



## Azure Fundamentals (AZ-900) Bootcamp

Gain knowledge of Azure cloud concepts and services

October/2021



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Cloud Consultant and Trainer



@zaalion

**Microsoft®**  
**CERTIFIED**  
*Trainer*



# Course Overview

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# AZ-900 Bootcamp

- Day 01
  - Cloud concepts
  - Core Azure services
  - Core solutions and management tools on Azure
  - Wrap-up and Q&A



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# AZ-900 Bootcamp

- Day 02
  - General Azure security and network security features
  - Azure identity, governance, privacy, and compliance features
  - Azure cost management and service-level agreements
  - Wrap-up and Q&A





# Course Repository

<https://github.com/zaalion/oreilly-az-900>



**Day 1**



# Azure Fundamentals Bootcamp

- Cloud concepts
- Core Azure services
- Core solutions and management tools on Azure
- Wrap-up and Q&A







# Cloud Computing

Cloud computing is the on-demand availability of computer system resources, especially data storage (cloud storage) and computing power, without direct active management by the user.



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# Cloud Benefits

- Scalability
- Flexibility (IaaS, PaaS, SaaS)
- Unlimited storage
- Unlimited processing
- Rich tooling
- Easily accessible
- Advanced cost management
- Maintainability
- Rich security
- Democratizing expensive services



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# Cloud Considerations

- Design security beforehand (data, app, in transit, at rest)
- Invest in service/app monitoring and logging
- IaaS vs. PaaS vs. SaaS
- Choose your services before jumping into implementation
- Design your solution before jumping into implementation
- Watch the cost
- There are always multiple ways to implement a project





# Cloud Service Categories

AI + machine learning

Analytics

Compute

Containers

Databases

Developer tools

DevOps

Hybrid + multicloud

Identity

Integration

Internet of Things

Management and governance

Media

Migration

Mixed reality

Mobile

Networking

Security

Storage

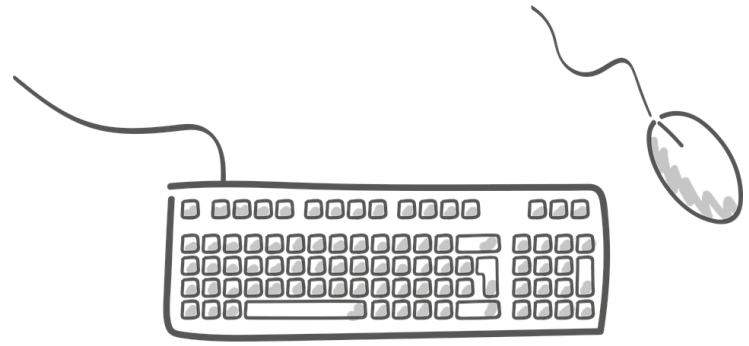
Virtual desktop infrastructure



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# Demo

- Getting to know the Azure portal
- Provisioning a new resource



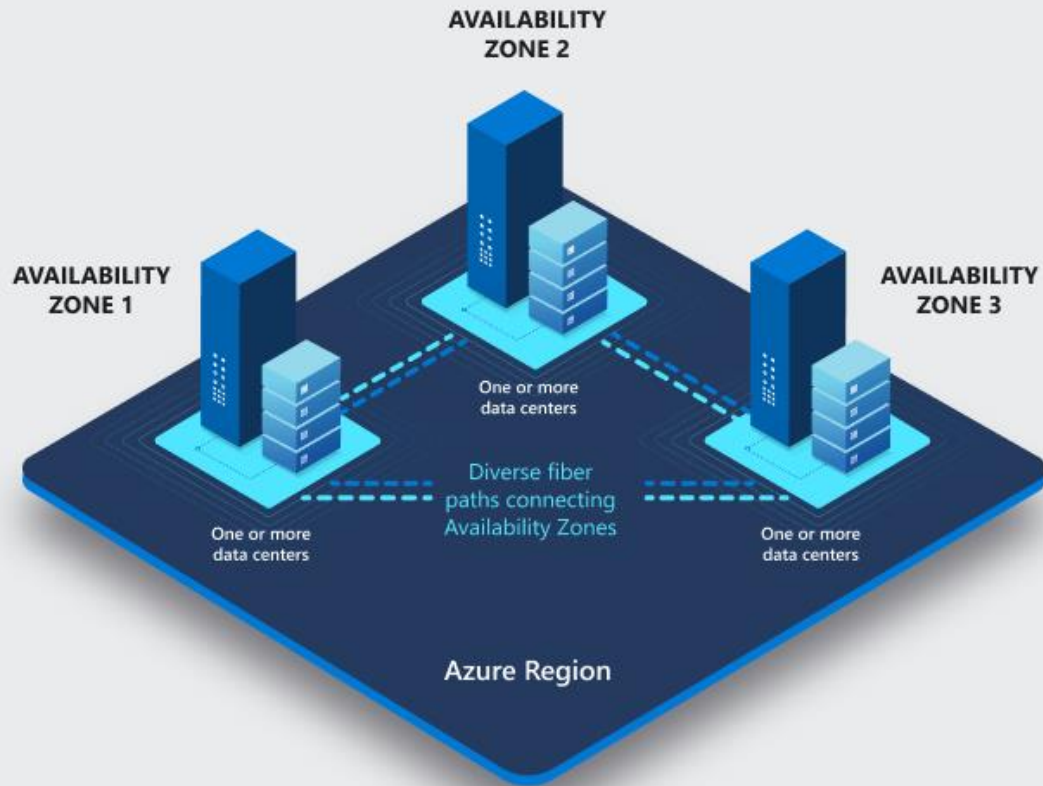
# Azure regions with availability zones

Azure provides the most extensive global footprint of any cloud provider and is rapidly opening new regions and availability zones.

Americas	Europe	Africa	Asia Pacific
Brazil South	France Central	South Africa North	Australia East
Canada Central	Germany West Central		Central India*
Central US	North Europe		Japan East
East US	Norway East		Korea Central
East US 2	UK South		Southeast Asia
South Central US	West Europe		East Asia*
US Gov Virginia	Sweden*		
West US 2			
West US 3			

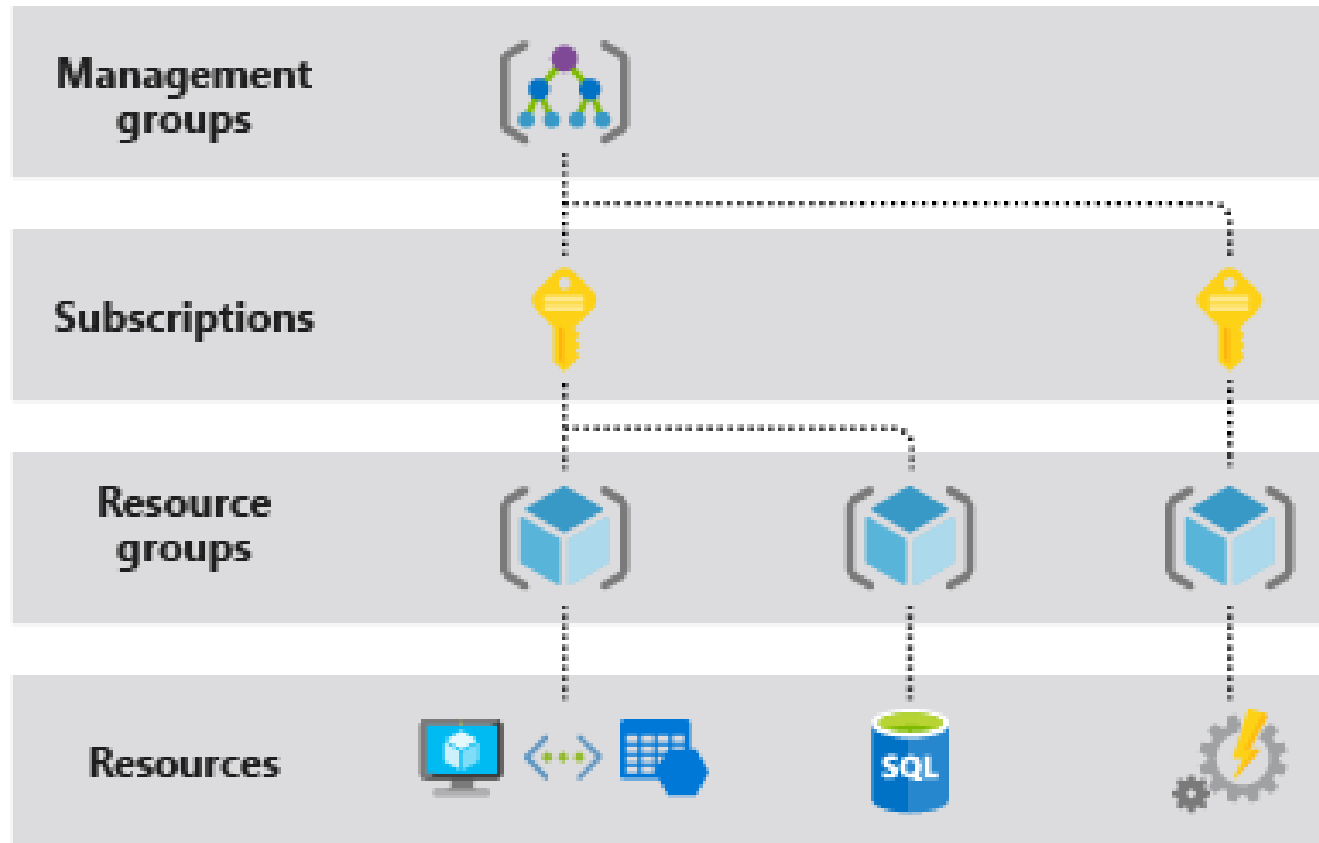
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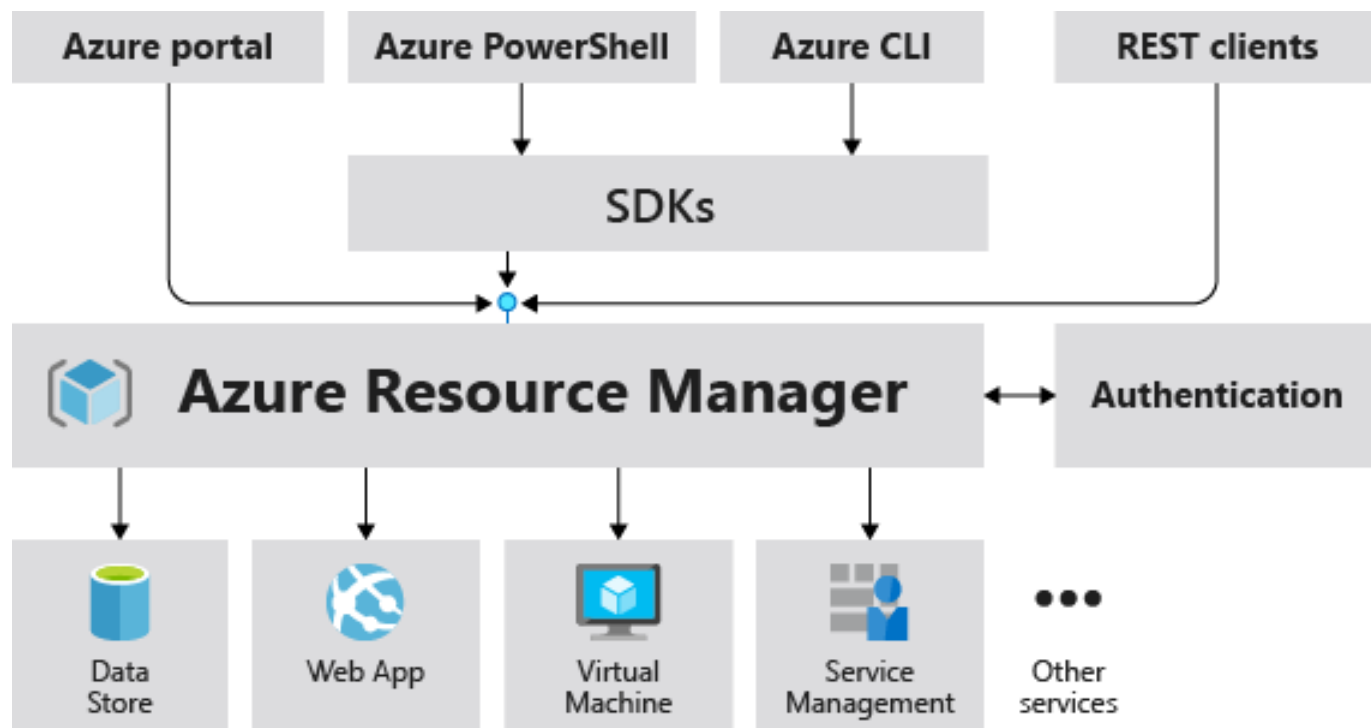




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[See reference](#)





Azure Resource Manager (ARM) is the deployment and management service for Azure.

[See reference](#)



# Core Azure Services

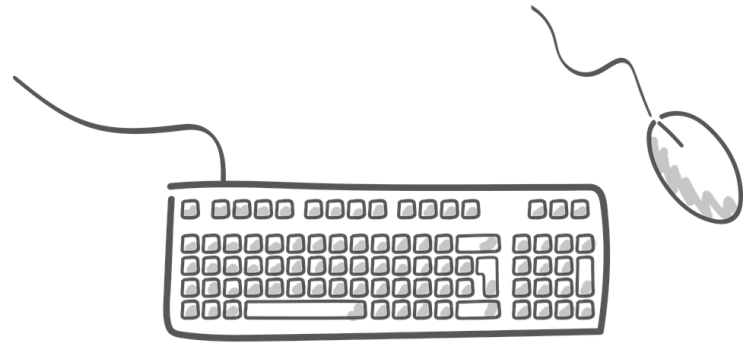
- Virtual machines
- Azure App Service
- Azure Container Instances (ACI)
- Azure Kubernetes Service (AKS)
- Windows Virtual Desktop
- Virtual networks
- VPN gateway
- Virtual network peering, and ExpressRoute
- Container (blob) storage
- Disk storage
- File storage, and storage tiers
- Azure SQL Database, Azure Database for MySQL, Azure Database for PostgreSQL, and SQL Managed Instance



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# Demo

- Azure Cosmos DB
- Azure Marketplace





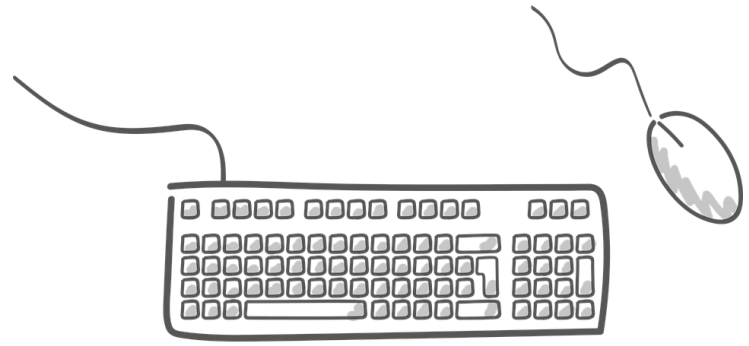
# Core solutions and management tools on Azure

- Azure Machine Learning
- Cognitive Services, and Bot Service
- Azure DevOps, GitHub, GitHub Actions, and Azure DevTest Labs
- Internet of Things (IoT) Hub, IoT Central, and Azure Sphere
- HDInsight, and Azure Databricks
- Azure portal, Azure PowerShell, Azure CLI, Cloud Shell
- Azure Mobile App
- Azure management tools: Azure Advisor, Azure Monitor, Azure Service Health
- Azure Status



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# Demo



- Azure Resource Manager (ARM) templates
- Azure Synapse Analytics
- Azure Functions and Logic Apps



**Day 2**



# Azure Fundamentals Bootcamp

- General Azure security and network security features
- Azure identity, governance, privacy, and compliance features
- Azure cost management and service-level agreements
- Wrap-up and Q&A





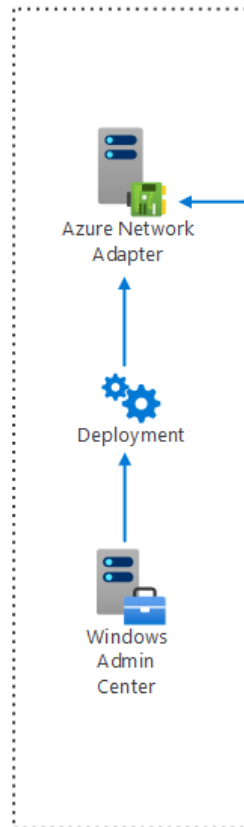


# General Azure security and network security features

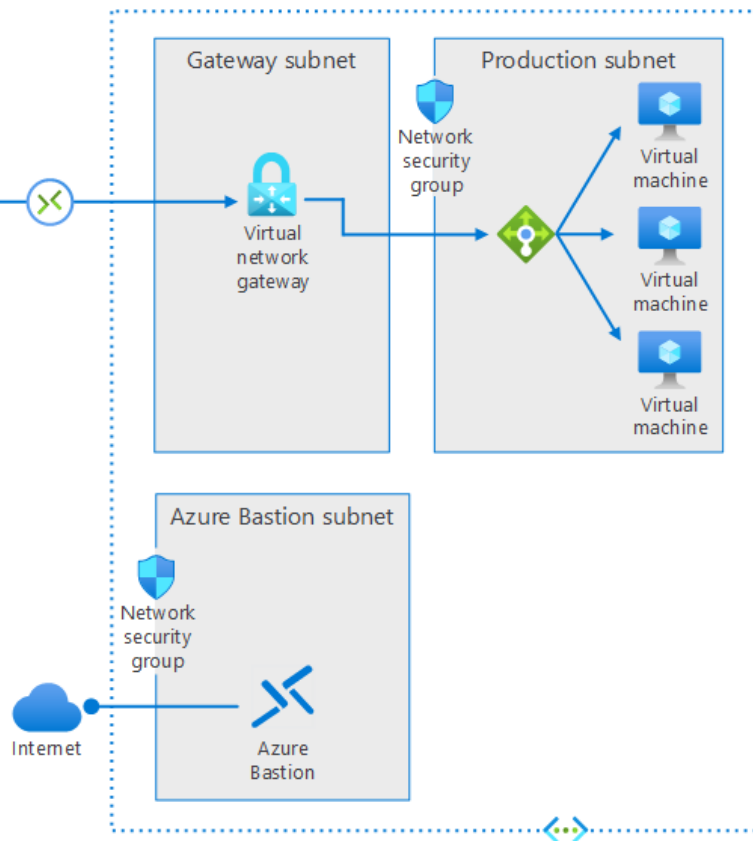
- Azure network security and the concept of defense in depth
- Azure Security Center, including policy compliance, security alerts, secure score, and resource hygiene
- Azure Sentinel
- Azure Dedicated Hosts
- Azure Firewall
- Azure DDoS protection



## On-premises network

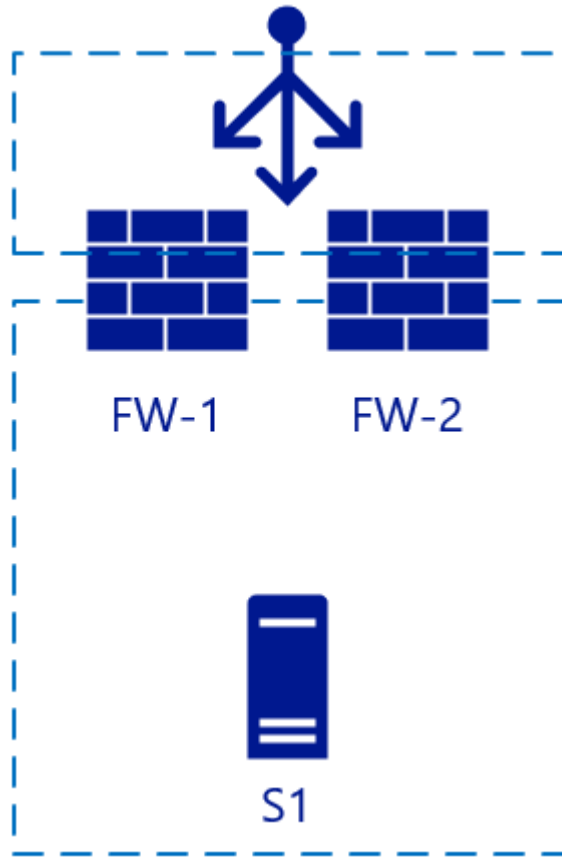


## Azure Virtual Network



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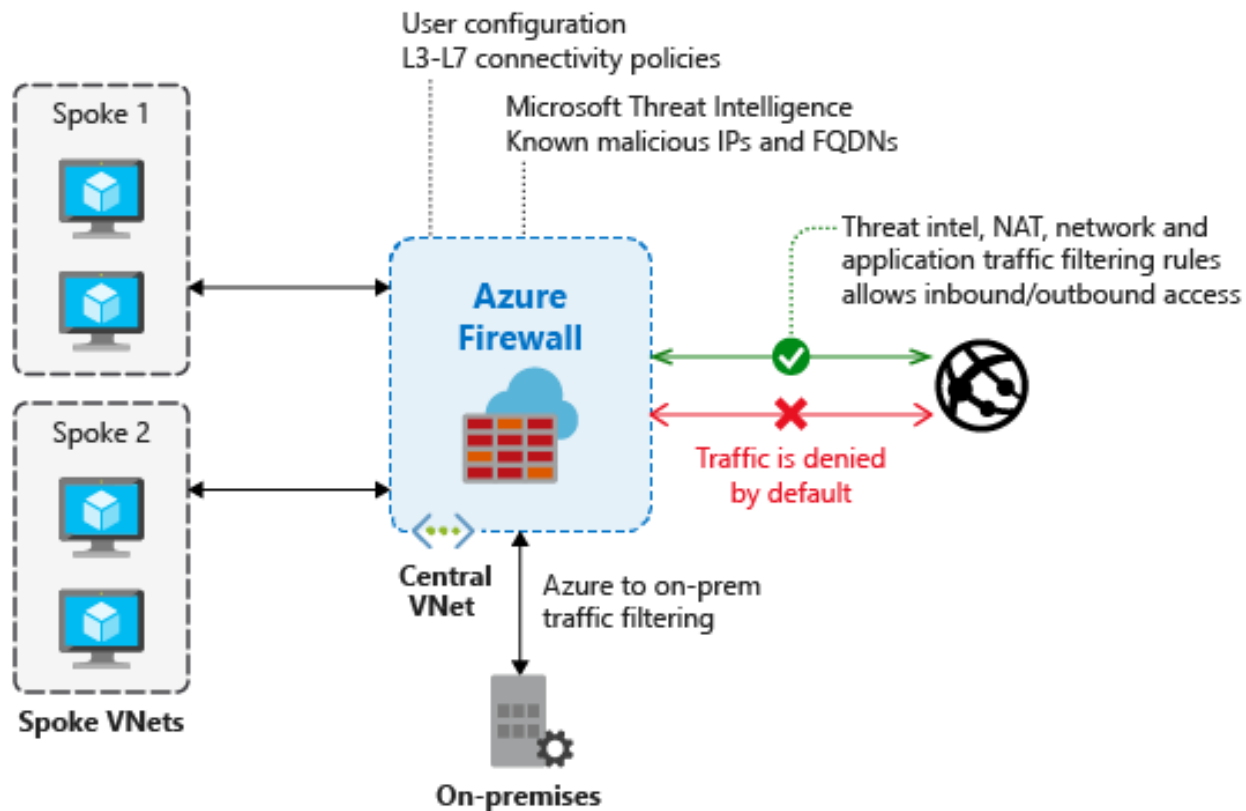


Subnet-A

Subnet-B

See reference





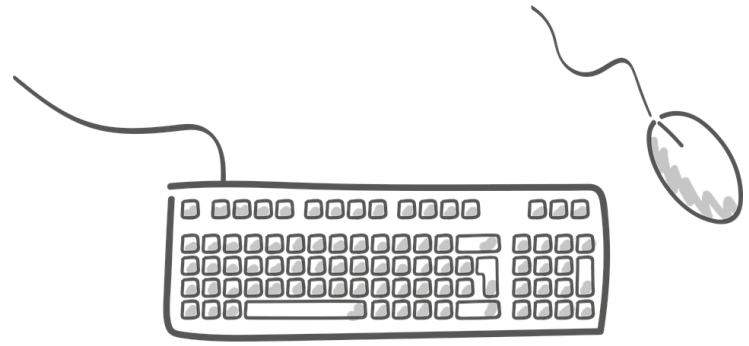
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# Demo

- Explore Key Vault
- Network Security Groups (NSG)



# Azure identity, governance, privacy, and compliance features

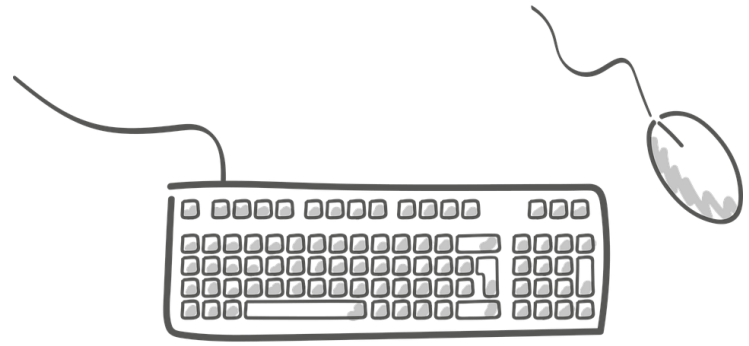
- Authentication vs. authorization
- Azure Active Directory
- Conditional Access, multifactor authentication (MFA), and single sign-on (SSO)
- Azure governance features
- Using Azure Blueprints
- Azure Cloud Adoption Framework
- Describing privacy and compliance resources
- The purpose of the Microsoft privacy statement, data protection addendum (DPA), and Product Terms site
- Security, privacy, and compliance
- Azure compliance
- Trust Center, Azure sovereign regions
- Resource locks



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# Demo

- Role-based access control (RBAC)
- Using tags
- Using Azure Policy



# Azure cost management and service-level agreements

- Methods for planning and managing costs
- Identifying factors that can affect costs (resource types, services, locations, ingress and egress traffic)
- Factors that can reduce costs (reserved instances, reserved capacity, hybrid use benefit, spot pricing)
- The purpose of an Azure service-level agreement
- Actions that can impact an SLA
- The service lifecycle in Azure (public preview and general availability)
- Pricing calculator and the total cost of ownership (TCO) calculator
- Azure cost management

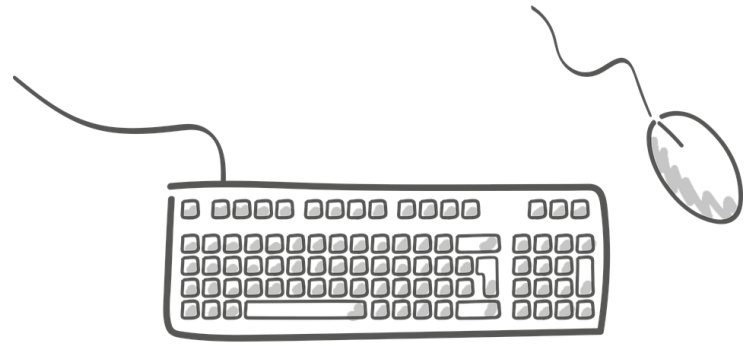




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# Demo

- Azure pricing calculator



# The Exam

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# Questions in AZ-900

- Number of Questions 40-60 Questions
- Questions
  - Multiple choice
  - Drag and drop
  - Scenario based
- There will NOT be hands-on labs but watch for updates!
- Pass Score 700 (on a scale of 1-1000)



# DP-203

- Exam AZ-900 → <https://docs.microsoft.com/en-us/learn/certifications/exams/az-900>
- Skills measured → <https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RE3VwUY>



# Schedule exam

## Exam AZ-900: Microsoft Azure Fundamentals

United States

**Languages:** English, Japanese, Chinese (Simplified), Korean, Spanish, German, French, Indonesian (Indonesia), Arabic (Saudi Arabia), Chinese (Traditional), Italian, Portuguese (Brazil), Russian

**Retirement date:** none

This exam measures your ability to describe the following concepts: cloud concepts; core Azure services; core solutions and management tools on Azure; general security and network security features; identity, governance, privacy, and compliance features; and Azure cost management and Service Level Agreements.

**\$99 USD\***

Price based on the country in which the exam is proctored.

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## Select exam options

DP-200: Implementing an Azure Data Solution

All fields are required.

How do you want to take your exam? [Exam delivery option descriptions](#)

- ☐ At a local test center
- ☒ At my home or office
- ☐ I have a Private Access Code

Are you going to be testing on this device and network?

If so, perform a quick pre-check to verify compatibility of your device and network before planning to take this exam in your home or office.  
If you skip, be sure to do a full system test before test day to avoid lost exam fees and launch delays.

[Run pre-check](#)

[Next](#)



## System check - Checking your requirements



Microphone

Default - Microphone (SI ▼)



Internet speed



Webcam

Integrated Webcam (0c ▼)

Next





# Course Repository

<https://github.com/zaalion/oreilly-az-900>





# Q&A



# O'REILLY®

## Thank you!

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