

# Cisco Service Provider 5G Technologies Foundations (SPMBL100)

## Description

The **Cisco Service Provider 5G Technologies Foundations (SPMBL100)** 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.

This training also earns you 24 Continuing Education (CE) credits toward recertification.

## 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
- Earn 24 CE credits toward recertification

## Who should enroll

- Customer Support Engineers
- Field Engineers
- Network Engineers
- Network Consulting Engineers

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## Technology areas

- Service Provider
- Networking

## Objectives

- 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

There are no prerequisites for this training. However, the knowledge and skills you are recommended to have before attending this training are:

- 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

These skills can be found in the following Cisco Learning Offerings:

- [Implementing and Administering Cisco Solutions \(CCNA\)](#)
- [Understanding Cisco Service Provider Foundations \(SPFNDU\)](#)

## Outline

- Mobile Network Fundamentals
- Enabling Technologies for 5G
- Cisco 5G NSA Solution
- Cisco 5G Converged SDN Transport Architecture
- Cisco NFV Infrastructure, Cisco Virtualized Network Functions (VNFs), Cisco VIM, and Cisco ESC
- Cisco Service Provider Automation and Orchestration
- Cisco Ultra Cloud Core
- 5G Ready Distributed DC with Cisco ACI
- Mitigating Threats in 5G

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## Links

- [Cisco U. Learning Path](#)
- [Cisco Learning Network Store](#)
- [Cisco Learning Locator](#)