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AZURE
CERTIFIED

AZ-900

Microsoft Azure Fundamentals

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INTRODUCTION

With the rapid advancement of technology, enterprises are adopting newer technologies that will help their businesses transform and grow. Microsoft Azure is one of the emerging technologies that you can leverage in this age since a lot of companies are shifting their existing infrastructures in the cloud. Unlike the traditional setup, cloud computing allows you to obtain resources on-demand with just one click on their platform, including the servers, storage, databases, networking, analytics, artificial intelligence, and a lot more.

Microsoft Azure offers a range of cloud services, depending on your business needs. These services are continuously upgrading, and new features are being added every year to deliver customer satisfaction. Since Azure's resources and services are too vast, the **Microsoft Azure Certification** program offers different certification paths that will help aspiring candidates and IT professionals validate their skills and knowledge to maximize the solutions created in the cloud.

Microsoft Azure is the second biggest cloud service provider in the market next to AWS, and a lot of companies are now adopting a **multicloud** strategy, which makes it all the more beneficial for IT professionals like you to expand your skill set and learn multiple cloud technologies. Learning is a lot more fun if you merge it with various cloud services. It will be an exciting and enjoyable journey for you, and the first step is to become **AZ-900 Microsoft Azure Fundamentals** certified. This eBook will help familiarize yourself with the basic cloud concepts as well as the core services of Microsoft Azure, which are the building blocks that will help you pass the exam and make a successful career shift to cloud computing.

Note: We took extra care to come up with these study guides and cheat sheets, however, this is meant to be just a supplementary resource when preparing for the exam. We highly recommend working on **hands-on sessions** and **practice exams** to further expand your knowledge and improve your test taking skills.

AZ-900 MICROSOFT AZURE FUNDAMENTALS EXAM OVERVIEW

The Microsoft Azure Certification Program validates the technical skills and knowledge for building secure and reliable cloud-based applications using the Azure platform. By successfully passing the Microsoft Azure exam, individuals can prove their expertise to their current and future employers. The AZ-900 Microsoft Azure Fundamentals exam is currently the most basic certificate that you can get and is also known to be the easiest among all of the Azure certification exams.

Exam Details

The AZ-900 Microsoft Azure Fundamentals examination is intended for candidates who have the knowledge and skills necessary to effectively demonstrate an overall understanding of the Azure Cloud, independent of specific technical roles addressed by other Microsoft certifications (for example, Administrator Associate and Developer Associate). The exam is composed of different types of questions.

For multiple-choice types of questions, you will have to choose one correct response out of four options.

A company is planning to deploy its suite of enterprise applications to Microsoft Azure, where each application has several dependencies and subcomponents. The company must also control and manage the patching activities of the underlying operating system of the servers.

What type of cloud deployment solution should you recommend?

○ Infrastructure as a Service (IaaS)

○ Platform as a Service (PaaS)

○ Software as a Service (SaaS)

○ Functions as a service (FaaS)

For Drag and Drop questions, match the items by dragging them to their correct descriptions.

Instructions: Drag the appropriate item from the column on the left to its description on the right. Each correct match is worth one point.

ANSWER OPTIONS

⠿ NIST

⠿ Azure Government

⠿ ISO

⠿ GPDR

ANSWER AREA

A non-regulatory agency of the United States government that defines industry standards.

An independent, non-governmental organization that defines international standards that are used in all industries across the globe.

A regulation on data protection and privacy in the European Union and the European Economic Area.

A dedicated cloud for US federal, state, and other partner agencies.

For Dropdown types of questions, select the correct answer from the drop-down list of options.

Azure App Service and Azure Virtual Machines are services that you can use in Azure. For each service, you have to determine its correct type of cloud service model.

Select the correct answer from the drop-down list of options. Each correct selection is worth one point.

Azure Virtual Machines [⌄]

Azure App Service [⌄]

For Hotspot types of questions such as multiple Yes/No, evaluate whether the presented statements relating to a certain topic are correct/incorrect.

For each of the following items, choose **Yes** if the statement is true or choose **No** if the statement is false. Take note that each correct item is worth one point.

Questions	Yes	No
Azure virtual machines are billed on a per-hour basis.	○	○
When you delete a virtual machine in Azure, by default, any disks that are attached to the VM are deleted.	○	○
Disks attached to stopped virtual machines do not incur costs.	○	○

You can take the exam via online proctoring or from a testing center close to you.

Exam Code:	AZ-900
Prerequisites:	None
No. of Questions:	30-40
Score Range:	100-1000
Cost:	99 USD
Passing Score:	700
Time Limit:	90 minutes

Exam Domains

The AZ-900 Microsoft Azure Fundamentals exam has three areas to assess your skills, each with a corresponding weight and topic coverage. The skills measured are: Cloud Concepts (25-30%), Azure Architecture and Services (35–40%), and Azure Management and Governance (30–35%).

Cloud Concepts
- Describe cloud computing
- Describe the benefits of using cloud services
- Describe cloud service types

Azure Architecture and Services
- Describe the core architectural components of Azure
- Describe Azure compute and networking services
- Describe Azure storage services
- Describe Azure identity, access, and security

Azure Management and Governance
- Describe cost management in Azure
- Describe features and tools in Azure for governance and compliance
- Describe features and tools for managing and deploying Azure resources
- Describe monitoring tools in Azure

Exam Scoring System

You can get a score from 100 to 1,000 with a minimum passing score of 700 when you take the AZ-900 Microsoft Azure Fundamentals exam. Microsoft uses a scaled scoring model to associate scores across multiple exam types that may have different levels of difficulty. Your complete score report will be sent to you by email 1 - 5 business days after your exam. However, as soon as you finish your exam, you'll immediately see a pass or fail notification on the testing screen.

For individuals who unfortunately do not pass their exams, you must wait 24 hours before you are allowed to retake the exam. There is no hard limit on the number of attempts you can retake an exam.

Once you receive your score report via email, the result should also be saved in your Microsoft Certification account. The score report contains a table of your performance on each domain and it will indicate whether you have met the level of competency required for these. Take note that you do not need to achieve competency in all areas for you to pass the exam. In the first part of the report, there will be a performance summary by exam section that highlights your strengths and weaknesses which can help you determine the areas you need to improve on.

Exam Benefit

If you successfully pass any Microsoft Certification exam, you will receive a **Certified Digital Badge**. You can showcase your achievements to your colleagues and employers by adding these digital badges to your email signatures, Linkedin profile, or on your social media accounts. To view your badges, simply go to the "Dashboard" section of your Acclaim Account.

You can visit the official Microsoft Certification FAQ page to view the frequently asked questions about getting certified and other information about the Microsoft Certification:
https://docs.microsoft.com/en-us/learn/certifications/certification-exam-policies.

AZURE CHEAT SHEETS

AZURE OVERVIEW

Azure Cloud Concepts

- Terminologies of the cloud: **High Availability, Fault Tolerance, Disaster Recovery, Scalability, Elasticity,** and **Agility**

High Availability
- If hardware fails, you can get a new, exact copy of it in very little time

- Use clusters (a group of virtual machines) to ensure high availability

Fault Tolerance
- Fault tolerance is part of the resilience of cloud computing

- **Zero Down-Time** - if one component fails, a backup component takes its place

Disaster Recovery
- Plan to recover critical business systems:
  - **Recovery Time Objective (RTO)** is the time it takes after a disruption to restore business process to its service level
  - **Recovery Point Objective (RPO)** is the acceptable amount of data loss measured in time before the disaster occurs
- Services for backup and disaster recovery:
  - **Azure Backup** - simplify data protection while saving costs
  - **Azure Site Recovery** - keep your business running with disaster recovery service

  - **Azure Archive Storage** - store rarely used data in the cloud

Scalability
- You may increase or decrease the resources and services used at any given time, depending on the demand or workload.
  - **Vertical Scaling** - adding resources to increase the power of an existing server
  - **Horizontal Scaling** - adding more servers that function together as one unit

- Use **scale sets** for critical scenarios

Elasticity

- Quickly expand or decrease computing resources

- Automatically provisions more computing resources to handle the increased traffic. Once the traffic begins to normalize, the cloud automatically de-allocates the extra resources automatically to reduce costs

Agility
- The ability to design, test, and launch software applications quickly that stimulate business growth.

- Cloud agility enables companies to concentrate on other concerns such as security, monitoring, and analysis, instead of provisioning and maintaining the resources.

Sources:
https://docs.microsoft.com/en-us/learn/modules/principles-cloud-computing/3-benefits-of-cloud-computing
https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/sap-high-availability-architecture-scenarios
https://azure.microsoft.com/en-us/solutions/backup-and-disaster-recovery/

Azure CapEx vs OpEx

Capital Expenditure (CapEx)
- Upfront cost on physical infrastructure
- You need to plan your expenses at the start of a project or budget period.
- CapEx computing costs:
  - **Server costs** - server clustering, redundant power supplies, and uninterruptible power supplies
  - **Storage costs** - centralized storage and fault-tolerant storage for critical applications.
  - **Network costs** - cabling, switches, access points, routers, wide area networks, and Internet connections.
  - **Backup and archive costs** - backup maintenance and consumables like tapes.
  - **Organization continuity and disaster recovery costs** - recover from a disaster and continue operating using backup generators.
  - **Datacenter infrastructure costs** - costs for construction and building equipment.
  - **Technical personnel** - technical expertise and workforce to install, deploy, and manage the systems in the data center and at the DR site.

Operational Expenditure (OpEx)
- No upfront cost but you pay for the service/product as you use it
- OpEx is particularly appealing if the demand fluctuates or is unknown
- OpEX computing costs:
  - **Leasing software and customized features** - responsibility to de-provision the resources when they aren't in use so that you can minimize costs.
  - **Scaling charges based on usage/demand instead of fixed hardware or capacity** - plan for backup traffic and disaster recovery traffic to determine the bandwidth needed.
  - **Billing at the user or organization level** - when using a dedicated cloud service, you could pay based on server hardware and usage.
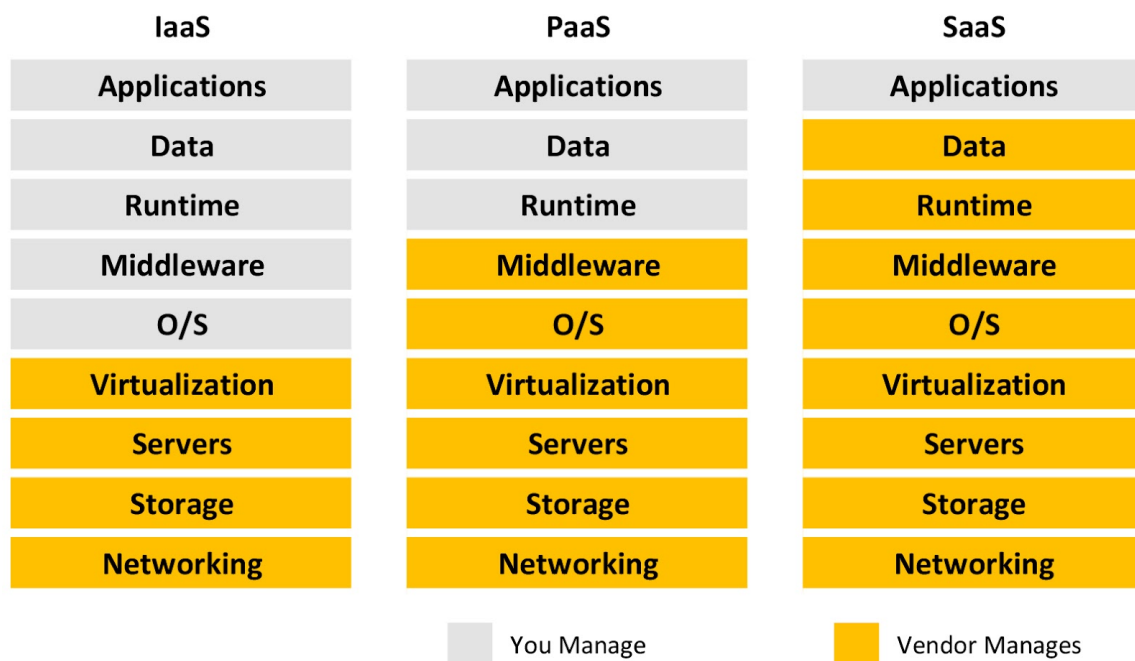
Sources:
https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/strategy/business-outcomes/fiscal-outcomes
https://docs.microsoft.com/en-us/learn/modules/principles-cloud-computing/3c-capex-vs-opex

Azure Cloud Service Models

- The three cloud computing service models are **IaaS, PaaS,** and **SaaS**.
- You can also use **serverless computing** to eliminate the need to manage infrastructure.
- The **shared responsibility model** determines the security tasks that are handled by the cloud provider and handled by the customer.
  - Azure is responsible for protecting the infrastructure such as hosts, network, and data center.
  - The customer is responsible for protecting their data, endpoints, account, and access management.
- IaaS, PaaS, and SaaS have different levels of managed services:

IaaS	PaaS	SaaS
Applications	Applications	Applications
Data	Data	**Data**
Runtime	Runtime	**Runtime**
Middleware	**Middleware**	**Middleware**
O/S	**O/S**	**O/S**
Virtualization	**Virtualization**	**Virtualization**
Servers	**Servers**	**Servers**
Storage	**Storage**	**Storage**
Networking	**Networking**	**Networking**

You Manage ▢   Vendor Manages ▮

Infrastructure as a service (IaaS)
- Most user management
- You are responsible for managing the **operating systems, data,** and **applications.**
- IaaS helps you to extend resources rapidly to meet the spikes required for your application.
- Used in the following scenarios:
  - **Migrating workloads** - move existing applications to the cloud.
  - **Test and development** - quickly set up and dismantle test and development environments. IaaS makes scaling development and testing environments, fast and economical.
  - **Storage, backup, and recovery** - simplify the planning and management of backup and recovery systems.
  - **Website hosting** - less expensive than traditional web hosting.

- ○ **High-performance computing (HPC)** - clusters of computers that help solve complex problems involving millions of variables or calculations.
  - ○ **Big data analysis** - for massive data sets that require a huge amount of processing power.

Platform as a service (PaaS)
- Less user management
- The operating systems are managed by the cloud provider, while the user is responsible for the applications and data they run and store.
- PaaS offers all the functionality you need to support the entire lifecycle of web applications: **building, testing the application**, **deploying the source code**, **managing**, and **updating** within the same integrated environment.
- Used in the following scenarios:
  - ○ **Development framework** - a framework for creating or customizing cloud-based applications.
  - ○ **Analytics or business intelligence** - find insights and patterns, and predict outcomes to improve business decisions.

Software as a service (SaaS)
- Requires the least amount of management.
- Allows organizations to focus on the business aspect rather than managing the infrastructure, security, and application.

	IaaS	PaaS	SaaS
Examples	Azure Virtual Machines	Azure Storage	Office 365
		Azure SQL Databases	Dynamics CRM Online
		Azure App Service	Skype

	IaaS	PaaS	SaaS
Costs	No upfront costs. Users pay only for what they consume.	No upfront costs. Users pay only for what they consume.	No upfront costs. Users pay a subscription, typically on a monthly or annual basis.
User Responsibility	Purchase, installation, configuration, and management of their own software, operating systems, middleware, and applications.	Custom development of their own applications. Allows the user to focus on the application or workload they want to run. Not responsible for managing the underlying server or infrastructure.	Users just use the application software Not responsible for any maintenance or management of the underlying software.
Cloud Provider Responsibility	Ensures that the underlying cloud infrastructure *(such as virtual machines, virtualization, storage, and networking)* is available for the user.	Operating system management, network, and service configuration. Typically responsible for everything apart from the application that a user wants to run. Provide the user a complete managed platform on which to run the application.	Provision, management, and maintenance of the application software.
Examples	Azure Virtual Machines	Azure Storage Azure SQL Databases Azure App Service	Office 365, Skype, and Dynamics CRM Online

Serverless Computing
- Function as a Service (FaaS)
- You simply deploy the code with a serverless platform, and it runs at high availability.
- Dynamically scales up and down to meet the demands of each workload within seconds.
- A **pay-per-execution model** that charges sub-second billing only for the time and resources required to execute the code.

AZ-900 Exam Notes:

It's important that you understand security in the cloud. Microsoft Azure provides a shared responsibility model that will help you understand the responsibilities of the cloud provider and the customer. The responsibilities vary depending on the cloud service model.

Sources:
https://docs.microsoft.com/en-us/learn/modules/principles-cloud-computing/5-types-of-cloud-services
https://azure.microsoft.com/en-us/overview/what-is-iaas/
https://azure.microsoft.com/en-us/overview/what-is-paas/
https://azure.microsoft.com/en-us/overview/what-is-saas/

https://azure.microsoft.com/en-us/overview/serverless-computing/

Azure Cloud Architecture Models

- Cloud computing is the delivery of services over the Internet that helps you reduce your operating costs, run your infrastructure efficiently, and scale as business requirements change.
  - Benefits of cloud computing:
    - Cost - eliminates capital expense.
    - Global scale - ability to scale elastically.
    - Performance - computing hardware is always upgraded to the latest generation.
    - Security - data stored in the cloud has a broad set of policies, technologies, and controls.
    - Speed - computing resources can be provisioned in minutes.
    - Productivity - enables the customer to focus on business requirements instead of setting up on-site datacenters.
    - Reliability - availability of your resources at all times.
- Three deployment methods of cloud computing: **Public vs Private vs Hybrid.**
- The model you choose for cloud deployment depends on your budget, security, scalability, and maintenance needs.

Public Cloud

- Focus on maintaining your applications without having to worry about purchasing, managing, or maintaining the hardware on which it runs.
- You can use multiple public cloud providers of varying scale.

Advantages	Disadvantages
High scalability/agility	Specific security requirements
Pay-as-you-go pricing	Government policies, industry standards, or legal requirements
You are not responsible for the updates and maintenance of the hardware.	You don't own the hardware or services and you also can't manage them as you may want to.
The required technical knowledge is minimal.	Maintaining a legacy application might be hard to meet

Private Cloud

- A dedicated on-premises datacenter configured to be a cloud environment that provides users in your organization with self-service access to compute resources.
- The headache of maintaining your hardware and software services are all in your hands.
- You can use a private cloud when an organization has data that cannot be put in the public cloud, perhaps for legal reasons.

Advantages	Disadvantages
Any scenario or legacy application configuration is supported.	CapEx involved - principal cost is the procurement of the equipment.
You have control (and responsibility) over security	To scale, you must buy, install, and set up new hardware
Compliance, or security requirements in your organization	Private clouds require IT skills and expertise

Hybrid Cloud
- Enables you to move data and applications between **private** and **public** clouds.
- When there is a spike in demand in your private cloud, you can "burst through" to the public cloud for additional computing resources.

Advantages	Disadvantages
Maintain a private infrastructure for sensitive assets.	More expensive than selecting one deployment model since it involves some CapEx cost upfront
Take advantage of the resources in the public cloud when needed.	It can be more complicated to set up and manage
With the ability to scale to the public cloud, you pay for extra computing power only when needed.	
Allows you to use your own equipment to meet the security and compliance requirements in your organization.	

Sources:
https://azure.microsoft.com/en-us/overview/what-are-private-public-hybrid-clouds/
https://docs.microsoft.com/en-us/learn/modules/principles-cloud-computing/4-cloud-deployment-models

Azure Global Infrastructure

Regions
- Each region has more than one data center, which is a physical location.
- A group of data centers deployed in a latency-defined perimeter and connected through a dedicated regional low latency network.
- Criteria in choosing a Region:
  - **Location** - a region closest to your users minimizes the latency
  - **Features** - some features **are not available** in all regions
  - **Price** - the price of services vary from region to region
- Each Region is paired within the same geographic area
- If the primary region has an outage, you can **failover** to the secondary region
- You can use paired regions for **replication**
- Regions that are unique when it comes to compliance:
  - **Azure Government Cloud** - only US federal, state, local, and tribal governments and their partners have access to this dedicated instance
  - **China Region** - data center is physically located within China and has no connection outside of China, including other Azure regions

Availability Zones
- Each availability zone is a physical location within a region
- A zone is composed of one or more data centers with independent power, cooling, and networking facilities.
- Azure services that support Availability Zones fall into two categories:
  - **Zonal services** - a resource is pinned to a specific zone
  - **Zone-redundant services** - replicates automatically across zones
- The data moving in and out of Azure data centers, as well as data moving between Azure data centers, is called **bandwidth**.
  - Data transfer to Azure is always free.
  - Data transfer between Availability Zones is not free.
  - Data transfer within the same Availability Zone is free.
  - Data transfer between Azure regions and to other continents is not free.

AZ-900 Exam Notes:

Take note that each availability zone is isolated or physically separated. To protect your services from single points of failure, you must replicate your applications and data in more than one Availability Zone.

Azure Site Recovery
- Azure's disaster recovery as a service (DRaaS)
- You can minimize recovery issues by sequencing the order of multi-tier applications that run on several virtual machines.
- Keep applications available from on-premises to Azure or Azure to another Azure region during outages with automatic recovery.

Sources:
https://docs.microsoft.com/en-us/learn/modules/explore-azure-infrastructure/
https://docs.microsoft.com/en-us/azure/availability-zones/az-overview
https://azure.microsoft.com/en-us/global-infrastructure/government/
https://docs.microsoft.com/en-us/azure/china/overview-operations
https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/overview
https://azure.microsoft.com/en-us/services/site-recovery/

Azure User Tools

- Manage your Azure resources through; **Portal, CLI, Powershell,** and **Cloudshell**

Azure Portal

- Create, manage, and monitor all resources in one console, from simple web applications to complex cloud applications.
- Portal Features:
  - **Personalize** - create your own dashboards, layouts, workflows, and colors
  - **Access Control** - fine-grained access control to all your resources
  - **Cost Management** - keep track of current and projected costs
  - **Multi-Platform** - available through web and mobile devices
  - **Marketplace** - an online store that consists of thousands of built-in product offerings such as:
    - Virtual machine images
    - Managed applications
    - Software-as-a-service solutions
    - Consulting and managed services

AZ-900 Exam Notes:

We recommend that you explore the Azure Portal. Defining each service in the cheat sheets alone won't help you understand how to use the portal to configure your services. By simulating it yourself, you'll be able to remember and understand the different configurations in the portal.

Azure CLI

- Command Line Interface (CLI) works on Windows, Mac, and Linux
- You can create and manage Azure resources with a set of commands
- It's built to get you to work with Azure quickly, with focus on **automation**.

Azure Powershell

- Fully supported by Azure with modules and **cmdlets**
  - **cmdlet** is a lightweight command, which is used in PowerShell.
- PowerShell provides powerful features for automation
- PowerShell also uses **Azure Resource Manager** to manipulate Azure resources

Azure Cloud Shell

- An interactive, **browser-accessible shell** for managing Azure resources.
- You can choose between **Bash** or **PowerShell**
- Shell access from anywhere using the web or mobile app
- Cloud Shell attaches **Azure Files** share to persist your data

- It also offers an integrated **file editor** built on the open-source Monaco Editor

	Windows	Linux	macOS
Azure CLI	✔	✔	✔
Azure Portal (via web browser)	✔	✔	✔
Azure PowerShell	✔	✔	✔
Azure Cloud Shell (via web browser)	✔	✔	✔

Tutorials Dojo

Azure Mobile App
- You can monitor the status and health of your Azure resources
- Monitor your metrics and alerts and take the necessary actions to fix common issues.
- You can run commands via Azure CLI or PowerShell to manage your Azure resources.

Sources:
https://azure.microsoft.com/en-us/features/azure-portal/
https://docs.microsoft.com/en-us/cli/azure/
https://docs.microsoft.com/en-us/powershell/azure/
https://docs.microsoft.com/en-us/azure/cloud-shell/overview

AZURE PRICING

- Azure offers pay-as-you-go and reserved instances for pricing.
- Azure Pricing Factors:
    - Resource size and resource type.
    - Different Azure locations have different prices for services.
    - The bandwidth of your services.
    - Any data transfer between two different billing zones is charged.
        - **Ingress (data in)** = free
        - **Egress (data out)** = charged based on data going out of Azure datacenters
- Factors that can reduce costs:
    - By purchasing a **reserved instance** (one-year or three-year terms), you can significantly reduce costs up to 72 percent compared to pay-as-you-go pricing.
    - A **reserved capacity** is a commitment for a period of one or three years for SQL Database and SQL Managed Instance.
    - **Hybrid Benefit** allows you to use your on-premises Software Assurance-enabled Windows Server and SQL Server licenses on Azure.
    - If you purchase an unused compute capacity, you can get deep discounts up to 90 percent compared to pay-as-you-go pricing. A **spot virtual machine** is for workloads that can tolerate interruptions.
- All resources belong to a **subscription**.
    - An Azure account can have multiple subscriptions.
    - Organize your resources and subscriptions using **Azure management groups**.
- **Azure Cost Management** gives you a detailed view of current and projected costs.
- For new accounts, the **Azure Free Tier** is available.
    - Free Tier offers limited usage of Azure products at no charge for 12 months.
    - You also get $200 credit that you can spend during the first 30 days.
    - More details at https://azure.microsoft.com/en-us/free/

AZ-900 Exam Notes:

In the first 30 days of an Azure free account, all the resources that you use are deducted from the $200 credit. After 30 days, you'll have to upgrade to a pay as you go subscription so you can continue to get access to all the free products in the free account.

- Estimate your expected monthly costs using **Azure Pricing Calculator.**
- **Total Cost of Ownership (TCO) Calculator**
    - Estimate total savings over a period of time by using Azure.
    - Compares costs and savings against on-premises and co-location environments.

- Azure Support Plans:
  - **Basic** - included for all Azure customers.
  - **Developer** - recommended for non-production environments. Limited access to technical support during business hours by email only.
  - **Standard** - appropriate for production workload environments. Has 24/7 access to Azure's technical support engineers by phone or email.
  - **Professional Direct** - suitable for business-critical workloads. Has 24/7 access to Azure's technical support engineers by phone or email. Provides access to Operations Support, ProDirect delivery managers, and Support APIs.

	BASIC	DEVELOPER	STANDARD	PROFESSIONAL DIRECT
Scope	Included for all Azure customers	Trial and non-production environments	Production workload environments	Business-critical dependence
Billing and subscription management support	✔	✔	✔	✔
24/7 self-help resources, including Microsoft Learn, Azure portal how-to videos, documentation, and community support	✔	✔	✔	✔
Ability to submit as many support tickets as you need	✔	✔	✔	✔
Azure Advisor—your free, personalized guide to Azure best practices	✔	✔	✔	✔
Azure health status and notifications	✔	✔	✔	✔
Third-party software support with interoperability and configuration guidance and troubleshooting		✔	✔	✔
24/7 access to technical support by email and phone		Available during business hours by email only.	✔	✔
Case severity and response time		Minimal business impact (Sev C): Within eight business hours[1]	Minimal business impact (Sev C): Within eight business hours[1] Moderate business impact (Sev B): Within four hours Critical business impact (Sev A): Within one hour	Minimal business impact (Sev C): Within four business hours[1] Moderate business impact (Sev B): Within two hours Critical business impact (Sev A): Within one hour
Architecture Support		General guidance	General guidance	Guidance from a pool of ProDirect delivery managers
				A single view to managing your active support tickets
Operations Support				Service reviews and advisory consultation from a pool of ProDirect delivery managers
Training				Webinars led by Azure engineers
Proactive Guidance				From a pool of ProDirect delivery managers

[1] For most countries and regions, business hours are from 9:00 AM to 5:00 PM (local time) Monday through Friday, excluding holidays. For North America, business hours are from 6:00 AM to 6:00 PM (Pacific time), Monday through Friday, excluding holidays. In Japan, business hours are from 9:00 AM to 5:30 PM, Monday through Friday, excluding holidays.

Tutorials Dojo

Service Level Agreement (SLA)
- It is the commitment of Microsoft for the uptime and connectivity of a service.
- You could obtain a service credit if the service level agreement is not met by Microsoft.
- Composite SLAs include several resources (*with different availability levels*) to support an application.
- SLAs for multi-region deployments distribute the application in more than one region for high availability and use Azure Traffic Manager for failover if one region fails.

AZ-900 Exam Notes:

Take note that Azure offers different SLAs for each service. To compute the total composite SLA of an application, you would have to multiply the SLA of each service.
For example,
- App Service web apps (SLA) = 99.95%
- SQL Database (SLA) = 99.99%

The composite SLA is 99.95% × 99.99% = 99.94%. We could see that the SLA is lower than the individual SLAs since multiple services have more potential failure points.

During your examination, you could use the calculator button if you need to compute for the composite SLA.

Service Lifecycle
- **Private Preview** is only available to a few customers for early access to new technologies and features.
- **Public Preview** makes the service in the public phase and can be used by any customers to evaluate the new features but SLA does not apply.
- **General Availability** is the release of service to the general public and is fully supported by SLAs.
- Azure updates allow you to get the latest updates on any Azure products and features.

	Private Preview	Public Preview	General Availability
Access	Subset of Azure customers *(By Invitation)*	All Azure customers	All Azure customers
Subject to Service Level Agreement (SLA)	No	No	Yes
Covered by Microsoft Customer Support Services	No	Yes	Yes

Tutorials Dojo

Sources:

https://azure.microsoft.com/en-us/pricing/

https://docs.microsoft.com/en-us/azure/cost-management-billing/cost-management-billing-overview

https://docs.microsoft.com/en-us/azure/architecture/framework/resiliency/business-metrics

https://azure.microsoft.com/en-us/support/legal/preview-supplemental-terms/