



Implementing Campus Access, Rev. 26.31

Course Description

This course is designed to provide IT professionals with the comprehensive skills and knowledge needed to deploy and manage secure, high-performance campus networks using HPE Aruba Networking solutions.

Through a structured series of modules, participants will explore key topics such as campus network architecture, wired and wireless redundancy, advanced routing protocols and Layer 3 services, enterprise WLAN security, guest access management, VXLAN and group-based policies, and network optimization and automation. Each module combines foundational theory with practical configuration and troubleshooting exercises, ensuring a hands-on learning experience.

By the end of the course, learners will be able to: Analyze business and technical requirements. Design simple network solutions based on HPE Aruba Networking products. Implement secure and scalable network infrastructures. Document their work for ongoing operational success. The curriculum emphasizes current industry best practices and prepares participants to confidently address the challenges of modern campus networks.

Course Duration:

5 days

Prerequisites:

It is recommended that candidates have proficient networking experience or attend Aruba's Campus Access Fundamentals.

Objectives:

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

- Assess, design, and implement various LAN topologies available for campus networks.
- Configure resilient and secure wired networks.
- Design wireless networks provide high-performance network access, dynamic security, and reliability.
- Configure guest access for wired and wireless networks.
- Deploy, monitor, and troubleshooting networks using HPE Aruba Networking Central and APIs.
- Manage and optimize networks by employing HPE Aruba Networking services.
- Develop professional network design, implementation, and documentation strategies aligned with business requirements.

Course Outline:

Introduction to HPE Aruba Networking solutions

- HPE Aruba Networking campus architecture
- Topologies and encapsulation
- Automation

Wired redundancy

- VSX overview and components
- VSX synchronization
- Traffic forwarding
- Loop avoidance

Campus routing

- Single-area OSPF review
- Multi-area OSPF
- Redistributing external routes
- Area types
- Promoting fast convergence
- BGP overview

L3 services

- DHCP snooping
- Dynamic ARP inspection

Multicast

- IGMP
- PIM introduction
- PIM-DM

Wireless infrastructure with gateways

- Mobility gateway use and functions
- AOS-10 gateway clusters
- Gateway deployment options
- Cluster configuration
- Cluster monitoring
- Secondary gateway

Tunneled WLAN architecture

- Tunnel forwarding mode
- Configuring tunnel mode SSID
- Monitoring tunnel mode implementation

Secure enterprise networks

- Introduction to authentication
- 802.1X authentication in AOS-10
- Firewall roles and policies
- Alias
- Dynamic authorization in AOS-10

Guest access

- Introduction to guest access
- Guest authentication process
- Configuring guest authentication using Central NAC
- MAC authentication



Mixed mode architecture

- HPE Aruba Networking mixed mode WLAN
- Mixed mode configuration

Gateway cluster deployment**Wired port access**

- Wired authentication

VXLAN and GBP**Security and availability features****RF optimization**

- Channel availability
- RF interference and duty cycle
- AirMatch and broadcast optimization
- ClientMatch
- AirGroup
- Managing personal device visibility and sharing

Traffic optimization and QoS**Professional network design and implementation****Who Should Attend**

Ideal candidates for this course have knowledge of HPE Aruba Networking campus LAN and WLAN portfolios. This includes basic Layer 2 (L2) and Layer 3 (L3) experience in networking and entry-level troubleshooting principles. Candidates should have at least six months of hands-on experience or equivalent knowledge configuring HPE Aruba Networking switches and APs in an enterprise environment and on-the-job training with exposure to network protocols.

This course is ideal for network engineers, administrators, or consultants aiming to demonstrate and expand their skills in campus network environments and take on expanded responsibilities.