Designing and Implementing Cisco Service Provider Cloud Network Infrastructure (SPCNI)

Description

Design and implement virtualized cloud infrastructures

Designing and Implementing Cisco Service Provider Cloud Network Infrastructure (SPCNI) is a comprehensive course that enables you to master the deployment of cloud infrastructures in a service provider network. You will learn to use advanced solutions for programmability, orchestration, and virtualization infrastructure. This course also prepares you to secure and optimize these infrastructures while ensuring high availability.

Through this training, you will explore essential concepts such as cloud computing, network function virtualization, and data center interconnection solutions. These skills are crucial for evolving service provider networks towards more resilient and high-performance architectures. The numerous labs allow you to apply the knowledge gained directly.

Reference
SPCNI
Course Content
Module 1: Cisco NFV Infrastructure

- Understand the virtualized network function infrastructure
- Explore NFV management tools

Module 2: Model-based programmability for service providers

- Configure and use programmability models
- Automate networks with NSO

Module 3: Network orchestration using NSO

- Use NSO to automate network orchestration

Module 4: Container orchestration

- Discover containerization technologies

- Configure Kubernetes for container orchestration

Module 5: Cloud computing

- Understand the basics of cloud computing
- Configure cloud deployment models

Module 6: MPLS and segment routing

- Configure and use MPLS
- Implement segment routing (SR)

Module 7: Cloud interconnection solutions

- Configure cloud interconnection solutions

Module 8: Data center interconnection solutions

- Configure data center interconnections

Module 9: Control plane security for service providers

- Implement control plane security mechanisms

Module 10: Data plane security for service providers

- Secure the data plane with advanced filters

Module 11: High availability for service providers

- Configure high availability in networks

Module 12: Core network optimization for service providers

- Optimize core network performance

Module 13: Performance monitoring for service providers

- Configure performance monitoring tools

Module 14: Cisco Crosswork Network Controller

- Deploy and configure Cisco Crosswork Network Controller

Lab / Exercises

- Deploy a VNF using OpenStack
- Configure and verify devices using model-based programmability
- Network orchestration using NSO
- Configure and verify application hosting in a Docker container
- Configure and verify segment routing
- Configure and verify SRv6
- Configure and verify Layer 3 VPN
- Configure and verify EVPN VPWS
- Implement BGP security
- Implement RTBH filtering

- Configure and verify SR TI-LFA using IS-IS
- Configure and verify SR TI-LFA using OSPF
- Configure and verify SR-TE using IS-IS
- Configure and verify SR-TE using OSPF
- Configure and verify ODN and flexible algorithms
- Configure and verify model-driven telemetry

Documentation

- Digital course materials included

Exam

- This course prepares you to the Cisco Certified Specialist – Service Provider Cloud Network Infrastructure certification. If you wish to take this 300-540 SPCNI v1.0 exam, please contact our secretariat who will let you know the cost of the exam and will take care of all the necessary administrative procedures for you.

Participant profiles

- Network engineers
- Cloud architects
- Network support technicians
- Cloud infrastructure consultants
- Cisco distribution partners

Prerequisites

- Understanding of routing protocols (BGP, IS-IS, OSPF)
- Experience in MPLS and layer 2 switching
- Knowledge of virtualization and cloud technologies
- Familiarity with network security and BGP filtering
- Mastery of container and orchestration concepts

Objectives

- Design virtualized cloud infrastructures
- Implement programmability and network orchestration
- Secure cloud infrastructures for service providers
- Optimize the high availability of infrastructures
- Configure cloud and data center interconnection solutions
- Apply segment routing technologies

Description
Designing and Implementing Cisco Service Provider Cloud Network Infrastructure (SPCNI) training
Niveau
Intermédiaire
Classroom Registration Price (CHF)
4350
Virtual Classroom Registration Price (CHF)
4350
Duration (in Days)
5