



# 5G (SA) RAN Signaling and Operations Part 3: Registration and PDU Session Setup

5G\_213d | On-Demand | 5G Access | ⚙️

Course Duration: 4 hours

This is the third course in a six-course set of self-paced courses encompassing 5G SA RAN Signaling and Operations! In this course, you will learn key operations for a device to gain access to the 5G SA network and establish sessions with services networks. You will explore registration including authentication of the user as well as PDU session establishment with a data network. Each course in this six-course set can stand on its own or can be combined with other courses as necessary to meet your learning objectives.

## Intended Audience

5G RAN and device engineering, operations, and performance related job functions

## Objectives

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

- Identify key steps of registering and authenticating a 5G device in SA network
- Explain the key steps of setting up PDU session in SA
- List 5G identifiers for device and network and radio states of a 5G device
- Illustrate Quality of Service (QoS) parameters in 5G network

## Course Prerequisites

[5G NR Air Interface](#)

## Outline

1. UE Registration
    - 1.1 5G Identifiers
    - 1.2 Radio states of a UE
    - 1.3 UE registration in 5G
    - 1.4 Authentication and security
    - 1.5 AS and NAS security

Exercise: Registration and authentication signaling flow

Exercise: Registration and AMF selection
  2. PDU Session Setup
    - 2.1 5G Quality of Service (QoS)
    - 2.2 PDU Session Setup

Exercise: PDU session establishment signaling flow

Exercise: PDU session setup and SMF selection

Exercise: PDU session setup - DNN, Network Slice, SSC mode
- Assessment