Building Cisco Service Provider Next-Generation Networks, Part 2

Varighed: 5 Days      Kursus Kode: SPNGN2

Beskrivelse:
This 5-day course is designed to provide network engineers and technicians with the knowledge and skills required to implement and support a provider network (P-network). The course focuses on using Cisco switches and routers that are connected in LANs and WANs and that are typically found in the P-network. Upon completing this course, learners will be able to configure, verify, and troubleshoot the various Cisco networking devices. The course also includes classroom activities with remote labs that are useful to gain practical skills on deploying Cisco IOS/IOS XE Software and Cisco IOS XR Software features to operate and support the P-network.

This course is worth 30 Credits in the Continuing Education Program.

Målgruppe:
Network Engineers operating in a Service Provider environment and individuals looking to achieve the Cisco Certified Network Associate SP Certification.

Agenda:
- Describe and implement basic MPLS
- Describe the Cisco IP NGN Architecture
- Determine how to apply ACLs that are based on network requirements, and implement ACLs on a P-network
- Describe when to use NAT and implement NAT on Cisco routers
- Describe basic IPv6 concepts and use different configuration scenarios to implement IPv6
- Describe the fundamentals of Cisco IOS XR technology
- Implement internal and external routing protocols: OSPF, IS-IS, and BGP
- After you complete this course you will be able to:
- Expand a small, switched LAN to a medium-sized LAN with multiple switches, supporting VLANs, trunking and Spanning Tree Protocol
- Describe routing concepts as they apply to a P-network and discuss considerations when implementing routing on the network

Forudsætninger:
Attendees should meet the following prerequisites:
- Basic knowledge of networking concepts
- Basic knowledge of Cisco IOS/IOS XE and Cisco IOS XR software configuration
- Skills and knowledge that are equivalent to those learned in the Building Cisco Service Provider Next-Generation Networks, Part 1 (SPNGN1) course

Test og certificering
Recommended preparation for exam(s):
- 640-878 - Building Cisco Service Provider Next-Generation Networks, Part 2

Yderligere Kurser:
The following courses are recommended for further study
- SPROUTE - Deploying Cisco Service Provider Network Routing
- SPADVROUTE - Deploying Cisco Service Provider Network Advanced Routing
- SPEDGE - Implementing Cisco Service Provider Next Generation EDGE Network Services
- SPCORE - Implementing Cisco Service Provider Next Generation Core Network Services
Indhold:

Service Provider Network Architecture
- Introduction to Service Providers
- Cisco IP NGN Architecture

Advanced LAN Switching
- Implementing VLANs and Trunks
- Spanning Tree Protocol Enhancements
- Routing Between VLANs
- First Hop Redundancy Protocols

Internal Service Provider Traffic Forwarding
- Link-State Routing Protocols
- Implementing OSPF
- Implementing IS-IS
- Implementing Route Redistribution
- MPLS Basics

External Service Provider Routing
- Introducing BGP
- Understanding BGP Path Attributes
- Establishing BGP Sessions
- Processing BGP Routes
- Configuring Basic BGP

- ACLs and IP Address Translation
- Implementing Access Control Lists
- Transitioning to IPv6

Service Provider Platforms
- Describing Cisco Hardware Platform Placement
- Describing Cisco IOS XR Software Architecture and Features
- Explaining Software Maintenance Operations on Cisco IOS XR and Cisco IOS XE
- Explaining Configuration Management with Cisco IOS XR Software

Labs
- Hardware Lab 1: Configure Advanced Switching
- Hardware Lab 2: Configure Inter-VLAN Routing and Gateway Redundancy
- Hardware Lab 3: Implement OSPF
- Hardware Lab 4: Implement IS-IS
- Hardware Lab 5: Configure Basic BGP
- Hardware Lab 6: Implement ACLs
- Hardware Lab 7: Manage Cisco IOS XR Software Package

Flere Informationer:

For yderligere informationer eller booking af kursus, kontakt os på tlf.nr.: 44 88 18 00

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