Multi-Access Edge Computing (MEC)

TPR1028x | Expert-Led Live | 5G Core | Expert
Course Duration: 4 hours

Multi-Access Edge Computing (MEC) pushes cloud computing capabilities closer to the user across multiple access network domains. This course provides an overview of MEC framework, underlying technology and its use cases. The course starts with the definition of MEC, its characteristics, benefits, and business drivers. The MEC architecture defined by ETSI is illustrated. The key components such as Mobile Edge Host (with platform, infrastructure, and applications) and MEC management are described. Technology enablers for MEC such as the cloud infrastructure, NFV, SDN, microservices, and 5G services are discussed. MEC location strategies are summarized. Implementation of MEC in a 5G network is also described. The course concludes with a discussion on challenges faced by MEC.

Intended Audience

A high-level technical overview to personnel involved in product management, marketing, planning, design, engineering, and operating wireless (4G, 5G) and wireline access networks

Objectives

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

- Define Multi-Access Edge computing(MEC)
- List the key use cases and benefits offered by MEC
- Illustrate the ETSI reference architecture for MEC
- Identify key technology enablers for MEC
- Describe how MEC interacts with the rest of the 5G network

Course Prerequisites

Welcome to 5G

Outline

1. Edge Computing in Networks
1.1 MEC: Definition
1.2 MEC characteristics
1.3 MEC benefits
1.4 Business drivers
1.5 Overview of MEC-facilitated use cases (e.g. video streaming and AR/VR)
1.6 MEC standardization (e.g., ETSI and 3GPP)

2. MEC Architecture and Functions
2.1 ETSI reference architecture
2.2 Mobile Edge Host (platform, infrastructure, applications)
2.3 MEC management (host-level, system level)
2.4 Mobile Edge Services
2.5 Example MEC APIs

3. MEC Technology Enablers
3.1 Cloud infrastructure
3.2 Network Functions Virtualization (NFV)
3.3 Software-Defined Networking
3.4 Microservices
3.5 Target 5G services

4. Deployment and Use Cases
4.1 MEC server location strategies
4.2 MEC in 5G (CAPIF, LADN, PDU Session)
4.3 Challenges and key considerations