Understanding Cisco Service Provider Network Foundations (SPFNDU)

What you'll learn in this course

The Understanding Cisco Service Provider Network Foundations (SPFNDU) training is designed to provide you with the foundational knowledge for the suite of Cisco® Certified Network Professional (CCNP®) Service Provider trainings. The training expands what you learned from the Cisco CCNA® training with a focus on theoretical and practical knowledge needed for the service provider environment. You will learn about architectures, protocols, software and hardware platforms, and solutions within the service provider realm.

This training earns you 30 Continuing Education (CE) credits towards recertification.

Course duration

- Instructor-led training: 5 days in the classroom with hands-on lab practice
- Virtual instructor-led training: 5 days of web-based classes with hands-on lab practice
- E-learning: 5 days equivalent of classroom training

How you'll benefit

This training will help you:

- Acquire the foundational knowledge to understand the Cisco Service Provider Network methodologies, tools, and functions
- Learn the skills to manage the software and hardware platforms, structures, and protocols within the service provider realm
- Qualify for professional-level job service provider roles
- Earn 30 CE credits towards recertification

Who should enroll

- Network Administrators
- Network Engineers
- Network Managers
- System Engineers
- Project Managers
- Network Designers

Technology areas

- Service Provider

Course details

Objectives:

- 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 Internetwork Operating System (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

Recommended knowledge and training

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

- Knowledge of IPv4 and IPv6 Transmission Control Protocol/Internet Protocol (TCP/IP) networking
- Familiarity with a typical service provider environment
- Basic knowledge about networking devices and their roles

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

- Implementing and Administering Cisco Solutions (CCNA)

How to enroll

To enroll in the SPFNDU course or explore our larger catalog of courses on Cisco Digital Learning, contact us at <training@fastlane-mea.com>

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 Service Provider Environment
- Introducing Routing Technologies in 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

Lab Practice

- Review Lab Environment
- Examine Governance Data
- Perform an Initial Cisco IOS XE Configuration
- Configure Connectivity and Connectivity Verification on Cisco IOS XE Devices
- Perform Initial Cisco IOS XR Configuration
- Configure and Verify Connectivity on Cisco IOS XR Devices
- Configure IS-IS
- Configure RIPv2 and RIPng
- Configure Basic BGP
- Configure MPLS
- Configure IP SLA
- Configure HSRP with Object Tracking
- Configure VRFs
- Configure NTP
- Use Linux CLI
- Configure IOS XR Using a Bash Script