Exam AZ-900: Microsoft Azure Fundamentals – Skills Measured

This exam will be updated on May 28, 2020. Following the current exam guide, we have included a version of the exam guide with Track Changes set to "On," showing the changes that will be made to the exam on that date.

Audience Profile

This exam is designed for candidates looking to demonstrate foundational level knowledge of cloud services and how those services are provided with Microsoft Azure. The exam is intended for candidates with non-technical backgrounds, such as those involved in selling or purchasing cloud based solutions and services or who have some involvement with cloud based solutions and services, as well as those with a technical background who have a need to validate their foundational level knowledge around cloud services. Technical IT experience is not required however some general IT knowledge or experience would be beneficial.

This exam can be taken as an optional first step in learning about cloud services and how those concepts are exemplified by Microsoft Azure. It can be taken as a precursor to Microsoft Azure or Microsoft cloud services exams. While it would be a beneficial first step, validating foundational level knowledge, taking this exam is not a pre-requisite before taking any other Azure-based certifications.

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: In most cases, exams do NOT cover preview features, and some features will only be added to an exam when they are GA (General Availability).

Understand cloud concepts (15-20%)

Describe the benefits and considerations of using cloud services

- understand terms such as high availability, scalability, elasticity, agility, fault tolerance, and disaster recovery
- understand the principles of economies of scale
- understand the differences between Capital Expenditure (CapEx) and Operational Expenditure (OpEx)
- understand 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

Understand core Azure services (30-35%)

Understand 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 Service Functions, 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 SQL Data Warehouse, 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

Understand Azure management tools

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

Understand security, privacy, compliance, and trust (25-30%)

Understand 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

- understand 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
- understand 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

Understand monitoring and reporting options in Azure

- describe Azure Monitor
- describe Azure Service Health
- understand the use cases and benefits of Azure Monitor and Azure Service Health

Understand privacy, compliance and data protection standards in Azure

- understand industry compliance terms such as GDPR, ISO and NIST
- understand 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
- understand Azure Government **cloud** services
- describe Azure China cloud services

Understand Azure pricing and support (20-25%)

Understand Azure subscriptions

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

Understand planning and management of costs

- understand options for purchasing Azure products and services
- understand options around Azure Free account
- understand the factors affecting costs such as resource types, services, locations, ingress and egress traffic
- understand Zones for billing purposes
- understand the Pricing calculator
- understand the Total Cost of Ownership (TCO) calculator
- understand 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

Understand the support options available with Azure

- understand support plans that are available such as Dev, Standard, Professional Direct and Premier
- understand how to open a support ticket
- understand available support channels outside of support plan channels
- describe the Knowledge Center

Describe Azure Service Level Agreements (SLAs)

- describe a Service Level Agreement (SLA)
- understand Composite SLAs
- understand how to determine an appropriate SLA for an application

Understand service lifecycle in Azure

- understand public and private preview features
- understand the term General Availability (GA)
- understand how to monitor feature updates and product changes

The exam guide below shows the changes that will be implemented on May 28, 2020.

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Describe the benefits and considerations of using cloud services

- ~~Understand~~ describe terms such as h~~H~~igh a~~A~~vailability, ~~S~~scalability, ~~E~~elasticity, ~~A~~agility, ~~F~~fault ~~T~~tolerance, and ~~D~~disaster r~~R~~ecovery
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- describe p~~P~~rivate cloud
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- describe Artificial Intelligence (AI) and products that are available for AI such as Azure Machine Learning Service and StudioAzure Machine Learning Studio (classic)
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- Understand describe Azure Advisor

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~~Understand~~ Describe Azure pricing and support (20-25%)

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- describe an Azure s~~S~~ubscription

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