Study guide for 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
Review the skills measured as of October 28, 2022	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 October 28, 2022	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.
Your Microsoft Learn profile	Connecting your certification profile to Microsoft Learn allows you to schedule and renew exams and share and print certificates.
Exam scoring and score reports	A score of 700 or greater is required to pass.
Exam sandbox	You can explore the exam environment by visiting our exam sandbox.
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.

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Useful links	Description
Take a free Practice Assessment	Test your skills with practice questions to help you prepare for the exam.

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. Although Microsoft makes every effort to update localized versions as noted, there may be times when the localized versions of an exam are not updated on this schedule. 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 October 28, 2022

Audience Profile

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

- Describe cloud concepts (25–30%)
- Describe Azure architecture and services (35–40%)
- Describe Azure management and governance (30–35%)

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Describe cloud concepts (25–30%)

Describe cloud computing

- Define cloud computing
- 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 regions, region 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

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- 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 Microsoft Azure Active Directory (Azure AD), part of Microsoft Entra 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 Conditional Access in Microsoft Azure Active Directory (Azure AD), part of Microsoft Entra
- 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

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- 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

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](#)

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.

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Skill area prior to October 28, 2022	Skill area as of October 28, 2022	Change
Audience profile		No change
Describe Cloud Concepts	Describe Cloud Concepts	No change
Describe Cloud Computing	Describe Cloud Computing	No change
Describe the Benefits of Using Cloud Services	Describe the Benefits of Using Cloud Services	No change
Describe Cloud Service Types	Describe Cloud Service Types	No change
Describe Azure Architecture and Services	**Describe Azure Architecture and Services**	No change
Describe the Core Architectural Components of Azure	Describe the Core Architectural Components of Azure	Minor
Describe Azure Compute and Networking Services	Describe Azure Compute and Networking Services	No change
Describe Azure Storage Services	Describe Azure Storage Services	No change
Describe Azure Identity, Access, and Security	Describe Azure Identity, Access, and Security	Minor
Describe Azure Management and Governance	**Describe Azure Management and Governance**	No change
Describe Cost Management in Azure	Describe Cost Management in Azure	No change
Describe Features and Tools in Azure for Governance and Compliance	Describe Features and Tools in Azure for Governance and Compliance	No change
Describe Features and Tools for Managing and Deploying Azure Resources	Describe Features and Tools for Managing and Deploying Azure Resources	No change
Describe Monitoring Tools in Azure	Describe Monitoring Tools in Azure	No change

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