

# Study Guide

## 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
<a href="#">How to earn the certification</a>	Some certifications only require one exam, while others require more. On the details page, you'll find information about what skills are measured and links to registration. Each exam also has its own details page covering exam specifics.
<a href="#">Certification renewal</a>	Once you earn your certification, don't let it expire. When you have an active certification that's expiring within six months, you should renew it—at no cost—by passing a renewal assessment on Microsoft Learn. Remember to renew your certification annually if you want to retain it.
<a href="#">Your Microsoft Learn profile</a>	Connecting your certification profile to Learn brings all your learning activities together. You'll be able to schedule and renew exams, share and print certificates, badges and transcripts, and review your learning statistics inside your Learn profile.
<a href="#">Passing score</a>	All technical exam scores are reported on a scale of 1 to 1,000. A passing score is 700 or greater. As this is a scaled score, it may not equal 70% of the points. A passing score is based on the knowledge and skills needed to demonstrate competence as well as the difficulty of the questions.
<a href="#">Exam sandbox</a>	Are you new to Microsoft certification exams? You can explore the exam environment by visiting our exam sandbox. We created the sandbox as an opportunity for you to experience an exam before you take it. In the sandbox, you can interact with different question types, such as build list, case studies,

Useful links	Description
	<p>and others that you might encounter in the user interface when you take an exam. Additionally, it includes the introductory screens, instructions, and help topics related to the different types of questions that your exam might include. It also includes the non-disclosure agreement that you must accept before you can launch the exam.</p>
<a href="#">Request accommodations</a>	<p>We're committed to ensuring all learners are set up for success. If you use assistive devices, require extra time, or need modification to any part of the exam experience, you can request an accommodation.</p>

## Objective domain: skills the exam measures

The English language version of this exam will be updated on November 2, 2022. If you're taking this exam's English version before this date, the following Skills Measured is what you should study. If you want to review changes to the future version, scroll to the end of this document.

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

- 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%)

# Functional groups

## 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 Azure AD

### Implement and manage hybrid identities

- Implement Azure AD Connect
- Manage Azure AD Connect Synchronization
- Implement Azure AD Connect cloud sync
- Integrate Azure AD, AD DS and Azure AD Domain Services
- Manage Azure AD Domain Services
- Manage Azure AD Connect Health
- Manage authentication in on-premises and hybrid environments
- Configure and manage AD DS passwords

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

# Future exam skills measured

Our exams are updated periodically to reflect skills that are required to perform a role. The following skills measured list depicts the additions, deletions, and modifications to the exam.

## Change log

Skill area	Change
<b>Create and manage AD DS security principals</b>	Minor
<b>Implement and manage hybrid identities</b>	Minor

## 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.

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

## Functional groups

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- 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
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