Exploring VoLTE: KPIs and Error Codes

LTE_131d | On-Demand | LTE and VoLTE | Express
Course Duration: 0.5 hours

Evaluating the performance of Long Term Evolution (LTE) and IP Multimedia Subsystem (IMS) networks can be challenging, given the complexity of the networks and the wide variety of services carried over them. The wireless industry has adopted a common set of Key Performance Indicators (KPIs) for LTE and VoLTE, allowing operators to develop a consistent set of monitoring tools independent of the specific vendors involved. This self-paced eLearning course defines these KPIs, discusses typical target values for each one, and describes typical failure scenarios for each of the metrics. In addition, the signaling protocols used in VoLTE operations can provide additional insights into certain failures, through the use of error codes and cause codes included in the messages.

Intended Audience

This course is intended for a technical audience looking for an overview of the KPIs typically used to evaluate LTE and VoLTE networks, along with the more common error codes encountered in VoLTE signaling.

Objectives

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

- Define the standard KPIs used to evaluate LTE and VoLTE performance
- Explain the common response and result codes reported in SIP and Diameter signaling messages

Course Prerequisites

Exploring VoLTE: Signaling and Operations

Outline

1. LTE KPIs
1.1 Availability
1.2 Accessibility
1.3 Retainability
1.4 Mobility
1.5 Throughput

2. VoLTE KPIs
2.1 Call Accessibility
2.2 Call Retainability
2.3 Call Mobility
2.4 Mean Opinion Score (MOS)

3. SIP Error Codes
3.1 Response codes

4. Diameter Error Codes
4.1 Result codes

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