Hewlett Packard Enterprise

Introduction to HPE Aruba Networking Solutions (0001196344)

H38DJS

Course ID	H38DJS
Duration	3 days
Format	ILT, VILT
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This introductory course provides an easy entry point to the world of computer networking. Geared toward students who are new to technology, it covers the different aspects of campus access—both wireless and wired methodologies. The course is approximately 40% lecture and learning activities and 60% lab activities.

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Audience

This course is ideal for aspiring networking professionals who have little or no experience with computer networking.

Certifications and related exams

This course prepares you for the HPE Aruba Networking Certified Network Technician (ACNT) exam.

Course objectives

After completing this course, you should be able to:

- Perform numerical conversions
- Analyze packets
- Do initial switch setup
- Configure VLANs and 802.1Q
- Configure IPv4 routing
- Deploy a WLAN
- Monitor a WLAN and wireless client

Detailed course outline

Module 1: Networking Fundamentals	• Basic network concepts • What is a computing network? • Network classifications • What is a protocol? • OSI reference model	• Encapsulation/layer headers/protocol data units (PDUs) • Physical media, cables • Binary numerical system • Hexadecimal numerical system
Module 2: TCP-IP	• Overview – How collaboration tools (Zoom, Teams) work from a networking perspective • TCP/IP stack • Ethernet, Ethernet frame • IPv4 header	• TCP header—three-way handshake, sequence numbers, port numbers • UDP header • Networking devices—switches, routers, multilayer switches, APs, firewalls, and servers • Networking services—DHCP, DNS, HTTP, Telnet, and SSH, FTP
Module 3: Basic Networking with HPE Aruba Networking Solutions	• Network design • Hierarchical models • HPE Aruba Networking switching portfolio	• Modern switching requirements • AOS-CX features, commands
Module 4: VLANs	• Collision domain • Broadcast domain • Virtual LAN • Access ports	• 802.1Q and trunk ports • Forwarding tables (MAC and ARP) • Frame delivery
Module 5: IPv4 Routing	• IPv4 addressing • Network mask • Routing introduction • Default gateway	• Inter-VLAN routing • IP routing table • Packet delivery
Module 6: WLAN Introduction	• Networking comparison: wired vs wireless • WLAN organizations	• Radio frequency communications (antenna types, 802.11 standards, and sources of interference) • Data rates
Module 7: WLAN Theory	• Terminology • Roaming • WLAN architecture	• Coverage • WLAN security

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