

MOC On-Demand: Networking with Windows Server 2016 (20741) H6LA7S

HPE course number	H6LA7S
Course length	13 Hours
Delivery mode	On-Demand
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This course provides the fundamental networking skills required to deploy and support Windows Server 2016 in most organizations. It covers IP fundamentals, remote access technologies, and more advanced content including Software Defined Networking.

Order details

- MS Order-ID: Q4P-00312
- MOD Duration: 180 days
- Digital MOC included

Audience

This course is intended for existing IT professionals, who have some networking knowledge and experience, and are looking for a single course that provides insight into core and advanced networking technologies in Windows Server 2016. This audience would typically include:

- Network administrators who are looking to reinforce existing skills and learn about new networking technology changes and functionality in Windows Server 2016
- System or Infrastructure Administrators with general networking knowledge who are looking to gain core and advanced networking knowledge and skills on Windows Server 2016

Prerequisites

In addition to professional experience, students who attend this training should already have the following technical knowledge:

- Experience working with Windows Server 2008 or Windows Server 2012
- Experience working in a Windows Server infrastructure enterprise environment
- Knowledge of the Open Systems Interconnection (OSI) model
- Understanding of core networking infrastructure components and technologies such as cabling, routers, hubs, and switches
- Familiarity with networking topologies and architectures such as local area networks (LANs), wide area networks (WANs) and wireless networking
- Some basic knowledge of the TCP/IP protocol stack, addressing and name resolution
- Experience with and knowledge of Hyper-V and virtualization
- Hands-on experience working with the Windows client operating systems such as Windows 8.1 or Windows 10

Course objectives

After completing this course, students will be able to:

- Plan and implement an IPv4 network
- Implement Dynamic Host Configuration Protocol (DHCP) Implement IPv6
- Implement Domain Name System (DNS)
- Implement and manage IP address management (IPAM)
- Plan for remote access
- Implement DirectAccess
- Implement virtual private networks (VPNs)
- Implement networking for branch offices
- Configure advanced networking features
- Implement Software Defined Networking

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Detailed On-Demand outline

Module 1: Planning and implementing an IPv4 network	<ul style="list-style-type: none"> • Planning IPv4 addressing • Configuring an IPv4 host 	<ul style="list-style-type: none"> • Managing and troubleshooting IPv4 network connectivity
Module 2: Implementing DHCP	<ul style="list-style-type: none"> • Overview of the DHCP server role • Deploying DHCP 	<ul style="list-style-type: none"> • Managing and troubleshooting DHCP
Module 3: Implementing IPv6	<ul style="list-style-type: none"> • Overview of IPv6 addressing • Configuring an IPv6 host 	<ul style="list-style-type: none"> • Implementing IPv6 and IPv4 coexistence • Transitioning from IPv4 to IPv6
Module 4: Implementing DNS	<ul style="list-style-type: none"> • Implementing DNS servers • Configuring zones in DNS • Configuring name resolution between DNS zones 	<ul style="list-style-type: none"> • Configuring DNS integration with Active Directory Domain Services (AD DS) • Configuring advanced DNS settings
Module 5: Implementing and managing IPAM	<ul style="list-style-type: none"> • Overview of IPAM • Deploying IPAM 	<ul style="list-style-type: none"> • Managing IP address spaces by using IPAM
Module 6: Remote access in Windows Server 2016	<ul style="list-style-type: none"> • Overview of remote access 	<ul style="list-style-type: none"> • Implementing Web Application Proxy
Module 7: Implementing DirectAccess	<ul style="list-style-type: none"> • Overview of DirectAccess • Implementing DirectAccess by using the Getting Started Wizard 	<ul style="list-style-type: none"> • Implementing and managing an advanced DirectAccess infrastructure
Module 8: Implementing VPNs	<ul style="list-style-type: none"> • Planning VPNs 	<ul style="list-style-type: none"> • Implementing VPNs
Module 9: Implementing networking for branch offices	<ul style="list-style-type: none"> • Networking features and considerations for branch offices • Implementing Distributed File System (DFS) for branch offices 	<ul style="list-style-type: none"> • Implementing BranchCache for branch offices
Module 10: Configuring advanced networking features	<ul style="list-style-type: none"> • Overview of high performance networking features 	<ul style="list-style-type: none"> • Configuring advanced Microsoft Hyper-V networking features
Module 11: Implementing software defined networking	<ul style="list-style-type: none"> • Overview of software defined networking • Implementing network virtualization 	<ul style="list-style-type: none"> • Implementing Network Controller

Detailed On-Demand Lab outline

Lab 1-A: Planning an IPv4 network	<ul style="list-style-type: none"> • Planning the IPv4 address assignments 	
Lab 1-B: Implementing and troubleshooting an IPv4 network	<ul style="list-style-type: none"> • Verifying the IPv4 communication 	<ul style="list-style-type: none"> • Troubleshooting IPv4
Lab 2 : Implementing DHCP	<ul style="list-style-type: none"> • Planning the DHCP server implementation • Implementing the DHCP configuration 	<ul style="list-style-type: none"> • Validating the DHCP implementation
Lab 3: Configuring and evaluating IPv6 transition technologies	<ul style="list-style-type: none"> • Reviewing the default IPv6 configuration • Implementing DHCPv6 	<ul style="list-style-type: none"> • Configuring network integration by using ISATAP • Configuring native IPv6 connectivity • Configuring 6to4 connectivity
Lab 4-A: Planning and implementing name resolution by using DNS	<ul style="list-style-type: none"> • Planning DNS name resolution 	<ul style="list-style-type: none"> • Implementing DNS servers and zones
Lab 4-B: Integrating DNS with AD DS	<ul style="list-style-type: none"> • Integrating DNS with AD DS 	<ul style="list-style-type: none"> • Lab 4-C: Configuring advanced DNS settings
Lab 4-C: Configuring advanced DNS settings	<ul style="list-style-type: none"> • Configuring DNS policies • Validating the DNS implementation 	<ul style="list-style-type: none"> • Troubleshooting DNS
Lab 5: Implementing IPAM	<ul style="list-style-type: none"> • Installing the IPAM Server feature • Provisioning the IPAM Server 	<ul style="list-style-type: none"> • Managing IP address spaces by using IPAM
Lab 6: Implementing Web Application Proxy	<ul style="list-style-type: none"> • Implementing Web Application Proxy 	<ul style="list-style-type: none"> • Validating the Web Application Proxy deployment
Lab 7-A: Implementing DirectAccess by using the Getting Started Wizard	<ul style="list-style-type: none"> • Verifying readiness for a DirectAccess deployment • Configuring DirectAccess 	<ul style="list-style-type: none"> • Validating the DirectAccess deployment
Lab 7-B: Deploying an advanced DirectAccess solution	<ul style="list-style-type: none"> • Preparing the environment for DirectAccess • Implementing the advanced DirectAccess infrastructure 	<ul style="list-style-type: none"> • Validating the DirectAccess deployment
Lab 8: Implementing a VPN	<ul style="list-style-type: none"> • Implementing a VPN • Validating the VPN deployment 	<ul style="list-style-type: none"> • Troubleshooting VPN access
Lab 9-A: Implementing DFS for branch offices	<ul style="list-style-type: none"> • Implementing DFS 	<ul style="list-style-type: none"> • Validating the deployment
Lab 9-B: Implementing BranchCache	<ul style="list-style-type: none"> • Implementing BranchCache 	<ul style="list-style-type: none"> • Validating the deployment
Lab 10: Configuring advanced Hyper-V networking features	<ul style="list-style-type: none"> • Creating and using Hyper-V virtual switches 	<ul style="list-style-type: none"> • Configuring and using the advanced features of a virtual switch
Lab 11: Deploying Network Controller	<ul style="list-style-type: none"> • Preparing to deploy Network Controller 	<ul style="list-style-type: none"> • Deploying Network Controller

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