

C-RAN for 5G

Course Description

The application of virtualization solutions to the 5G NG-RAN is a key initiative for 5G deployment. This short course details the concepts behind C-RAN (Centralized RAN) for 5G, including focus on the 3GPP architectural options. Key procedures are also examined, outlining how UE initial access, handovers and dual connectivity are influenced by C-RAN. Finally, the course explores alternative solutions to 3GPP C-RAN, in addition to NG-RAN transport network considerations.

This course has no prerequisites.



CPD Learning Credits



This course will contain the following sections:

1. C-RAN for 5G

Topic areas covered include:

- · C-RAN Concepts.
- 3GPP 5G C-RAN Architecture:
 - Separation of gNB-CU.
 - EN-DC Configuration for 5G C-RAN.
 - Xn Reference Point.
 - F1 Reference Point.
 - F1 Protocol Stack Split.
- 5G C-RAN Procedures:
 - UE Initial Access Procedure.
 - Intra gNB-CU Handover.
 - Dual Connectivity (EN-DC).
- Alternative C-RAN Technologies:
 - eCPRI.
 - IEEE 1914.
 - Additional Initiatives.
- NG-RAN Transport Network:
 - Midhaul Considerations.
 - Fronthaul Considerations.
 - Overall Bandwidth Requirements.
 - Transport Network Design.















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