Study Guide

Exam AZ-900: Microsoft Azure Fundamentals

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.
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, 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.

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Useful links	Description
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 October 28, 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
- Describe cloud concepts (25–30%)
- Describe Azure architecture and services (35–40%)
- Describe Azure management and governance (30–35%)

Functional groups

Describe cloud concepts (25–30%)

Describe cloud computing
- Define cloud computing

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- Describe the shared responsibility model
- Define cloud models, including public, private, and hybrid
- Identify appropriate use cases for each cloud model
- Describe the consumption-based model
- Compare cloud pricing models

Describe the benefits of using cloud services

- Describe the benefits of high availability and scalability in the cloud
- Describe the benefits of reliability and predictability in the cloud
- Describe the benefits of security and governance in the cloud
- Describe the benefits of manageability in the cloud

Describe cloud service types

- Describe infrastructure as a service (IaaS)
- Describe platform as a service (PaaS)
- Describe software as a service (SaaS)
- Identify appropriate use cases for each cloud service (IaaS, PaaS, SaaS)

Describe Azure architecture and services (35–40%)

Describe the core architectural components of Azure

- Describe Azure regional, regional pairs, and sovereign regions
- Describe availability zones
- Describe Azure datacenters
- Describe Azure resources and resource groups
- Describe subscriptions
- Describe management groups
- Describe the hierarchy of resource groups, subscriptions, and management groups

Describe Azure compute and networking services

- Compare compute types, including container instances, virtual machines (VMs), and functions
- Describe VM options, including Azure Virtual Machines, Azure Virtual Machine Scale Sets, availability sets, and Azure Virtual Desktop
- Describe resources required for virtual machines
- Describe application hosting options, including the Web Apps feature of Azure App Service, containers, and virtual machines
- Describe virtual networking, including the purpose of Azure Virtual Networks, Azure virtual subnets, peering, Azure DNS, Azure VPN Gateway, and Azure ExpressRoute
- Define public and private endpoints

Describe Azure storage services

- Compare Azure storage services

- Describe storage tiers
- Describe redundancy options
- Describe storage account options and storage types
- Identify options for moving files, including AzCopy, Azure Storage Explorer, and Azure File Sync
- Describe migration options, including Azure Migrate and Azure Data Box

Describe Azure identity, access, and security

- Describe directory services in Azure, including Azure Active Directory (Azure AD) and Azure Active Directory Domain Services (Azure AD DS)
- Describe authentication methods in Azure, including single sign-on (SSO), multifactor authentication, and passwordless
- Describe external identities and guest access in Azure
- Describe Azure AD Conditional Access
- Describe Azure role-based access control (RBAC)
- Describe the concept of Zero Trust
- Describe the purpose of the defense in depth model
- Describe the purpose of Microsoft Defender for Cloud

Describe Azure management and governance (30–35%)

Describe cost management in Azure

- Describe factors that can affect costs in Azure
- Compare the Pricing calculator and the Total Cost of Ownership (TCO) calculator
- Describe the Azure Cost Management and Billing tool
- Describe the purpose of tags

Describe features and tools in Azure for governance and compliance

- Describe the purpose of Azure Blueprints
- Describe the purpose of Azure Policy
- Describe the purpose of resource locks
- Describe the purpose of the Service Trust Portal

Describe features and tools for managing and deploying Azure resources

- Describe the Azure portal
- Describe Azure Cloud Shell, including Azure CLI and Azure PowerShell
- Describe the purpose of Azure Arc
- Describe Azure Resource Manager and Azure Resource Manager templates (ARM templates)

Describe monitoring tools in Azure

- Describe the purpose of Azure Advisor
- Describe Azure Service Health
- Describe Azure Monitor, including Log Analytics, Azure Monitor alerts, and Application Insights

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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	Azure on Microsoft Learn
	Azure documentation
	Microsoft Cloud Adoption Framework for Azure
	Accelerate cloud adoption with the Microsoft Cloud Adoption Framework for Azure
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

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
Describe the core architectural components of Azure	Minor
Describe Azure identity, access, and security	Minor

Audience Profile

Candidates for this exam are technology professionals who want to demonstrate foundational knowledge of cloud concepts and Microsoft Azure.

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These professionals can describe Azure architectural components and Azure services, such as compute, networking, and storage. They can also describe features and tools to secure, govern, and administer Azure.

Candidates for this exam have skills and experience working with an area of information technology, such as infrastructure management, database management, or software development.

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