Exam AZ-900: Microsoft Azure Fundamentals – Skills Measured

Audience Profile

Candidates for this exam should have foundational knowledge of cloud services and how those services are provided with Microsoft Azure.

Azure Fundamentals exam is an opportunity to prove knowledge of cloud concepts, core Azure services, Azure pricing, SLA, and lifecycle, and the fundamentals of cloud security, privacy, compliance, and trust.

This exam is intended for people beginning to work with cloud-based solutions and services. Candidates should be able to demonstrate a fundamental knowledge of cloud concepts, as well as Azure services, workloads, security, privacy, pricing, and support. In addition, you should be familiar with concepts of networking, storage, compute, application support, and application development.

Azure Fundamentals can be used to prepare for other Azure role-based or specialty certifications, but it is not a prerequisite for any of them.

Skills measured

NOTE: The bullets that appear below each of the skills measured are intended to illustrate how we are assessing that skill. This list is not definitive or exhaustive.

NOTE: Unless otherwise noted in the skills measured or in the exam description, exams do not cover preview features. In most cases, features will only be added to exams when they are GA (general availability).

Describe Cloud Concepts (15-20%)

Describe the benefits and considerations of using cloud services
- Describe terms such as High Availability, Scalability, Elasticity, Agility, Fault Tolerance, and Disaster Recovery
- Describe the principles of economies of scale
- Describe the differences between Capital Expenditure (CapEx) and Operational Expenditure (OpEx)

- Describe the consumption-based model

Describe the differences between Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS) and Software-as-a-Service (SaaS)
- Describe Infrastructure-as-a-Service (IaaS),
- Describe Platform-as-a-Service (PaaS)
- Describe Software-as-a-Service (SaaS)
- Compare and contrast the three different service types

Describe the differences between Public, Private and Hybrid cloud models
- Describe Public cloud
- Describe Private cloud
- Describe Hybrid cloud
- Compare and contrast the three different cloud models

Describe Core Azure Services (30-35%)

Describe the core Azure architectural components
- Describe Regions
- Describe Availability Zones
- Describe Resource Groups
- Describe Azure Resource Manager
- Describe the benefits and usage of core Azure architectural components

Describe some of the core products available in Azure
- Describe products available for Compute such as Virtual Machines, Virtual Machine Scale Sets, App Services, Azure Container Instances (ACI) and Azure Kubernetes Service (AKS)
- Describe products available for Networking such as Virtual Network, Load Balancer, VPN Gateway, Application Gateway and Content Delivery Network
- Describe products available for Storage such as Blob Storage, Disk Storage, File Storage, and Archive Storage
- Describe products available for Databases such as Cosmos DB, Azure SQL Database, Azure Database for MySQL, Azure Database for PostgreSQL, Azure Database Migration service
- Describe the Azure Marketplace and its usage scenarios

Describe some of the solutions available on Azure
- Describe Internet of Things (IoT) and products that are available for IoT on Azure such as IoT Hub and IoT Central

- Describe Big Data and Analytics and products that are available for Big Data and Analytics such as Azure Synapse Analytics, HDInsight, and Azure Databricks
- Describe Artificial Intelligence (AI) and products that are available for AI such as Azure Machine Learning Service and Studio
- Describe Serverless computing and Azure products that are available for serverless computing such as Azure Functions, Logic Apps and Event Grid
- Describe DevOps solutions available on Azure such as Azure DevOps and Azure DevTest Labs
- Describe the benefits and outcomes of using Azure solutions

Describe Azure management tools
- Describe Azure tools such as Azure Portal, Azure PowerShell, Azure CLI and Cloud Shell
- Describe Azure Advisor

Describe Security, Privacy, Compliance, and Trust (25-30%)

Describe securing network connectivity in Azure
- Describe Network Security Groups (NSG)
- Describe Application Security Groups (ASG)
- Describe User Defined Rules (UDR)
- Describe Azure Firewall
- Describe Azure DDoS Protection
- Choose an appropriate Azure security solution

Describe core Azure Identity services
- Describe the difference between authentication and authorization
- Describe Azure Active Directory
- Describe Azure Multi-Factor Authentication

Describe security tools and features of Azure
- Describe Azure Security Center
- Describe Azure Security Center usage scenarios
- Describe Key Vault
- Describe Azure Information Protection (AIP)
- Describe Azure Advanced Threat Protection (ATP)

Describe Azure governance methodologies
- Describe policies and initiatives with Azure Policy
- Describe Role-Based Access Control (RBAC)
- Describe Locks

- Describe Azure Advisor security assistance
- Describe Azure Blueprints

Describe monitoring and reporting options in Azure
- Describe Azure Monitor
- Describe Azure Service Health
- Describe the use cases and benefits of Azure Monitor and Azure Service Health

Describe privacy, compliance and data protection standards in Azure
- Describe industry compliance terms such as GDPR, ISO and NIST
- Describe the Microsoft Privacy Statement
- Describe the Trust center
- Describe the Service Trust Portal
- Describe Compliance Manager
- Determine if Azure is compliant for a business need
- Describe Azure Government cloud services
- Describe Azure China cloud services

Describe Azure Pricing, Service Level Agreements, and Lifecycles (20-25%)

Describe Azure subscriptions
- Describe an Azure Subscription
- Describe the uses and options with Azure subscriptions such access control and offer types
- Describe subscription management using Management groups

Describe planning and management of costs
- Describe options for purchasing Azure products and services
- Describe options around Azure Free account
- Describe the factors affecting costs such as resource types, services, locations, ingress and egress traffic
- Describe Zones for billing purposes
- Describe the Pricing calculator
- Describe the Total Cost of Ownership (TCO) calculator
- Describe best practices for minimizing Azure costs such as performing cost analysis, creating spending limits and quotas, using tags to identify cost owners, using Azure reservations and using Azure Advisor recommendations
- Describe Azure Cost Management

Describe Azure Service Level Agreements (SLAs)
- Describe a Service Level Agreement (SLA)
- Describe Composite SLAs
- Describe how to determine an appropriate SLA for an application

Describe service lifecycle in Azure
- Describe Public and Private Preview features
- Describe the term General Availability (GA)
- Describe how to monitor feature updates and product changes