



# Integrated Access and Backhaul Overview

TPR1048x | Expert-Led Live | 5G Access | ⚙️⚙️⚙️

Course Duration: 4 hours

This training is a high-level technical overview of Integrated Access and Backhaul (IAB) - a 3GPP solution to explore higher frequencies including mmW to provide access to end devices as well as offer a backhaul transport solution for dense 4G and 5G radio networks.

## Intended Audience

This course is intended for planning, engineering, and operations personnel.

## Objectives

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

- Define IAB and why it is needed
- Sketch the IAB architecture
- Step through the key operations of IAB
- Identify deployment scenarios of IAB for improving coverage and capacity

## Course Prerequisites

[Welcome to 5G](#)

## Outline

1. IAB: What and Why?
    - 1.1 Transport bandwidth
    - 1.2 Coverage fill
    - 1.3 First mile access
    - 1.4 Space limitationsExercise: Knowledge check
  2. IAB Architecture
    - 2.1 gNB BBU split
    - 2.2 Donors DUs and IAB DUs
    - 2.3 Relay
    - 2.4 F1 and Backhaul Adaptation Protocol (BAP)Exercise: Build IAB-based 5G network  
Exercise: Knowledge check
  3. IAB Operations
    - 3.1 Multiplexing access and backhaul
    - 3.2 Route management
    - 3.3 IAB resource management
    - 3.4 Backhaul bearer setupExercise: Knowledge check
  4. IAB Deployment Scenarios
    - 4.1 Cell densification
    - 4.2 Coverage fill
    - 4.3 Coverage extensionExercise: Knowledge check
- Putting it all together  
Final Assessment