



Deploying HPE FlexFabric Core Technologies for Comware Based Devices H4C88S

HPE course number	H4C88S
Course length	4 days
Delivery mode	ILT
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HPE FlexNetwork is redefining the way organizations think about their data center network fabric. It is the industry's most complete software-defined network fabric. This four-day course gives network administrators, and engineers an opportunity to plan for and implement networks utilizing HPE FlexNetwork Architecture, using Comware devices. Participants will work HPE IRF, along with open standard technologies like ACL's, QoS, OSPF, BGP and Multicast technologies. The learner will experience both theory and hands on interaction using HPE network devices through remote lab exercises over four days.

Why HPE Education Services?

- IDC MarketScape leader 4 years running for IT education and training*
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- Simplified purchase option with HPE Training Credits

Course description

This course covers basic and advanced topics within the HPE FlexCampus Architecture. The learner will experience both theory and hands on experience utilizing real hardware through lab exercises over four days. The learner will configure and monitor Comware devices using open standard technologies. You will work with layer 2 technologies, such as Multiple Instance Spanning Tree (MSTP) and Link-Aggregation (Trunks). You will also learn about Backplane Stacking. Layer 3 technologies, such as static routes, Open Shortest Path First (OSPF) with Multi-Area implementations, and Border Gateway Protocol (BGP), along with multicast solutions leveraging Protocol independent Multicast (PIM) both dense and sparse modes.

Audience

- This course is designed for Network Administrators, engineers and consultants who plan to Deploy HPE FlexNetwork Architecture using Comware devices

Prerequisites

The learner is should have completed one of the two courses below or obtained equivalent knowledge.

- HPE FlexNetwork Fundamentals (H4C81)
- HPE Comware Foundations training (Part number H4C87)

Course objectives

At the conclusion of this course, you should be able to:

- Implement and deploy HPE IRF with MAD technologies to protect your network
- Implement, design and deploy Access Control Lists (ACLs)
- Configure, design and deploy Open Shortest Path First (OSPF), in multi-area, and work with External routes

- Implement, design and deploy Open Shortest Path First (OSPF), in multi-area design, and work with External routes
- Implement, design and deploy Border Gateway Protocol (BGP)
- Implement, design and deploy Quality of Service (QoS)
- Implement, design and deploy Multicast (Protocol Independent Multicast Dense Mode and Sparse mode) along with IGMP technologies

Benefits to you

- Gain hands-on experience with HPE FlexNetwork Architecture using Comware experience in a zero risk environment using real hardware. If you make a mistake you will not, incur any production outage in our lab environment which also means no higher ups asking what happened
- Learn how to plan, design and implement HPE Flex Network Architecture using HPE Comware
- Enhance your knowledge and comfort level with HPE Flex Network Architecture running Comware in any deployment location within your network, from the Core to the Edge, and also the Spine and Leaf design

Detailed course outline

Module 1: Introduction	<ul style="list-style-type: none">• Course overview and objectives	
Module 2: IRF	<ul style="list-style-type: none">• Design an IRF virtual device for the core, distribution, or access layer• Implement and manage an IRF virtual device	<ul style="list-style-type: none">• Describe what a split IRF stack is and configure the mechanisms designed to detect and remedy this problem
Module 3: Access Control Lists	<ul style="list-style-type: none">• Define ACL and identify the criteria by which ACLs select traffic• Configure ACLs on HPE Comware based switches to select given traffic	<ul style="list-style-type: none">• Apply static ACLs to interfaces to meet the needs of a particular scenario• Examine an ACL configuration and determine the action taken on specific packets
Module 4: Quality of Service	<ul style="list-style-type: none">• Need for QoS• Prioritization and queue scheduling• Traffic policing and shaping	<ul style="list-style-type: none">• Congesting avoidance• Voice VLAN and LLDP-MED
Module 5: OSPF	<ul style="list-style-type: none">• Deploy HPE products in single-area and multiple-area OSPF systems• Use area definitions and summaries to create efficient and scalable, multiple-area designs• Advertise routes to external networks in a variety of OSPF environments	<ul style="list-style-type: none">• Promote fast, effective convergence during a variety of failover situations• Use virtual links as required to establish nondirect connections to the backbone• Implement OSFP authentication
Module 6: BGP	<ul style="list-style-type: none">• Establish and monitor eBGP sessions between your routers and Internet Service Provider (ISP) routers• Advertise an IP block to multiple ISP routers	<ul style="list-style-type: none">• Filter BGP routes as required for a dual-homed ISP connection• Configure a BGP router to advertise a default route in OSPF or to redistribute and aggregate BGP routes, as appropriate
Module 7: Multicast	<ul style="list-style-type: none">• Route multicast traffic using Protocol Independent Multicast-Dense Mode (PIM-DM) or Protocol Independent Multicast-Sparse Mode (PIM-SM)• Select and configure rendezvous points (RPs) based on particular environmental needs such as redundancy and efficient operation	<ul style="list-style-type: none">• Minimize unnecessary multicast flooding• Apply advanced controls such as source-specific multicasting (SSM) and administrative scopes to a PIM-SM deployment

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