5G Voice Solutions - VoNR and EPS Fallback Overview

TPR1050x | Expert-Led Live | 5G Core | ⚙⚙⚙
Course Duration: 4 hours

Voice over NR (VoNR) and EPS Fallback are some of the ways to support voice and related services like SMS, video and emergency calls in 5G. This training presents an overview of an end-to-end network architecture, key network components, and high-level operations of various call scenarios, emergency calls, and handovers to VoLTE.

Intended Audience

This course is intended for planning, engineering, operations, and systems performance teams.

Objectives

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

- Describe the various solutions of supporting voice in 5G networks
- Sketch an end-to-end architecture using the 5G RAN, 5G Core, and IMS for voice services
- Describe VoNR and EPS fallback services and the life of a device during a voice call
- Describe key handover scenarios to 4G VoLTE and Wi-Fi, as well as services like video calls and SMS
- Describe support for emergency calls in 5G

Course Prerequisites

No Prerequisites

Outline

1. What are voice solutions in 5G?
1.1 Voice over NR (VoNR) in 5G
1.2 EPS Fallback as an interim solution
1.3 VoLTE in 5G NSA networks

2. VoNR and EPS Fallback Architecture
2.1 5G RAN, 5G Core, and IMS for VoNR
2.2 EPS Fallback architecture
2.3 End-to-end signaling and traffic paths
Exercise: Building VoNR Network

3. VoNR and EPS Fallback Operation
3.1 5G Registration and IMS Registration
3.2 VoNR call setup
Exercise: VoNR call flow
3.3 EPS Fallback call setup
Exercise: EPS Fallback call flow

4. Handover, Interworking, and Emergency Calls
4.1 VoNR to VoLTE and Wi-Fi Handovers
4.2 Support for Video and SMS
4.3 Emergency calls in 5G

Putting it all together