AOS-CX Switching Fundamentals, Rev. 24.31

Duration: 5 Days

Course Description:

This course prepares you for the updated AOS-CX switching-based ACA - Switching certification exam (HPE6-A86). Attending this course will teach you the fundamental skills to configure and manage modern, open standard-based networking solutions using HPE Aruba Networking's AOS-CX routing and switching technologies. This 5-day course consists of approximately 60% lecture and 40% hands-on lab exercises to help you understand how to implement and validate small to medium enterprise network solutions. In this course, you will learn AOS-CX switch technologies such as:

- Virtual Local Area Networks (VLANs)
- Redundancy technologies such as Multiple Spanning Tree Protocol (MSTP)
- Link aggregation techniques, including Link Aggregation Control Protocol (LACP)
- Switch virtualization with HPE Aruba Networking Virtual Switching Framework (VSF).

You also learn about IP Routing, including static and dynamic routing with Open Shortest Path First (OSPF).

Target Audience:

The ideal candidate is someone starting a career as a networking IT professional. They have six months of experience in the field. Supporting or operating limited scope wired network used in SMB, edge, and simple core environments. They are the junior member of the IT Operations team.

Prerequisites:

It is highly recommended that candidates already have basic knowledge of networking (knowing the OSI model, IP addressing, basic routing, etc.). The Aruba Certified Network Technician (ACNT) course and certification is the perfect primer for this course. The ACNT certification validates that you understand the different aspects of campus access both wireless and wired methodologies.

Course Objectives:

After you successfully complete this course, expect to be able to:

- Identify the best HPE Aruba Networking switching portfolio products for various network types and sizes
- Install devices running the HPE Aruba networking AOS-CX network operating system
- Configure network segmentation using Virtual Local Area Networks (VLANs), Spanning Tree Protocol (STP) and Link Aggregation Groups (LAGs)
- Demonstrate creating network efficiency with stacking, virtualization, and routing such as Open Shortest Path First (OSPF)
- Deploy secure management and maintenance methodologies

Course Outlines:

AOS-CX Switching Portfolio
- Network designs
- Switching Portfolio

Switching Fundamentals
- Switching contexts
- Command Line Interface (CLI)
- Basic configuration

VLANs
- Domains - Collision and broadcast
- LANs and VLANs
- 802.1Q
- Forwarding Tables

Spanning Tree
- Purpose
- Redundant networks
- Spanning Tree Protocol (STP)
- Rapid Spanning Tree Protocol (RSTP)
- Multiple Spanning Tree Protocol (MSTP)

Link Aggregation
- Overview and interface requirements
- Static and dynamic LAGs
- Load sharing

Switch Stacking and Extension
- Operational planes
- Virtual Switching Framework (VSF)

Layer 3 Routing
- Intro to routing
- IP routes and default gateways
- Inter-VLAN routing
- Packet delivery

IP Routing Fundamentals
- Principles of routing
- Routing tables
- Routing protocols

Dynamic IP Routing
- Intro to OSPFv2
- Neighbor relationships
- OSPF network types

Quality of Service
- Intro to Quality of Service (QoS)
- Packet classification and marking
- Queuing
- Rate Limiting

Network Security Fundamentals
- Security fundamentals
- Port access
- Captive Portal

Secure Management and Maintenance
- Secure management
- Maintenance