O-RAN Fronthaul Technology and Testing eLearning Program

Get the best education quickly from trusted experts

eLearning Overview

A complete and focused set of eLearning modules to help you find success with your Keysight investment at your own pace.

What you will learn

In the O-RAN Fronthaul Technology course, you will learn the basics of the O-RAN fronthaul architecture and protocol, to read and understand the O-RAN specification, and to use commercial tools to test O-RAN radio and distributed units.

In the O-RAN Fronthaul Testing course, you will learn how to successfully test your O-RAN radio, get acquainted with the Keysight O-RAN Fronthaul tool suite including Open RAN Studio, VSA, and Signal Studio. During the course you will learn to use these tools to build an uplink and downlink signal, play the signal, and capture the signal.

Who should attend?

Engineers responsible for testing O-RAN compliant Radio Units and Distributed Units, as well as product marketing people responsible for specifying network elements using the O-RAN fronthaul protocol.

Delivery Method

State-of-the-art self-paced eLearning modules developed by Keysight experts.

Program Package (T6615A-100-ABA)

The O-RAN Fronthaul Technology and Testing courses are offered together as a package in English by ordering T6615A-100-ABA.

KEYSIGHT

O-RAN Fronthaul Technology

Course duration: 3 hours

eLearning	What you will learn
O-RAN Basics	Learn the O-RAN fronthaul protocol's basic fundamentals and gain understanding of the O-RAN Alliance structure.
Transport	Learn how the O-RAN protocol is transported between a distributed unit (DU) and radio unit (RU).
Basic Resource Allocation	Learn how the O-DU informs the O-RU of where user data should be placed in the 5G and LTE time frequency grid.
IQ Power Scaling and Compression	Learn how IQ power scaling and IQ compression is performed in O-RAN.
Beamforming	Learn about O-RAN beamforming.
O-RAN Test	Learn the differences between conformation test, 3GPP test, and interoperability test and how each is accomplished.
O-RAN Technology Quiz	Quiz to reinforce your understanding of the course material.

O-RAN Fronthaul Testing

Course duration: 3 hours

eLearning	What you will learn
Getting Started	Become familiar with the basic U5040B Open RAN Studio hardware, how to install the software, the files used by the system, and how to navigate the workflow to establish the uplink and downlink connections.
Builder and Explorer Overview	Learn how to use the off-line U5040B Open RAN Studio features to build waveforms and create pcap files.
Player, Monitor and Synchronization Overview	Learn how the Open RAN Studio real time player and monitor are configured and operate.
Signal Generation and Analysis Overview	Learn how Keysight's VSA and Signal Studio software applications operate with Open RAN Studio.
M-Plane Overview	Learn how to use U5040B Open RAN Studio for beamforming.
Rest API Overview	Learn the REST API capabilities and how they are used to programmatically control the U5040B Open RAN Studio.
Test on a Real O-RU	Using a real O-RU, show how to run tests on a real DUT.

Next Step

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