# Integrated Access and Backhaul Overview

**TPR1048x | Expert-Led Live | 5G Access | Expert**
**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 limitations
Exercise: 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 setup
Exercise: Knowledge check

4. IAB Deployment Scenarios
4.1 Cell densification
4.2 Coverage fill
4.3 Coverage extension
Exercise: Knowledge check

Putting it all together
Final Assessment