LTE-M and NB-IoT

TPR1026d | On-Demand | 5G Access | Expanded
Course Duration: 4 hours

This course high-level technical overview Celluar Internet of Things (IoT) defined by 3GPP - LTE-M and NB-IoT. Fundamental concepts of IoT-centric optimizations for a wireless network are explained. IoT-specific characteristics of the wireless network and relevant UE categories (e.g., M1,M2 and NB1 and NB2) are described.

Intended Audience

Technical and product marketing personnel working for wireless operators, equipment and device manufacturers, as well as IoT architects and designers.

Objectives

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

- Describe the meaning and motivation behind IoT and MTC
- Give examples of LPWA technologies and their characteristics
- Describe how Cellular IoT requirements are met in 4G LTE
- Describe the characteristics of Cat-M and Cat-NB devices
- Describe air interface characteristics for Cat-M and NB-IoT operations
- Describe different modes for data delivery for celluar IoT
- Sketch an end-to-end architecture and bearer paths for cellular IoT

Course Prerequisites

LTE Overview

Outline

1. IoT Basics
1.1 IoT: What and Why?
1.2 Wireless Optimizations for IoT
Exercise: Knowledge Checks

2. LTE Enhancements for IoT
2.1 Capacity Management and Enhancements
2.2 Coverage Enhancements
2.3 Battery Life Enhancements
Exercise: Knowledge Checks

3. Network Features
3.1 Device Positioning
3.2 Network enhancements and Data delivery
Exercise: Knowledge Checks

4. UE Categories and Operations
4.1 UE categories in LTE-M and NB-IoT
4.2 LTE-M operations
4.3 NB-IoT operations
Exercise: Knowledge Checks

Putting it all together
Final Assessment

© 2024 Award Solutions, Inc.