Study guide for Exam AZ-800: Administering Windows Server Hybrid Core Infrastructure

Purpose of this document

This study guide should help you understand what to expect on the exam and includes a summary of the topics the exam might cover and links to additional resources. The information and materials in this document should help you focus your studies as you prepare for the exam.

Useful links	Description
Review the skills measured as of February 3, 2023	This list represents the skills measured AFTER the date provided. Study this list if you plan to take the exam AFTER that date.
Review the skills measured prior to February 3, 2023	Study this list of skills if you take your exam PRIOR to the date provided.
Change log	You can go directly to the change log if you want to see the changes that will be made on the date provided.
How to earn the certification	Some certifications only require passing one exam, while others require passing multiple exams.
Certification renewal	Microsoft associate, expert, and specialty certifications expire annually. You can renew by passing a **free** online assessment on Microsoft Learn.
Your Microsoft Learn profile	Connecting your certification profile to Learn allows you to schedule and renew exams and share and print certificates.
Passing score	A score of 700 or greater is required to pass.
Exam sandbox	You can explore the exam environment by visiting our exam sandbox.

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Useful links	Description
Request accommodations	If you use assistive devices, require extra time, or need modification to any part of the exam experience, you can request an accommodation.

Updates to the exam

Our exams are updated periodically to reflect skills that are required to perform a role. We have included two versions of the Skills Measured objectives depending on when you are taking the exam.

We always update the English language version of the exam first. Some exams are localized into other languages, and those are updated approximately eight weeks after the English version is updated. Other available languages are listed in the **Schedule Exam** section of the **Exam Details** webpage. If the exam isn't available in your preferred language, you can request an additional 30 minutes to complete the exam.

Note

The bullets that follow each of the skills measured are intended to illustrate how we are assessing that skill. Related topics may be covered in the exam.

Note

Most questions cover features that are general availability (GA). The exam may contain questions on Preview features if those features are commonly used.

Skills measured as of February 3, 2023

Audience profile

Candidates for this exam are responsible for configuring and managing Windows Server on-premises, hybrid, and Infrastructure as a Service (IaaS) platform workloads. The Windows Server Hybrid Administrator is tasked with integrating Windows Server environments with Azure services and managing Windows Server in on-premises networks. This role manages and maintains Windows Server IaaS workloads in Azure as well as migrating and deploying workloads to Azure. This role typically collaborates with Azure Administrators, Enterprise Architects, Microsoft 365 administrators, and network engineers.

Candidates for this exam deploy, package, secure, update, and configure Windows Server workloads using on-premises, hybrid, and cloud technologies. This role implements and manages on-premises and hybrid solutions, such as identity, security, management, compute, networking, storage, monitoring, high availability, and disaster recovery. This role uses administrative tools and technologies such as Windows Admin Center, PowerShell, Azure Arc, Azure Policy, Azure Monitor, Azure Automation Update Management, Microsoft Defender for Identity, Microsoft Defender for Cloud, and IaaS VM administration.

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Candidates for this exam have several years of experience with Windows Server operating systems.

- Deploy and manage AD DS in on-premises and cloud environments (30–35%)
- Manage Windows servers and workloads in a hybrid environment (10–15%)
- Manage virtual machines and containers (15–20%)
- Implement and manage an on-premises and hybrid networking infrastructure (15–20%)
- Manage storage and file services (15–20%)

Deploy and manage AD DS in on-premises and cloud environments (30–35%)

Deploy and manage AD DS domain controllers

- Deploy and manage domain controllers on-premises
- Deploy and manage domain controllers in Azure
- Deploy RODCs
- Troubleshoot FSMO roles

Configure and manage multi-site, multi-domain, and multi-forest environments

- Configure and manage forest and domain trusts
- Configure and manage AD DS sites
- Configure and manage AD DS replication

Create and manage AD DS security principals

- Create and manage AD DS users and groups
- Manage users and groups in multi-domain and multi-forest scenarios
- Implement Group Managed Service Accounts (gMSAs)
- Join Windows Servers to AD DS, Azure AD DS, and Microsoft Azure Active Directory (Azure AD), part of Microsoft Entra

Implement and manage hybrid identities

- Integrate Microsoft Azure Active Directory (Azure AD), part of Microsoft Entra, AD DS and Azure AD Domain Services
- Implement Azure AD Connect
- Manage Azure AD Connect synchronization
- Implement Azure AD Connect cloud sync
- Manage Azure AD Domain Services
- Manage Azure AD Connect Health
- Manage authentication in on-premises and hybrid environments
- Configure and manage AD DS passwords

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Manage Windows Server by using domain-based Group Policies

- Implement Group Policy in AD DS
- Implement Group Policy Preferences in AD DS
- Implement Group Policy in Azure AD DS

Manage Windows Servers and workloads in a hybrid environment (10–15%)

Manage Windows Servers in a hybrid environment

- Deploy a WAC Gateway server
- Configure a target machine for WAC
- Configure PowerShell remoting
- Configure CredSSP or Kerberos Delegation for 2nd Hop Remoting
- Configure JEA for PowerShell remoting

Manage Windows Servers and workloads by using Azure services

- Manage Windows Servers by using Azure Arc
- Assign Azure Policy guest configuration
- Deploy Azure services using Azure VM extensions on non-Azure machines
- Manage updates for Windows machines
- Integrate Windows Servers with Log Analytics
- Integrate Windows Servers with Microsoft Defender for Cloud
- Manage IaaS VMs in Azure that run Windows Server
- Implement Azure Automation for hybrid workloads
- Create runbooks to automate tasks on target VMs
- Implement Azure Automation State Configuration to prevent configuration drift in IaaS machines

Manage virtual machines and containers (15–20%)

Manage Hyper-V and guest virtual machines

- Enable VM Enhanced session mode
- Manage VM using PowerShell remoting, PowerShell Direct and SSH Direct for Linux VMs
- Configure nested virtualization
- Configure VM Memory
- Configure integration services
- Configure Discrete Device Assignment
- Configure VM resource groups
- Configure VM CPU groups
- Configure hypervisor scheduling types

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- Manage VM checkpoints
- Implementing high availability for virtual machines
- Manage VHD and VHDX files
- Configure Hyper-V Network Adapter
- Configure NIC Teaming
- Configure Hyper-V Switch

Create and manage containers

- Create Windows Server container images
- Manage Windows Server container images
- Configure container networking
- Manage container instances

Manage Azure Virtual Machines that run Windows Server

- Manage data disks
- Resize Azure VM
- Configure continuous delivery for an Azure VM
- Configure connections to VMs
- Manage Azure VM network configuration

Implement and manage an on-premises and hybrid networking infrastructure (15–20%)

Implement on-premises and hybrid name resolution

- Integrate DNS with AD DS
- Create and manage DNS zones and records
- Configure DNS forwarding/conditional forwarding
- Integrate Windows Server DNS with Azure DNS private zones
- Implement DNSSEC

Manage IP addressing in on-premises and hybrid scenarios

- Implement and manage IPAM
- Implement and configure the DHCP server role (on-premises only)
- Resolve IP address issues in hybrid environments
- Create and manage scopes
- Create and manage IP reservations
- Implement DHCP high availability

Implement on-premises and hybrid network connectivity

- Implement and manage the Remote Access role
- Implement and manage Azure Network Adapter

- Implement and manage Azure extended network
- Implement and manage Network Policy Server role
- Implement Web Application Proxy
- Implement Azure Relay
- Implement site-to-site VPN
- Implement Azure Virtual WAN
- Implement Azure AD Application Proxy

Manage storage and file services (15–20%)

Configure and manage Azure File Sync

- Create Azure File Sync Service
- Create sync groups
- Create cloud endpoints
- Register servers
- Create server endpoints
- Configure cloud tiering
- Monitor File Sync
- Migrate DFS to Azure File Sync

Configure and manage Windows Server file shares

- Configure Windows Server file share access
- Configuring file screens
- Configure FSRM quotas
- Configure BranchCache
- Implement and configure Distributed File System (DFS)

Configure Windows Server storage

- Configure disks and volumes
- Configure and manage Storage Spaces
- Configure and manage Storage Replica
- Configure Data Deduplication
- Configure SMB direct
- Configure Storage QoS
- Configure file systems

Study resources

We recommend that you train and get hands-on experience before you take the exam. We offer self-study options and classroom training as well as links to documentation, community sites, and videos.

Study resources	Links to learning and documentation
Get trained	Choose from self-paced learning paths and modules or take an instructor-led course
Find documentation	Windows Server documentation
	Azure documentation
	Connecting Windows Server to Azure hybrid services
	Azure AD Domain Services documentation
	Azure Active Directory (AD)
	Azure Active Directory Connect
	Create and manage group policy in Azure AD Domain Services
	Deploy a Windows Admin Center gateway in Azure
	PowerShell remoting
	Azure Arc
	Azure Policy guest configuration baseline for Windows
	Manage hybrid Azure workloads using Windows Admin Center
	Virtualization documentation
	Containers on Windows documentation
	Networking documentation
	Windows Server Storage documentation
Ask a question	Microsoft Q&A | Microsoft Docs
Get community support	Azure Community Support
Follow Microsoft Learn	Microsoft Learn - Microsoft Tech Community
Find a video	Exam Readiness Zone
	Azure Fridays
	Browse other Microsoft Learn shows

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Change log

Key to understanding the table: The topic groups (also known as functional groups) are in bold typeface followed by the objectives within each group. The table is a comparison between the two versions of the exam skills measured and the third column describes the extent of the changes.

Skill area prior to February 3, 2023	Skill area as of February 3, 2023	Change
Audience profile	Audience profile	No change
Deploy and Manage AD DS in On-premises and Cloud Environments	**Deploy and manage AD DS in on-premises and cloud environments**	Minor
Deploy and Manage AD DS Domain Controllers	Deploy and Manage AD DS Domain Controllers	No change
Configure and Manage Multi-site, Multi-domain, and Multi-forest Environments	Configure and Manage Multi-site, Multi-domain, and Multi-forest Environments	No change
Create and Manage AD DS Security Principals	Create and manage AD DS security principals	Minor
Implement and Manage Hybrid Identities	Implement and manage hybrid identities	Minor
Manage Windows Server by using Domain-based Group Policies	Manage Windows Server by using Domain-based Group Policies	No change
Manage Windows Servers and Workloads in a Hybrid Environment	**Manage Windows Servers and workloads in a hybrid environment**	Minor
Manage Windows Servers in a Hybrid Environment	Manage Windows Servers in a hybrid environment	Minor
Manage Windows Servers and Workloads by using Azure Services	Manage Windows Servers and workloads by using Azure services	Minor
Manage Virtual Machines and Containers	**Manage virtual machines and containers**	Minor
Manage Hyper-V and Guest Virtual Machines	Manage Hyper-V and guest virtual machines	Minor
Create and Manage Containers	Create and manage containers	Minor
Manage Azure Virtual Machines that run Windows Server	Manage Azure Virtual Machines that run Windows Server	Minor

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Skill area prior to February 3, 2023	Skill area as of February 3, 2023	Change
Implement and Manage an On-premises and Hybrid Networking Infrastructure	**Implement and manage an on-premises and hybrid networking infrastructure**	Minor
Implement On-premises and Hybrid Name Resolution	Implement on-premises and hybrid name resolution	Minor
Manage IP Addressing in On-premises and Hybrid Scenarios	Manage IP addressing in on-premises and hybrid scenarios	Minor
Implement On-premises and Hybrid Network Connectivity	Implement on-premises and hybrid network connectivity	Minor
Manage Storage and File Services	**Manage storage and file services**	Minor
Configure and Manage Azure File Sync	Configure and manage Azure File Sync	Minor
Configure and Manage Windows Server File Shares	Configure and manage Windows Server file shares	Minor
Configure Windows Server Storage	Configure Windows Server storage	Minor

Skills measured prior to February 3, 2023

- Deploy and manage Active Directory Domain Services (AD DS) in on-premises and cloud environments (30–35%)
- Manage Windows Servers and workloads in a hybrid environment (10–15%)
- Manage virtual machines and containers (15–20%)
- Implement and manage an on-premises and hybrid networking infrastructure (15–20%)
- Manage storage and file services (15–20%)

Deploy and manage AD DS in on-premises and cloud environments (30–35%)

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Implement and manage hybrid identities

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- Implement Azure AD Connect
- Manage Azure AD Connect Synchronization
- Implement Azure AD Connect cloud sync
- Manage Azure AD Domain Services
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- Manage authentication in on-premises and hybrid environments
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- Configure VM CPU Groups
- Configure hypervisor scheduling types
- Manage VM Checkpoints
- implementing high availability for virtual machines
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