

Cisco Service Provider 5G Technologies Foundations (SPMBL100) v1.0

What you'll learn

The Cisco Service Provider 5G Technologies Foundations (SPMBL100) v1.0 training introduces mobile network components, basic 5G concepts, and features of 5G technology including faster data speeds, higher device capacity, and improved user experience. You will examine the mobile packet core solutions, 5G transport architecture, and Cisco® automation and orchestration tools used in 5G networks. You will also learn about the Cisco 5G Non-standalone (NSA) and the Cisco Ultra Cloud Core 5G standalone (SA) platform solutions, the Cisco 5G converged Software-Defined Networking (SDN) transport architecture, and Cisco edge computing solutions. You will study the Cisco Network Function Virtualization (NFVI) architecture, Cisco Network Services Orchestrator (NSO), and Cisco Elastic Services Controller (ESC). You will learn how 5G is distributed with Telco Data Center (DC) with Cisco Application Centric Infrastructure (Cisco ACI®). And finally, Zero-Touch Provisioning (ZTP), Cisco Crosswork™, and the Cisco 5G security architecture will also be presented.

How you'll benefit

This training will help you:

Use the higher data speeds of 5G to access data more quickly and accommodate every device with increased capacity

Learn how 5G technology delivers lower latency, higher device capacity, and a more uniform user experience

Who should enroll

Customer support engineers

Field engineers

Network engineers

Network consulting engineers

Technology areas

Service Provider

Networking

Training overview

Objectives

After taking this training, you should be able to:

Describe mobile network architecture basics

List enabling technologies for 5G and describe 5G key use cases

Perform basic operations on a Cisco 5G NSA mobile packet core

Describe the Cisco 5G Converged SDN Transport Architecture

Describe Cisco NFVI and perform basic operations using Cisco ESC and Cisco Virtualized Infrastructure Manager (VIM)

Describe Cisco service provider automation and orchestration solutions to deploy and manage 5G network functions

Describe the Cisco Ultra Cloud Core architecture and deploy the Cisco SMI

Explain the 5G ready distributed Telco DC with Cisco ACI solution

Describe the Cisco 5G security architecture

Prerequisites

Before enrolling in this training, you should have knowledge in the following areas:

Knowledge of general networking concepts

Experience working with command-line interface (CLI)-based network devices

Basic understanding of Multiprotocol Label Switching (MPLS)

Familiarity with service provider architectures

The following Cisco training may help you meet these prerequisites:

Implementing and Administering Cisco Solutions (CCNA®)

Understanding Cisco Service Provider Foundations (SPFNDU)

Lab outline

Investigating the EPC and xHaul Device Operations

Deploying Cisco Ultra Gateway Platform with CUPS

Configuring the EPC for 5G NSA

Network Slicing with Segment Routing

Deploying a VNF using Cisco ESC

Using ZTP and Telemetry

Using Cisco Crosswork Optimization with NSO



Deploying the Cisco SMI and Cisco Ultra Cloud Core