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Learning Style: On Demand

Technology: Cisco

Difficulty: Intermediate

Course Duration: 40 Hours

Understanding Cisco Service Provider Network Foundations (SPFNDU) v1.0 - On Demand



About this course:

The Understanding Cisco Service Provider Network Foundations (SPFNDU) v1.0 course is designed to provide you with the foundational knowledge for the suite of Cisco CCNP Service Provider courses.

The course expands on what you learn from the Cisco CCNA course with a focus

on theoretical and practical knowledge needed for the service provider environment. Through a combination of lessons and hands-on practice, you will learn about architectures, protocols, software and hardware platforms, and solutions within the service provider realm. While this course does not lead directly to a certification exam, it does cover foundational knowledge critical to success in the service provider technology track.

Course Objective:

After taking this course, you should be able to:

- Describe network architectures, devices, and software used by service providers
- Describe the various Internet governance organizations, their roles, and tools available for governance information verification
- Configure Cisco IOS and Cisco IOS XE routers
- Describe Cisco IOS XR software, perform initial configuration, and explain platform daily tasks
- Describe various access and core technologies used by service providers
- Describe various major switching technologies used by service providers
- Describe major overlay technologies and their usage, and configure Virtual Extensible LAN (VxLAN)
- Describe various major routing protocols used by service providers
- Configure Layer 3 services used by service providers
- Describe Multiprotocol Label Switching (MPLS), components, protocols, and MPLS usage
- Describe usage of various services used and maintained by service providers
- Introduce Linux networking, Bourne-Again Shell (Bash) scripting, and their usage within Cisco IOS XR software

Audience:

This course is designed for network and software engineers and those that hold job roles such as:

- Network administrator
- Network engineer
- Network manager
- System engineer
- Project manager
- Network designer

Prerequisite:

Before taking this course, you should have the following knowledge and skills:

- Knowledge of IPv4 and IPv6 TCP/IP networking
- Familiarity with typical service provider environment

- Basic knowledge about networking devices and their roles

Course Outline:

- **Introducing Service Provider Architectures**
- **Describing Internet Governance Organizations**
- **Configuring the Cisco IOS and Cisco IOS XE Router**
- **Configuring Cisco IOS XR Router**
- **Introducing Access and Core Technologies in the Service Provider Environment**
- **Introducing Routing Technologies in the Service Provider Environment**
- **Describing MPLS**
- **Implementing Layer 3 Services**
- **Introducing Switching Technologies in the Service Provider Environment**
- **Introducing Overlay Technologies**
- **Implementing Service Provider Services**
- **Introducing Programmability on Cisco IOS XR Routers**

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