- Open RAN Working Groups
- White-Box Hardware Design
- Open RAN: Enabling White Box RAN
- Open RAN: White Box Hardware

11. Open RAN deployment scenario, obstacles, drivers, solutions

- Open RAN Deployment Scenarios
- Obstacles to Open RAN Deployment
- Drivers to Open RAN Adoption
- Conditions for Deploying Open RAN
- Operators Consider Multiple Vendors for Open RAN Deployments
- What Could Speed Up Deployments or Improve the Business Case for Open RAN?
- Cost Plays a Crucial Role in Driving Open RAN Deployments

12. IIoT in 5G and Open RAN

- IIoT in 5G and Open RAN

Course Duration: 1 Hr. 40 Min.

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