Study Guide

Exam AZ-801: Configuring Windows Server Hybrid Advanced Services

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
How to earn the certification	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.
Certification renewal	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.
Your Microsoft Learn profile	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.
Passing score	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.
Exam sandbox	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
	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.
Request accommodations	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.
Take a practice test	Taking a practice test is a great way to know whether you're ready to take the exam or if you need to study a bit more. Subject-matter experts write the Microsoft Official Practice Tests, which are designed to assess all exam objectives.

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

- Secure Windows Server on-premises and hybrid infrastructures (25–30%)
- Implement and manage Windows Server high availability (10–15%)
- Implement disaster recovery (10–15%)

- Migrate servers and workloads (20–25%)
- Monitor and troubleshoot Windows Server environments (20–25%)

Functional groups

Secure Windows Server on-premises and hybrid infrastructures (25–30%)

Secure Windows Server operating system

- Configure and manage Exploit Protection
- Configure and manage Windows Defender Application Control
- Configure and manage Windows Defender for Endpoint
- Configure and manage Windows Defender Credential Guard
- Configure SmartScreen
- Implement operating system security by using Group Policies

Secure a hybrid Active Directory infrastructure

- Configure password policies
- Enable password block lists
- Manage protected users
- Manage account security on an RODC
- Harden domain controllers
- Configure authentication policies silos
- Restrict access to domain controllers
- Configure account security
- Manage AD built-in administrative groups
- Manage AD delegation
- Implement and manage Microsoft Defender for Identity

Identify and remediate Windows Server security issues by using Azure Services

- Monitor on-premises servers and Azure IaaS VMs by using Microsoft Sentinel
- Identify and remediate security issues on-premises servers and Azure IaaS VMs by using Microsoft Defender for Cloud

Secure Windows Server networking

- Manage Windows Defender Firewall
- Implement domain isolation
- Implement connection security rules

Secure Windows Server storage

- Manage Windows BitLocker Drive Encryption (BitLocker)

- Manage and recover encrypted volumes
- Enable storage encryption by using Azure Disk Encryption
- Manage disk encryption keys for IaaS virtual machines

Implement and manage Windows Server high availability (10–15%)

Implement a Windows Server failover cluster

- Implement a failover cluster on-premises, hybrid, or cloud-only
- Create a Windows failover cluster
- Stretch cluster across datacenter or Azure regions
- Configure storage for failover clustering
- Modify quorum options
- Configure network adapters for failover clustering
- Configure cluster workload options
- Configure cluster sets
- Configure Scale-Out File servers
- Create an Azure witness
- Configure a floating IP address for the cluster
- Implement load balancing for the failover cluster

Manage failover clustering

- Implement cluster-aware updating
- Recover a failed cluster node
- Upgrade a node to Windows Server 2022
- Failover workloads between nodes
- Install Windows updates on cluster nodes
- Manage failover clusters using Windows Admin Center

Implement and manage Storage Spaces Direct

- Create a failover cluster using Storage Spaces Direct
- Upgrade a Storage Spaces Direct node
- Implement networking for Storage Spaces Direct
- Configure Storage Spaces Direct

Implement Disaster Recovery (10–15%)

Manage backup and recovery for Windows Server

- Back up and restore files and folders to Azure Recovery Services Vault
- Install and manage Azure Backup Server
- Back up and recover using Azure Backup Server
- Manage backups in Azure Recovery Services Vault

- Create a backup policy
- Configure backup for Azure VM using the built-in backup agent
- Recover VM using temporary snapshots
- Recover VMs to new Azure VMs
- Restore a VM

Implement disaster recovery by using Azure Site Recovery

- Configure Azure Site Recovery networking
- Configure Site Recovery for on-premises VMs
- Configure a recovery plan
- Configure Site Recovery for Azure VMs
- Implement VM replication to secondary datacenter or Azure region
- Configure Azure Site Recovery policies

Protect virtual machines by using Hyper-V replicas

- Configure Hyper-V hosts for replication
- Manage Hyper-V replica servers
- Configure VM replication
- Perform a failover

Migrate Servers and Workloads (20–25%)

Migrate on-premises storage to on-premises servers or Azure

- Transfer data and share
- Cut over to a new server by using Storage Migration Service (SMS)
- Use Storage Migration Service to migrate to Azure VMs
- Migrate to Azure file shares

Migrate on-premises servers to Azure

- Deploy and configure Azure Migrate appliance
- Migrate VM workloads to Azure IaaS
- Migrate physical workloads to Azure IaaS
- Migrate by using Azure Migrate

Migrate workloads from previous versions to Windows Server 2022

- Migrate IIS
- Migrate Hyper-V hosts
- Migrate RDS host servers
- Migrate DHCP
- Migrate print servers

Migrate IIS workloads to Azure

- Migrate IIS workloads to Azure Web Apps
- Migrate IIS workloads to containers

Migrate an AD DS infrastructure to Windows Server 2022 AD DS

- Migrate AD DS objects, including users, groups and Group Policies using AD Migration Tool
- Migrate to a new Active Directory forest
- Upgrade an existing forest

Monitor and Troubleshoot Windows Server Environments (20–25%)

Monitor Windows Server by using Windows Server tools and Azure services

- Monitor Windows Server by using Performance Monitor
- Create and configure Data Collector Sets
- Monitor servers and configure alerts by using Windows Admin Center
- Monitor by using System Insights
- Manage event logs
- Deploy Azure Monitor agents
- Collect performance counters to Azure
- Create alerts
- Monitor Azure VMs by using Azure diagnostics extension
- Monitor Azure VMs performance by using VM Insights

Troubleshoot Windows Server on-premises and hybrid networking

- Troubleshoot hybrid network connectivity
- Troubleshoot on-premises connectivity

Troubleshoot Windows Server virtual machines in Azure

- Troubleshoot deployment failures
- Troubleshoot booting failures
- Troubleshoot VM performance issues
- Troubleshoot VM extension issues
- Troubleshoot disk encryption issues
- Troubleshoot storage
- Troubleshoot VM connection issues

Troubleshoot Active Directory

- Restore objects from AD recycle bin
- Recover Active Directory database using Directory Services Restore mode
- Recover SYSVOL
- Troubleshoot Active Directory replication

- Troubleshoot Hybrid authentication issues
- Troubleshoot on-premises Active Directory

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 Windows Server Security documentation Protect data and infrastructure documentation Best Practices for Securing Active Directory Microsoft Sentinel documentation Failover Clustering Storage Spaces Direct overview Azure Site Recovery documentation Azure Backup Documentation Virtualization documentation Windows Server Storage documentation Azure Migrate documentation Migrating apps to Azure Active Directory Azure Monitor documentation Identity and Access documentation
Ask a question	Microsoft Q&A
Get community support	Windows Server Community Azure Community Support
Follow Microsoft Learn	Microsoft Learn - Microsoft Tech Community

Study resources	Links to learning and documentation
Find a video	Exam Readiness Zone Azure Fridays Browse other Microsoft Learn shows

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
Secure Windows Server operating system	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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