

# **Aruba Network Certified Associate (ANCA) – Switching**

## **AOS-CX Switching Fundamentals, Rev. 24.31 –**

**Duration:** 40 HRS

### **Overview**

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.

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).

### **Topics**

- **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

## **Upon Completion**

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