5G Advanced Enhancements in 3GPP R19

TPR1063x | Expert-Led Live | 5G Access | Expert
Course Duration: 4 hours

5G Advanced represents the next milestone in the 3GPP 5G Evolution path toward 6G. The features and enhancements in 5G R19 build upon the 5G baseline features defined in earlier releases to further boost network performance and address new use cases. This course explores 5G Rel 19 features and enhancements for devices, radio networks, and core networks. facilitating enriched 5G Network performance. Notable improvements discussed in this course includes ISAC, A-IoT, FR3, AI/ML for 5G RAN, 5G support for UAV, XR and media services, Massive MIMO and WBA.

Intended Audience

This training is intended for planning, engineering and systems integration teams.

Objectives

After completing this course, the learner will be able to:

- Identify the driving factors for 5G Advanced R19 enhancements
- List and describe 5G advanced enhancements in 5G RAN
- List and describe 5G advanced enhancements in 5G Core network
- Describe the role of AI/ML in 5G R19
- Describe the migration path toward 6G

Outline

1. Introduction to 5G Advanced Release 19
1.1 3GPP Evolution to 5G-Advanced R19
1.2 Timelines for standardization
1.3 Motivation and benefits of 5G-Advanced R19
1.4 5G-Advanced R19 Architecture
Exercise: Knowledge Check

2. 5G Advanced Enhancements to 5G Core
2.1 Indirect Network Sharing
2.2 Wireless Access Backhaul (WAB)
2.3 Energy Efficiency and Energy Savings
2.4 QoS Handling for Non-3GPP Devices
2.5 Integrated Sensing and Communications Architecture
2.6 Support for NR Femto Cells
2.7 Security Enhancements
Exercise: Knowledge Check

3. 5G Advanced Enhancements to 5G RAN
3.1 NR Air Interface Enhancements
3.2 MIMO Enhancements
3.3 Mobility Enhancements
3.4 AI/ML for NG RAN
3.5 Ambient IoT
3.6 Integrated Sensing and Communications (ISAC)
3.7 5G RAN architecture enhancements
Exercise: Knowledge Check

4. 5G Advanced New Use Cases
4.1 UAV Trajectory Tracking
4.2 5G NR Coverage Enhancements
4.3 5G Advanced Satellite Communications
4.4 5G Ambient IoT
4.5 5G Advanced WAB
Exercise: Knowledge Check

5. Moving Forward to 6G
5.1 IMT 2030 Requirements
5.2 Motivation and Use cases for 6G
Exercise: Knowledge Check

© 2024 Award Solutions, Inc.