5G Voice Solutions - VoNR and EPS Fallback Part 1: Voice Services in 5G

5G_223d | On-Demand | 5G Core | Expanded
Course Duration: 4 hours

This is the first course in a four-course set of self-paced courses encompassing 5G Voice Services. In this course, you will learn about IMS-based voice solutions for 5G including Voice Over New Radio (VoNR) and EPS Fallback. You will explore at a high level how VoNR works in a 5G Standalone deployment. You will also discover the importance of EPS Fallback and its role in ensuring seamless voice services during the network transition to full VoNR support. Each course in this four-course set can stand on its own or can be combined with other courses as necessary to meet your learning objectives.

Intended Audience

Planning, design, engineering and operations personnel

Objectives

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

- Describe solutions of voice services in 5G networks
- Define Voice over NR (VoNR) and EPS Fallback solutions
- Sketch the architecture for 5G voice services using 5G RAN, 5G Core and IMS networks
- Identify the reasons for EPS Fallback in 5G SA networks
- Identify 5G features for supporting IMS voice services
- List the use of voice codecs in 5G NR

Course Prerequisites

5G Networks and Services

Outline

1. Voice Services in 5G
1.1 Voice in 5G Networks
1.2 Review of VoLTE and IMS
1.3 Introduction to 5G Voice Services

2. 5G Core Network Overview
2.1 5G Architecture: AMF, AUSF, UDR, UDM
2.2 5G Architecture: SMF, UPF, PCF, NEF
Exercise: 5G Core Architecture

3. Introduction EPS Fallback and VoNR
3.1 Introduction to EPS Fallback
3.2 Introduction to VoNR
3.3 5G Features for IMS Voice Support

4. 5G and IMS Voice Support
4.1 5G Features for IMS Voice Support
4.2 IMS Voice over PS Options
Exercise: IMS Voice in 5G
Exercise: Voice Codecs in 5G

Final Assessment

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