

Question 1:

**Skipped**

Your company plans to deploy several web servers and several database servers to Azure. You need to recommend an Azure solution to limit the types of connections from the web servers to the database servers.

**What should you include in the recommendation?**

- Azure Service Bus
- A local network gateway
- A route filter
- Network security groups (NSGs)  
**(Correct)**

**Explanation**

You can use an **Azure network security group** to filter network traffic to and from Azure resources in an Azure virtual network. A network security group contains [security rules](#) that allow or deny inbound network traffic to, or outbound network traffic from, several types of Azure resources. For each rule, you can specify source and destination, port, and protocol.

**Network security group security rules are evaluated by priority using the 5-tuple information (source, source port, destination, destination port, and protocol) to allow or deny the traffic.** A flow record is created for existing connections. Communication is allowed or denied based on the connection state of the flow record. The flow record allows a network security group to be stateful. If you specify an outbound security rule to any address over port 80, for example, it's not necessary to specify an inbound security rule for the response to the outbound traffic. You only need to specify an inbound security rule if communication is initiated externally. The opposite is also true. If inbound traffic is allowed over a port, it's not necessary to specify an outbound security rule to respond to traffic over the port.

**Reference:** <https://docs.microsoft.com/en-us/azure/virtual-network/security-overview>

Question 2:

**Skipped**

Your company plans to deploy several million sensors that will upload data to Azure. You need to identify which Azure resources must be created to support the planned solution.

**Which TWO Azure resources should you identify?**

**NOTE: Each correct selection is worth one point.**

- Azure Data Lake  
**(Correct)**
- Azure Notification Hubs
- Azure Queue storage
- Azure File Storage
- Azure IoT Hub  
**(Correct)**

**Explanation**

**IoT Hub** (Internet of things Hub) provides data from millions of sensors.

IoT Hub is a managed service, hosted in the cloud, that acts as a central message hub for bi-directional communication between your IoT application and the devices it manages. You can use

Azure IoT Hub to build IoT solutions with reliable and secure communications between millions of IoT devices and a cloud-hosted solution backend. You can connect virtually any device to IoT Hub.

There are two storage services IoT Hub can route messages to -- **Azure Blob Storage and Azure Data Lake Storage Gen2 (ADLS Gen2) accounts**. Azure Data Lake Storage accounts are hierarchical namespace-enabled storage accounts built on top of blob storage. Both of these use blobs for their storage.

## References:

<https://docs.microsoft.com/en-us/azure/iot-hub/about-iot-hub>

<https://docs.microsoft.com/en-us/azure/iot-hub/iot-hub-devguide-messages-d2c>

Question 3:

Skipped

Which of the following would you use to deploy and manage containerised applications to provide an integrated continuous integration and continuous delivery (CI/CD) experience and enterprise-grade security and governance.

- Azure Batch
- Azure Container
- Azure Kubernetes  
**(Correct)**
- Azure Functions

## Explanation

You can deploy and manage containerised applications more easily with a fully managed Kubernetes service. Azure Kubernetes Service (AKS) offers serverless Kubernetes, an integrated continuous integration and continuous delivery (CI/CD) experience and enterprise-grade security and governance. You can also unite your development and operations teams on a single platform to rapidly build, deliver and scale applications with confidence.

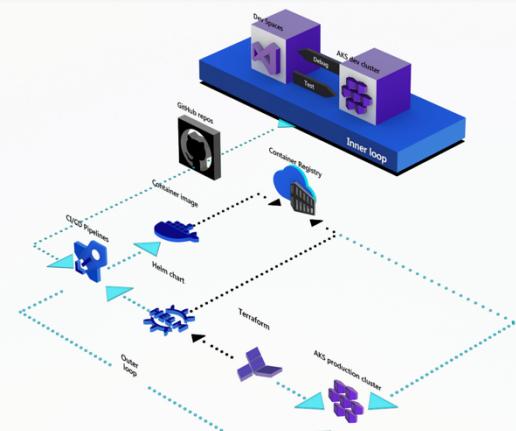
## Accelerate containerised application development

Easily define, deploy, debug and upgrade even the most complex Kubernetes applications and automatically containerise your applications. Develop and test microservices-based applications without mocking up dependencies using [Dev Spaces](#).

Add a full CI/CD pipeline to your AKS clusters with automated routine tasks and set up a canary deployment strategy in just a few clicks. Detect failures early and optimise your pipelines with deep traceability into your deployments.

Gain visibility into your environment with control-plane telemetry, log aggregation and container health, accessible in the Azure portal and automatically configured for AKS clusters.

[Review DevOps fundamentals >](#)



Reference: <https://azure.microsoft.com/en-in/services/kubernetes-service/#features>

Question 4:

**Skipped**

**To which service should an application connect to retrieve security tokens?**

- An Azure SQL Database
- Azure Active Directory (Azure AD)  
**(Correct)**
- An Azure Storage account
- A Certificate Store

**Explanation**

Please note that the question asks us "**To retrieve security tokens**". You might be thinking about Azure Key Vaults here.

A service such as Azure Key Vault can **keep** security token, however to **access/retrieve** something from the Key Vault , we need to be authenticated to retrieve them. To authenticate, we can use "managed identity" that gives Azure services an automatically managed identity in Azure AD. So the answer is Azure AD.

Remember that Azure AD provides access tokens. Azure Key vault is used to securely store passwords, secrets, certificates and tokens.

**Reference:** <https://docs.microsoft.com/en-us/azure/key-vault/general/basic-concepts>

Question 5:

**Skipped**

**You have an on-premises network that contains 100 servers.**

**You need to recommend a solution that provides additional resources to your users. The solution must minimize capital and operational expenditure costs.**

**What should you include in the recommendation?**

- An additional data center
- A complete migration to the public cloud
- A private cloud
- A hybrid cloud  
**(Correct)**

**Explanation**

A **hybrid cloud** is a combination of a private cloud and a public cloud.

Capital expenditure is the spending of money up-front for infrastructure such as new servers.

With a hybrid cloud, you can continue to use the on-premises servers while adding new servers in the public cloud (Azure for example). Adding new servers in Azure minimizes the capital expenditure costs as you are not paying for new servers as you would, if you deployed new servers on-premises.

**Incorrect Answers:**

A: A complete migration of 100 servers to the public cloud would involve a lot of operational expenditure (the cost of migrating all the servers).

B: An additional data center would involve a lot of capital expenditure (the cost of the new infrastructure).

C: A private cloud is hosted on on-premises servers so this would involve a lot of capital expenditure (the cost of the new infrastructure to host the private cloud).

**References:** <https://docs.microsoft.com/en-gb/learn/modules/principles-cloud-computing/4-cloud-deployment-models>

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Question 6:

**Skipped**

**Your company plans to move several servers to Azure.**

**The company's compliance policy states that a server named LiveServer must be on a separate network segment.**

**You are evaluating which Azure services can be used to meet the compliance policy requirements.**

**Which Azure solution should you recommend?**

- A virtual network for LiveServer and another virtual network for all the other servers **(Correct)**
- One resource group for all the servers and a resource lock for LiveServer
- A resource group for LiveServer and another resource group for all the other servers
- A VPN for LiveServer and a virtual network gateway for each other server

**Explanation**

**Azure Virtual Network (VNet)** is the fundamental building block for your private network in Azure. VNet enables many types of Azure resources, such as Azure Virtual Machines (VM), to securely communicate with each other, the internet, and on-premises networks. VNet is similar to a traditional network that you'd operate in your own data center, but brings with it additional benefits of Azure's infrastructure such as scale, availability, and isolation.

Networks in Azure are known as virtual networks. A virtual network can have multiple IP address spaces and multiple subnets. Azure automatically routes traffic between different subnets within a virtual network.

The question states that FinServer must be on a separate network segment. The only way to separate FinServer from the other servers in networking terms is to place the server in a different virtual network to the other servers.

**References:** <https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-vnet-plan-design-arm>

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Question 7:

**Skipped**

**[redacted] notifies you about Azure service incidents and planned maintenance so you can take action to mitigate downtime.**

- Azure Monitor
- Azure Service Health **(Correct)**
- Azure Active Directory
- Azure Trust Center

**Explanation**

Azure Service Health provides personalised alerts and guidance for Azure service issues.

Azure Service Health notifies you about Azure service incidents and planned maintenance so you can take action to mitigate downtime. You can also configure customisable cloud alerts and use your

personalised dashboard to analyse health issues, monitor the impact to your cloud resources, get guidance and support, and share details and updates.

## IMPORTANT!

What's the difference between Service Health and the Azure status page? ^

The [Azure status](#) page is a global view of the health of all Azure services in all regions. It's a quick reference for incidents with widespread impact. [Service Health](#) keeps you informed about the health of your environment. It provides a personalised view of the status of your Azure services and regions, includes information about planned maintenance and current incidents, and offers richer functionality, including alerting and RCAs. See the [documentation](#) and [watch this video](#) to learn more.



Personalised dashboard shows the service issues that affect you



Configurable cloud alerts notify you about active and upcoming service issues



Shareable details and updates, including incident root cause analyses



Guidance and support during service incidents

Reference: <https://azure.microsoft.com/en-ca/features/service-health/>

Question 8:

**Skipped**

For the following statement, select Yes if the statement is True, otherwise select

No.

To implement an Azure Multi-Factor Authentication(MFA) solution, you must deploy a federation solution or sync on-premises identities to the cloud

- Yes
  - No
- (Correct)**

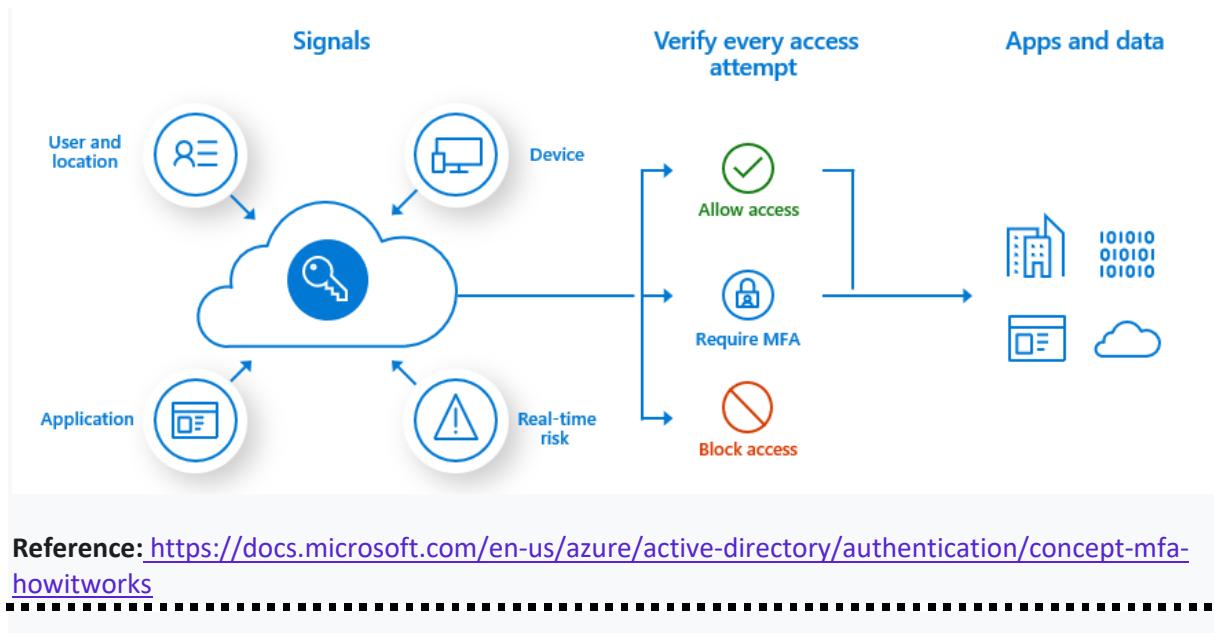
**Explanation**

**Multi-factor authentication** is a process where a user is prompted during the sign-in process for an additional form of identification, such as to enter a code on their cellphone or to provide a fingerprint scan.

If you only use a password to authenticate a user, it leaves an insecure vector for attack. If the password is weak or has been exposed elsewhere, is it really the user signing in with the username and password, or is it an attacker? When you require a second form of authentication, security is increased as this additional factor isn't something that's easy for an attacker to obtain or duplicate.

**Users and groups can be enabled for Azure Multi-Factor Authentication to prompt for additional verification during the sign-in event. Security defaults are available for all Azure AD tenants to quickly enable the use of the Microsoft Authenticator app for all users.**

For more granular controls, [Conditional Access](#) policies can be used to define events or applications that require MFA. These policies can allow regular sign-in events when the user is on the corporate network or a registered device, but prompt for additional verification factors when remote or on a personal device.



Reference: <https://docs.microsoft.com/en-us/azure/active-directory/authentication/concept-mfa-howitworks>

Question 9:

**Skipped**

Your company is developing a solution and has the following requirements :

- 1) The ability to decouple components
- 2) Enable 1:n relationships between publishers and subscribers using topics.

**Which of the following is the best suited service for this?**

- Azure Service Bus  
**(Correct)**
- Azure Service Fabric
- Azure Cache for Redis
- Azure Queue Storage

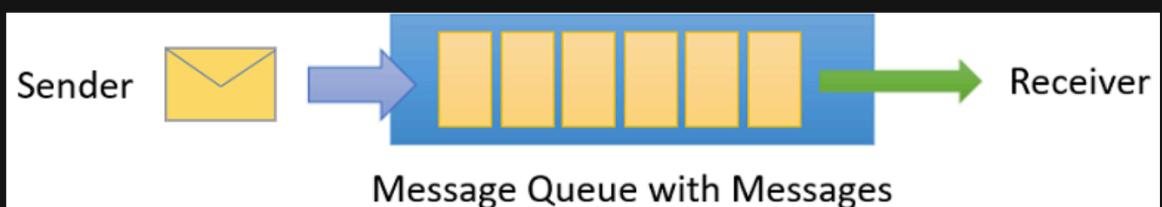
**Explanation**

According to the official documentation :

Microsoft Azure Service Bus is a fully managed enterprise integration message broker. Service Bus can decouple applications and services. Service Bus offers a reliable and secure platform for asynchronous transfer of data and state.

## Queues

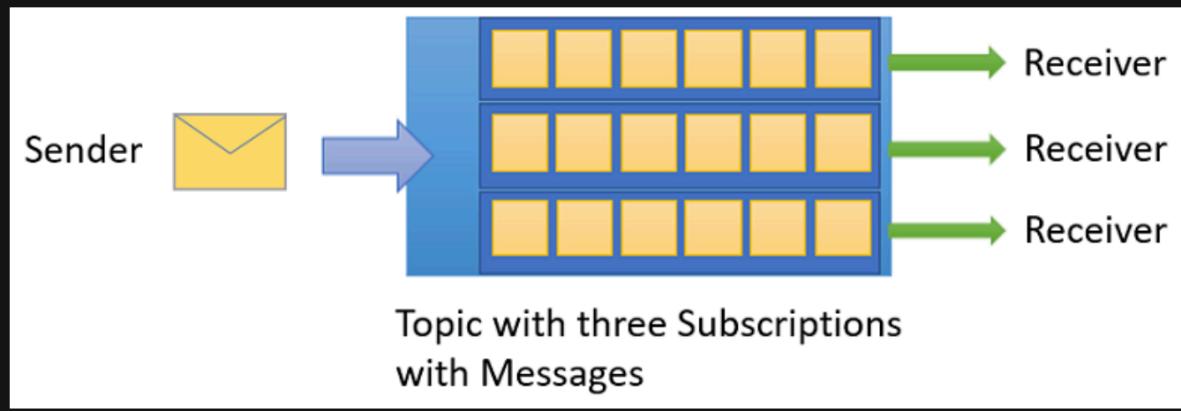
Messages are sent to and received from *queues*. Queues store messages until the receiving application is available to receive and process them.



Messages in queues are ordered and timestamped on arrival. Once accepted, the message is held safely in redundant storage. Messages are delivered in *pull* mode, only delivering messages when requested.

## Topics

You can also use *topics* to send and receive messages. While a queue is often used for point-to-point communication, topics are useful in publish/subscribe scenarios.



Topics can have multiple, independent subscriptions. A subscriber to a topic can receive a copy of each message sent to that topic. Subscriptions are named entities. Subscriptions persist, but can expire or autodelete.

**Reference :** <https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-messaging-overview>

Question 10:

**Skipped**

**You plan to deploy several Azure virtual machines.**

**You need to ensure that the services running on the virtual machines are available if a single data center fails.**

**Solution: You deploy the virtual machines to two or more regions.**

**Does this meet the goal?**

- Yes  
**(Correct)**
- No

**Explanation**

By deploying the virtual machines to two or more regions, you are deploying the virtual machines to multiple datacenters. This will ensure that the services running on the virtual machines are available if a single data center fails.

Azure operates in multiple datacenters around the world. These datacenters are grouped in to geographic regions, giving you flexibility in choosing where to build your applications. You create Azure resources in defined geographic regions like 'West US', 'North Europe', or 'Southeast Asia'. You can review the list of regions and their locations.

Within each region, multiple datacenters exist to provide for redundancy and availability.

**Reference:** <https://docs.microsoft.com/en-us/azure/virtual-machines/windows/regions>

Question 11:

**Skipped**

**Which of the following is a cloud based job scheduling and compute management platform that enables running large-scale parallel and high performance computing applications efficiently in the cloud?**

- Azure Blueprint
- Azure Container Instances
- **Azure Batch**  
**(Correct)**
- Azure App Service

**Explanation**

**Azure Batch** is a cloud based job scheduling and compute management platform that enables running large-scale parallel and high performance computing applications efficiently in the cloud.



#### Choose your operating system and tools

Choose the operating system and development tools you need to run your large-scale jobs on Batch. Batch gives you a consistent management experience and job scheduling, whether you select Windows Server or Linux compute nodes, but it lets you take advantage of the unique features of each environment. With Windows, use your existing Windows code, including Microsoft .NET, to run large-scale compute jobs in Azure. With Linux, choose from popular distributions including CentOS, Ubuntu, and SUSE Linux Enterprise Server to run your compute jobs, or use Docker containers to lift and shift your applications. Batch gives you SDKs and supports a range of development tools including Python and Java.



#### Cloud-enable your cluster applications

Batch runs the applications that you use on workstations and clusters. It is easy to cloud-enable your executable files and scripts to scale out. Batch provides a queue to receive the work that you want to run and executes your applications. Describe the data that need to be moved to the cloud for processing, how the data should be distributed, what parameters to use for each task and the command to start the process. Think about it like an assembly line with multiple applications. With Batch, you can share data between steps and manage the execution as a whole.



#### Imagine running at 100x scale

You use a workstation, maybe a small cluster or you wait in a queue to run your jobs. What if you had access to 16 cores or even 100,000 cores when you needed them and only had to pay for what you used? With Batch you can. Avoid the waiting that can limit your imagination. What could you do on Azure that you cannot do today?



#### Tell us what to execute

At the core of Batch is a high-scale job scheduling engine which is available to you as a managed service. Use the scheduler in your application to dispatch work. Batch can also work with cluster job schedulers or behind the scenes of your software as a service (SaaS). You do not need to write your own work queue, dispatcher, or monitor. Batch gives you this as a service.



#### Let Batch take care of scale for you

When you are ready to run a job, Batch starts a pool of compute virtual machines for you, installing applications and staging data, running jobs with as many tasks as you have, identifying failures and re-queuing work and scaling down the pool as work completes. You control scale to meet deadlines and manage costs and run at the right scale for your application.



#### Deliver solutions as a service

Batch processes jobs on demand, not on a predefined schedule, so your customers run jobs in the cloud when they need to. Manage who can access Batch and how many resources they can use and ensure that requirements such as encryption are met. Rich monitoring helps you to know what is going on and identify problems. Detailed reporting helps you track usage.

**Reference:** <https://azure.microsoft.com/en-in/services/batch/#features>

Question 12:

**Skipped**

For the following statement, select Yes if the statement is True, otherwise select

No.

**Azure Multi-Factor Authentication (MFA) can be required for administrative and non-administrative user accounts**

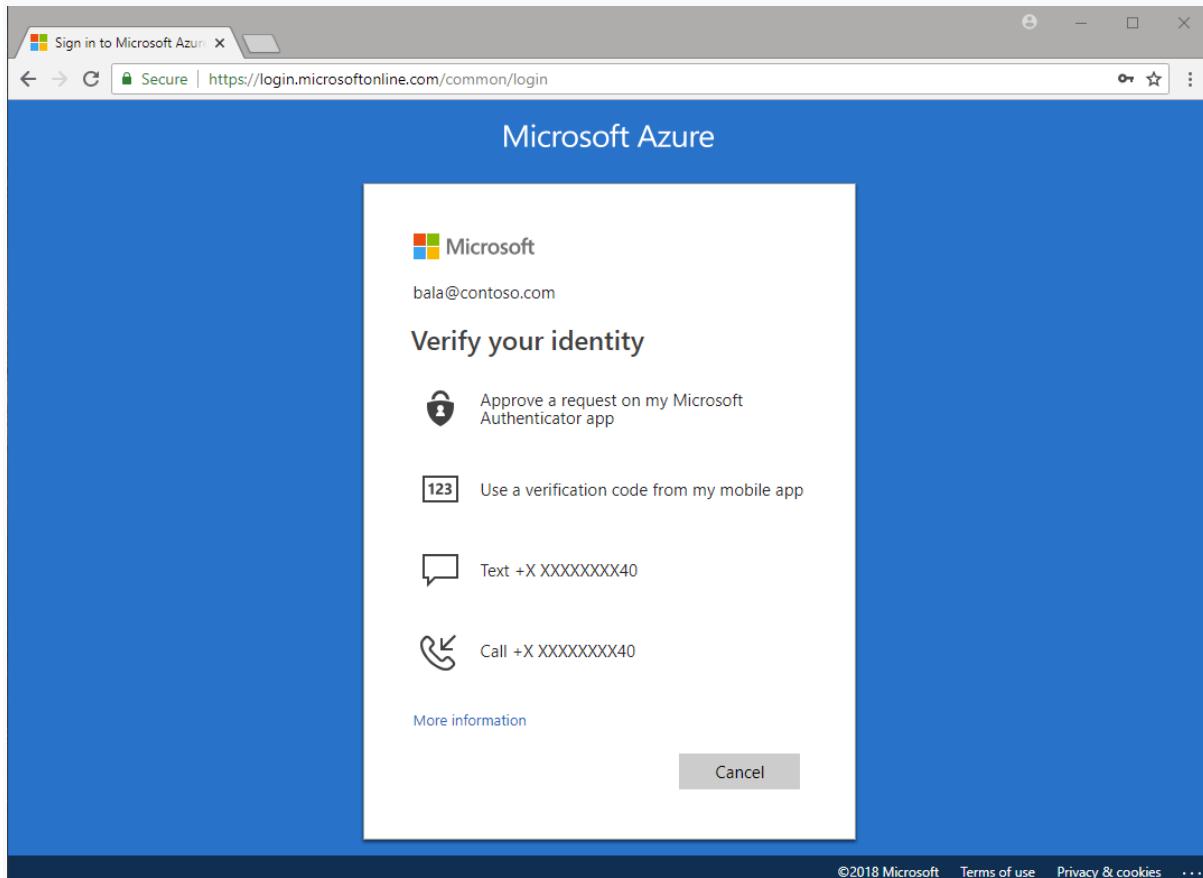
- No
- Yes  
**(Correct)**

### Explanation

Multi-factor authentication is a process where a user is prompted during the sign-in process for an additional form of identification, such as to enter a code on their cellphone or to provide a fingerprint scan.

If you only use a password to authenticate a user, it leaves an insecure vector for attack. If the password is weak or has been exposed elsewhere, is it really the user signing in with the username and password, or is it an attacker? When you require a second form of authentication, security is increased as this additional factor isn't something that's easy for an attacker to obtain or duplicate.

Azure Multi-Factor Authentication helps safeguard access to data and applications while maintaining simplicity for users. It provides additional security by requiring a second form of authentication and delivers strong authentication via a range of easy to use [authentication methods](#). **Users may or may not be challenged for MFA based on configuration decisions that an administrator makes.**



**Reference:** <https://docs.microsoft.com/en-us/azure/active-directory/authentication/concept-mfa-howitworks>

Question 13:

**Skipped**

An Azure dashboard is stored as which type of file?

- JPEG
- JSON
- (Correct)
- Typescript
- XML

**Explanation**

Shared **dashboards** in the Azure portal are resources just like virtual machines and storage accounts. You can manage resources programmatically by using the Azure Resource Manager REST APIs, the Azure CLI, and Azure PowerShell commands.

Many features build on these APIs to make resource management easier. Each of these APIs and tools offers ways to **create, list, retrieve, modify, and delete** resources. Since dashboards are resources, you can pick your favorite API or tool to use.

Whichever tools you use, to create a dashboard programmatically, you construct a **JSON** representation of your dashboard object. This object contains information about the tiles on the dashboard. It includes sizes, positions, resources they're bound to, and any user customizations.

**The most practical way to build up this JSON document is to use the Azure portal. You can interactively add and position your tiles. Then export the JSON and create a template from the result for later use in scripts, programs, and deployment tools.**

The screenshot shows the Azure Portal interface with a dashboard titled "Test VM Dashboard" for "CONTOSO". The dashboard includes:

- A tile for "Azure Virtual Machines Overview" with a video player.
- A text section describing the dashboard as a team dashboard for a test VM, listing links for "Getting started", "Troubleshooting guide", and "Architecture docs".
- A chart titled "Percentage CPU for the past hour" showing usage over time, with a value of **3.89 %** highlighted.
- Four smaller tiles: "Disk Read Operations/Sec and Disk ... MYVM1", "Disk Read Bytes and Disk Write Byte... MYVM1", "Network In and Network Out for the... MYVM1", and "myVM1" (status: Running).

**Reference :** <https://docs.microsoft.com/en-us/azure/azure-portal/azure-portal-dashboards-create-programmatically>

#### Question 14:

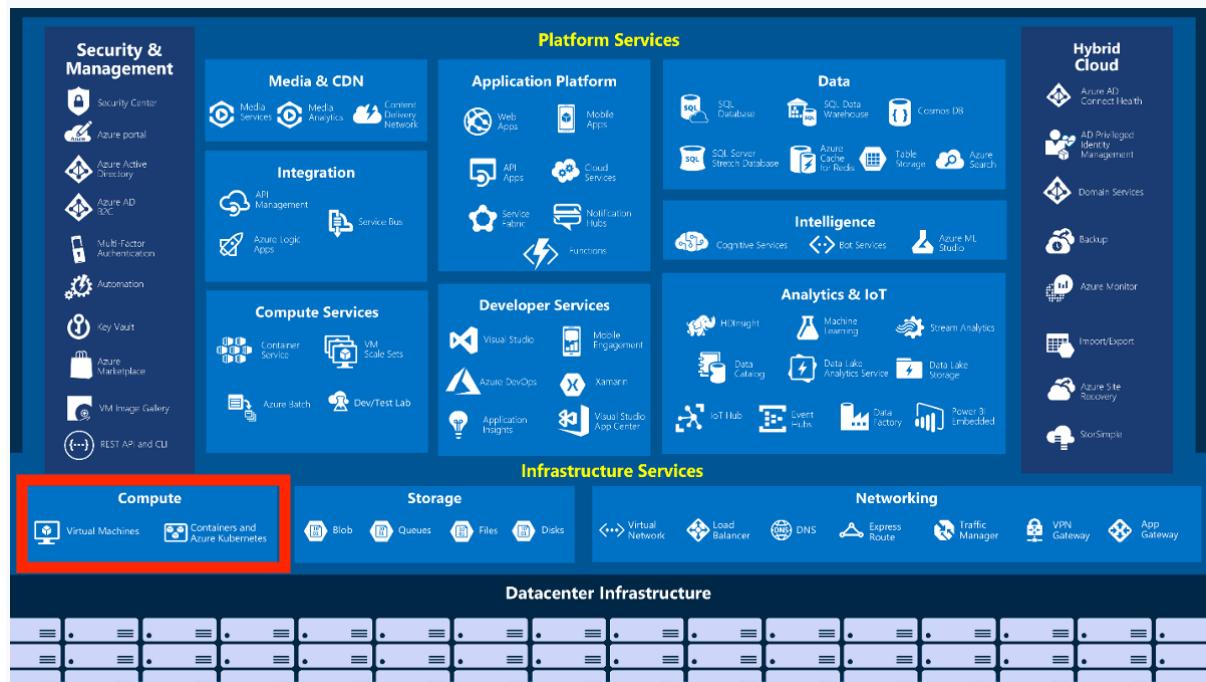
Skipped

Which of the following categories does Azure Kubernetes service belong to?

- Infrastructure as a service (IaaS)  
**(Correct)**
- Software as a service (SaaS)
- Database as a service (DaaS)
- Platform as a service (PaaS)

Explanation

Remember that Virtual Machines, Containers and Kubernetes are considered Compute Services, and fall under IaaS!



Azure Kubernetes Service (AKS) offers serverless Kubernetes, an integrated continuous integration and continuous delivery (CI/CD) experience, and enterprise-grade security and governance. Unite your development and operations teams on a single platform to rapidly build, deliver, and scale applications with confidence.

Reference: <https://azure.microsoft.com/en-us/services/kubernetes-service/>

#### Question 15:

Skipped

You need to ensure that when Azure Active Directory (Azure AD) users connect to Azure AD from the Internet by using an anonymous IP address, the users are prompted automatically to change their password.

Which Azure service should you use?

- Azure AD Identity Protection  
**(Correct)**
- Azure Advanced Threat Protection (ATP)
- Azure AD Privileged Identity Management
- Azure AD Connect Health

## Explanation

**Identity Protection** is a tool that allows organizations to accomplish three key tasks:

- 1) Automate the detection and remediation of identity-based risks.
- 2) Investigate risks using data in the portal.
- 3) Export risk detection data to third-party utilities for further analysis

**Reference:** <https://docs.microsoft.com/en-us/azure/active-directory/identity-protection/overview-identity-protection>

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Question 16:

**Skipped**

**Which statements regarding Azure subscriptions are correct? (Choose 3)**

- Subscription is dependent on a region  
**(Correct)**
- Azure subscription cannot have a trust relationship with an Azure Active Directory (AD) instance
- Trial subscription can be converted to paid  
**(Correct)**
- Multiple subscriptions cannot be created within an Azure account
- Billing is applied to each subscription separately  
**(Correct)**

**Explanation**

**Billing is applied to each subscription separately** - Yes! It is one of the many reasons why people use separate subscriptions.

**Trial subscription can be converted to paid** - Of course. When you sign up for an Azure free account, you get \$200 credit. In the first 30 days, any services you use beyond their free amounts will be deducted from that \$200 credit. When you've used up your \$200 credit or 30 days have passed (whichever happens first), you'll need to upgrade by moving to [pay-as-you-go pricing](#). That way, you can keep getting free amounts of services and purchase services beyond their free amounts as needed. The cost of those services is charged to the payment method you provide.

**Subscription is dependent on a region** - Yes, when you create a subscription in Azure, you need to specify a certain region for that Subscription. Hence, this choice is valid as well.

All other options are invalid and don't stand true.

**References:**

<https://techcommunity.microsoft.com/t5/azure/understanding-azure-account-subscription-and-directory/m-p/34800>

<https://docs.microsoft.com/en-us/azure/active-directory/fundamentals/active-directory-how-subscriptions-associated-directory>

<https://azure.microsoft.com/en-us/free/free-account-faq/>

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Question 17:

**Skipped**

**What is the minimum number of Virtual Machines and minimum number of Availability zones respectively that must be used to guarantee an SLA of 99.99%?**

- 1 Virtual Machine, 1 Availability Zone

- **2 Virtual Machines , 2 Availability Zones  
(Correct)**
- **2 Virtual Machines, 1 Availability Zone**
- **1 Virtual Machine, 2 Availability Zones**

**Explanation**

**Important question!**

Azure offers industry best SLAs for VMs. However, to guarantee an SLA of 99.99%, you must have 2 or more instances deployed across 2 or more Availability Zones!

According to the official website :

## SLA for Virtual Machines

Last updated: January 2020

- For all Virtual Machines that have **two** or more instances deployed across **two** or more Availability Zones in the same Azure region, we guarantee you will have Virtual Machine Connectivity to at least one instance at least 99.99% of the time.

**Reference : [https://azure.microsoft.com/en-us/support/legal/sla/virtual-machines/v1\\_9/](https://azure.microsoft.com/en-us/support/legal/sla/virtual-machines/v1_9/)**

Question 18:

**Skipped**

Your company has the following requirements :

- 1) SDKs for popular languages, APIs for SQL, MongoDB, Cassandra and more
- 2) The ability to run most critical workloads in any Azure region in the world
- 3) The ability to work with NoSQL data

**Which of the following would you choose?**

- Azure Table Storage
- Azure Queues
- Azure Files
- **Azure Cosmos DB  
(Correct)**

**Explanation**

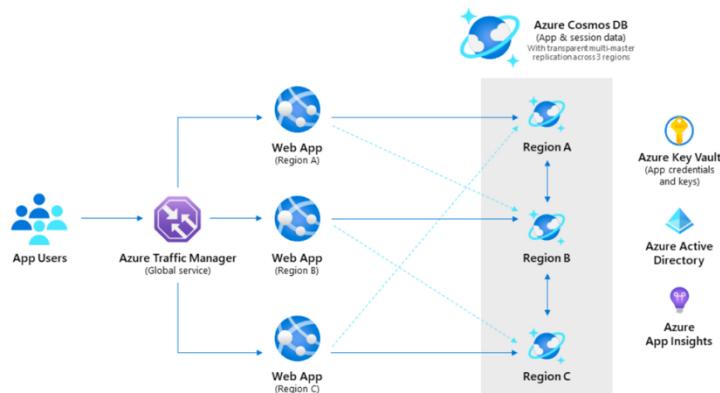
According to the offical documentation :

## Build or modernize scalable, high-performance apps

Azure Cosmos DB is a fully managed NoSQL database service for modern app development with guaranteed single-digit millisecond response times and 99.999-percent availability [backed by SLAs, automatic and instant scalability](#), and open source APIs for MongoDB and Cassandra. Enjoy fast writes and reads anywhere in the world with turnkey multi-master global distribution.

## Mission-critical applications

Run your most critical workloads in any Azure region in the world with SLA-backed speed, availability, throughput, and consistency. Ensure business continuity with turnkey multi-master replication and enterprise-grade security and compliance including end-to-end encryption and access control. Azure Cosmos DB is trusted by leading enterprises globally including [Coca-Cola](#), [Symantec](#), and [Citrix](#).



Reference : <https://azure.microsoft.com/en-us/services/cosmos-db/#featured>

Question 19:

Skipped

Match the Azure services on the left to their correct description on the right.

Azure Machine Learning

1

Provides a digital online assistant that provides speech support.

Azure IoT Hub

2

Uses past trainings to provide predictions that have high probability.

Azure Functions

3

Provides serverless computing functionalities

Azure Bot Services

4

Processes data from millions of sensors

- 1) Azure Machine Learning
- 2) Azure Functions
- 3) Azure IoT Hub
- 4) Azure Bot Services

- 1) Azure Bot Services
- 2) Azure Machine Learning
- 3) Azure Functions
- 4) Azure IoT Hub  
**(Correct)**
- 1) Azure IoT Hub
- 2) Azure Bot Services
- 3) Azure IoT Hub
- 4) Azure Machine Learning
- 1) Azure Functions
- 2) Azure Bot Services
- 3) Azure IoT Hub
- 4) Azure Machine Learning

#### Explanation

**1) Azure Bot Services** - It is a managed service purpose-built for bot development. Using this you can develop intelligent, enterprise-grade bots that help you enrich the customer experience while maintaining control of your data. Build any type of bot—from a Q&A bot to your own branded virtual assistant—to quickly connect your users to the answers they need.



Create a bot that can naturally interact with users by easily integrating Cognitive Services



Use open-source SDK and tools to build, test, and publish your bot to Azure



Deploy your bot to popular channels, wherever your customers interact



Create your own branded virtual assistant using solution accelerators

#### Easily add natural language and speech to your bot

Integrate powerful AI capabilities with Azure Cognitive Services to keep pace with technological advances without machine learning experience. Improve experiences by giving your users the ability to interact with your bot using natural language and speech capabilities.

[Learn how >](#)

**Easily add natural language and speech to your bot**



Speech



Search



Language Understanding



QnA Maker



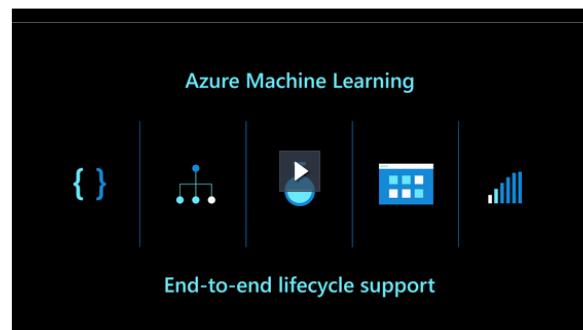
Vision

Reference: <https://azure.microsoft.com/en-us/services/bot-services/>

**2) Azure Machine Learning** - Enterprise-grade machine learning service for building and deploying models faster.

## Accelerate the end-to-end machine learning life cycle

Empower data scientists and developers with a wide range of productive experiences to build, train and deploy machine learning models and foster team collaboration. Accelerate time to market with industry-leading MLOps – DevOps for machine learning. Innovate on a secure, trusted platform, designed for responsible machine learning.



### Machine Learning for all skill levels

Productivity for all skill levels, with Jupyter notebooks, drag-and-drop [designer](#) and [automated machine learning](#).



### End-to-end MLOps

Robust [MLOps](#) capabilities that enable creation and deployments of models at scale using automated and reproducible machine learning workflows.



### Responsible machine learning innovation

Rich set of built-in responsible capabilities to understand, protect and control data, models and processes.



### Open and interoperable

Best-in-class support for open-source frameworks and languages including MLflow, Kubeflow, ONNX, PyTorch, TensorFlow, Python and R.

Reference: <https://azure.microsoft.com/en-ca/services/machine-learning/>

**3) Azure Functions** - Azure Functions is a cloud service available on-demand that provides all the continually-updated infrastructure and resources needed to run your applications. You focus on the pieces of code that matter most to you, and Functions handles the rest. Functions provides **serverless compute** for Azure. You can use Functions to build web APIs, respond to database changes, process IoT streams, manage message queues, and more.

Reference: <https://docs.microsoft.com/en-us/azure/azure-functions/>

**4) Azure IoT Hub** - A managed service for bidirectional communication between IoT devices and Azure.



Security-enhanced communication channel for sending and receiving data from IoT devices



[Device Update for IoT Hub](#) enables over-the-air deployment of updates to keep IoT devices up to date and secure



Full integration with Azure Event Grid and serverless compute, simplifying IoT application development



Compatibility with Azure IoT Edge and Azure Stack for building hybrid IoT apps

### Establish bidirectional communication with billions of IoT devices

Use device-to-cloud telemetry data to understand the state of your devices and define message routes to other Azure services – without writing any code. In cloud-to-device messages, reliably send commands and notifications to your connected devices – and track message delivery with acknowledgement receipts.

Automatically resend device messages as needed to accommodate intermittent connectivity.



**Reference:** <https://azure.microsoft.com/en-ca/services/iot-hub/>

Question 20:

**Skipped**

You plan to map a network drive from several computers that run Windows 10 to Azure Storage. You need to create a storage solution in Azure for the planned mapped drive.

**What should you create?**

- An Azure Disk Storage
- A files service in a storage account  
**(Correct)**
- A blob service in a storage account
- An Azure Data Lake

**Explanation**

[Azure Files](#) is Microsoft's easy-to-use cloud file system. Azure file shares can be seamlessly used in Windows and Windows Server.

## Use an Azure file share with Windows

06/07/2018 • 11 minutes to read • +10

[Azure Files](#) is Microsoft's easy-to-use cloud file system. Azure file shares can be seamlessly used in Windows and Windows Server. This article discusses the considerations for using an Azure file share with Windows and Windows Server.

In order to use an Azure file share outside of the Azure region it is hosted in, such as on-premises or in a different Azure region, the OS must support SMB 3.0.

You can use Azure file shares on a Windows installation that is running either in an Azure VM or on-premises. The following table illustrates which OS versions support accessing file shares in which environment:

Reference : <https://docs.microsoft.com/en-us/azure/storage/files/storage-how-to-use-files-windows>

---

Question 21:

**Skipped**

Your company plans to automate the deployment of servers to Azure.

Your manager is concerned that you may expose administrative credentials during the deployment.

You need to recommend an Azure solution that encrypts the administrative credentials during the deployment.

What should you include in the recommendation?

- Azure Security Center
- Azure Key Vault  
**(Correct)**
- Azure Information Protection
- Azure Multi-Factor Authentication (MFA)

**Explanation**

We can use Azure Key Vault to encrypt keys and small secrets like passwords that use keys stored in hardware security modules (HSMs).

It is the go-to solution to safeguard cryptographic keys and other secrets used by cloud apps and services

Reference: <https://azure.microsoft.com/en-us/services/key-vault/>

---

Question 22:

**Skipped**

Azure Germany can be used by **legal residents of Germany only**.

Instructions: Review the bolded text. If the statement is already correct, select "No change is needed". If the statement is incorrect, select the answer choice that makes the statement correct.

- **No change is needed**
- Any user or enterprise that requires its data to reside in Germany  
**(Correct)**
- Only enterprises that are registered in Germany
- Only enterprises that purchase their azure licenses from a partner based in Germany

**Explanation**

Azure Germany is available to eligible customers and partners globally who intend to do business in the EU/EFTA, including the United Kingdom.

Reference: <https://docs.microsoft.com/en-us/azure/germany/germany-welcome>

---

Question 23:

**Skipped**

For the following statement, select Yes if the statement is true. Otherwise, select No.

**Identities stored in Azure Active Directory (AD) , third party cloud services, and on premises Active Directory can be used to access Azure resources.**

- No
  - Yes
- (Correct)**

**Explanation**

All the options mentioned above can provide authorization, hence the answer is yes!

---

Question 24:

**Skipped**

**For the following statement, select Yes if the statement is true. Otherwise, select**

**No.**

**Deploying your own datacenter is an example of Capex.**

- Yes
- (Correct)
- No

**Explanation**

Deploying your own datacenter is definitely an example of CapEx. This is because you need to purchase all the infrastructure upfront before you can use it.

**References:** <https://docs.microsoft.com/en-us/azure/architecture/cloud-adoption/appendix/azure-scaffold>

---

Question 25:

**Skipped**

**To complete the sentence, select the appropriate option below:**

**An Azure Web App that queries an on-prem Microsoft SQL Server is an example  
of**

- multi-vendor
  - private
  - hybrid
- (Correct)**
- public

**Explanation**

Since you are using both Azure, as well as on-prem resources ( A combination of both ) -> This is an example of a hybrid cloud!

### The benefits of a hybrid cloud platform

A hybrid cloud platform gives organisations many advantages such as greater flexibility, more deployment options, security, compliance and getting more value from their existing infrastructure. When computing and processing demand fluctuates, hybrid cloud computing gives businesses the ability to seamlessly scale up their on-premises infrastructure to the public cloud to handle any overflow – without giving third-party data centres access to the entirety of their data. Organisations gain the flexibility and innovation that the public cloud provides by running certain workloads in the cloud while keeping highly sensitive data in their own data centre to meet client needs or regulatory requirements.

This not only allows companies to scale computing resources, it also eliminates the need to make massive capital expenditures to handle short-term spikes in demand, as well as when the business needs to free up local resources for more sensitive data or applications. Companies will only pay for the resources they temporarily use instead of having to purchase, program and maintain additional resources and equipment that could remain idle over long periods of time.

[Read more about hybrid cloud capabilities and getting started with Azure >](#)

Advantages of the hybrid cloud:

- **Control** – your organisation can maintain a private infrastructure for sensitive assets or workloads that require low latency.
- **Flexibility** – you can take advantage of additional resources in the public cloud when you need them.
- **Cost-effectiveness** – with the ability to scale to the public cloud, you pay for extra computing power only when needed.
- **Ease** – transitioning to the cloud doesn't have to be overwhelming because you can migrate gradually – phasing in workloads over time.

Reference: <https://azure.microsoft.com/en-in/overview/what-is-hybrid-cloud-computing/>

Question 26:

**Skipped**

**For the following statement, select Yes if the statement is true. Otherwise, select No.**

**Azure Reserved VM instances are an example of Opex**

- **No**  
**(Correct)**
- **Yes**

**Explanation**

A reserved instance is where you pay upfront for the use of a virtual machine for a period of time (1 or 3 years). This can save you money as you receive a discount on the cost of a VM if you pay upfront for a reserved instance.

However, as this is an upfront payment, it will be classed as **CapEx**, not OpEx.

**Simple way to remember : Upfront payment = Capex, Pay as you go = Opex!**

Question 27:

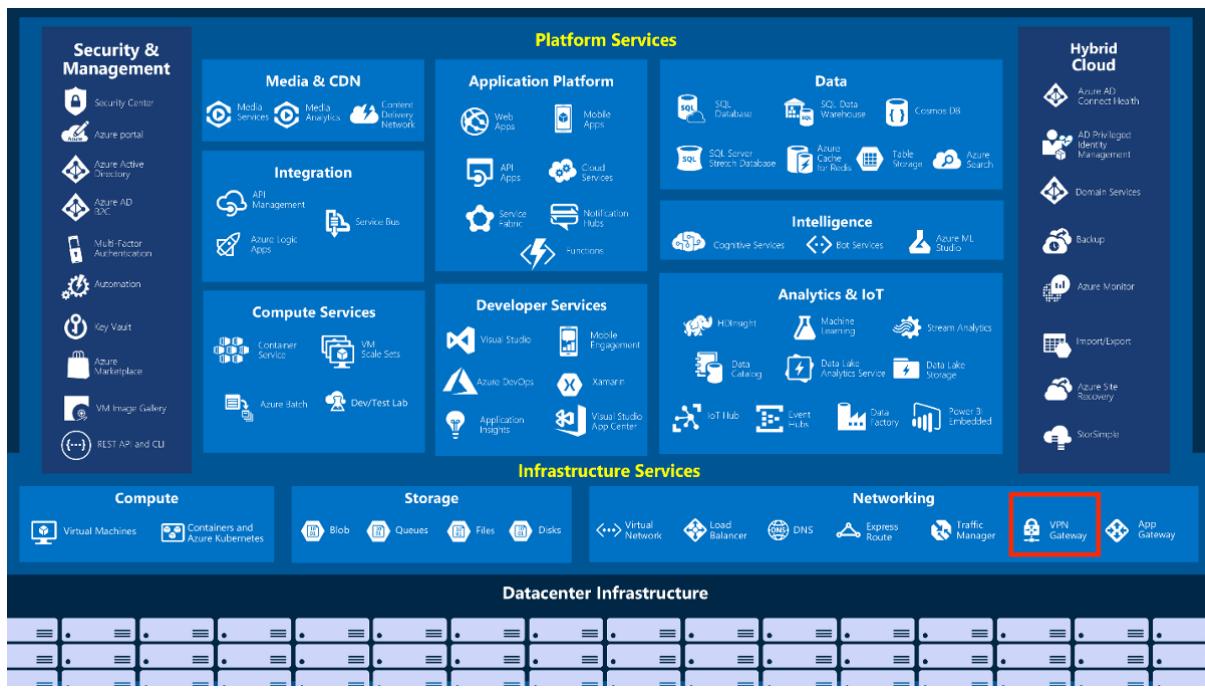
**Skipped**

**Azure VPN Gateway is which of the following?**

- **Platform as a Service (PaaS)**
- **Software as a Service ( SaaS )**
- **Network as a Service ( NaaS )**
- **Infrastructure as a Service (IaaS)**  
**(Correct)**

**Explanation**

According to the official documentation :



Reference: <https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-about-vpngateways>

Question 28:

**Skipped**

Your company has the following requirements :

- 1) Create thousands of identical virtual machines in minutes
- 2) Deploy across availability zones to protect against datacenter failures

**Which of the following presents the most suitable solution?**

- Azure Virtual Machine Scale Sets  
**(Correct)**
- Azure Container Instance
- Azure Virtual Machines
- Azure Kubernetes

**Explanation**

**According to the official website :**

Azure Virtual Machine Scale Sets is Automated virtual machine scaling that helps you cost-effectively simplify the deployment, management, and availability of your applications.

- ✓ Create thousands of identical virtual machines in minutes
- ✓ Rely on integrated load balancing and autoscaling
- ✓ Deploy virtual machines and updates at scale
- ✓ Run Cassandra, Cloudera, Hadoop, MongoDB, and Mesos
- ✓ Quickly scale your big compute and big data applications
- ✓ Attach additional data disks as per your application requirement
- ✓ Support Linux or Windows images and extensions
- ✓ Deploy across availability zones to protect against datacenter failures

Reference : <https://azure.microsoft.com/en-us/services/virtual-machine-scale-sets/>

---

Question 29:

**Skipped**

For the following statement, select Yes if the statement is True, otherwise select No.

All the Azure resources deployed to a single resource group must share the same Azure Region

- Yes
  - No
- (Correct)**

**Explanation**

Azure resources deployed to a single resource group can be located in different regions. **The resource group only contains metadata about the resources it contains.**

When creating a resource group, you need to provide a location for that resource group. You may be wondering, "Why does a resource group need a location?"

And, if the resources can have different locations than the resource group, why does the resource group location matter at all?"

The resource group stores metadata about the resources. When you specify a location for the resource group, you're specifying where that metadata is stored. For compliance reasons, you may need to ensure that your data is stored in a particular region.

---

Question 30:

**Skipped**

**Resource groups** provide organizations with the ability to manage the compliance of Azure resources across multiple subscriptions.

**Instructions: Review the bolded text. If the statement is already correct, select "No change is needed". If the statement is incorrect, select the answer choice that makes the statement correct.**

- No change is needed
  - Azure Policies
- (Correct)**
- Resource Groups
  - Azure App Service plans

**Explanation**

Azure Policy is a service in Azure that you use to create, assign, and manage policies. These policies enforce different rules and effects over your resources, so those resources stay compliant with your corporate standards and service level agreements. Azure Policy meets this need by evaluating your resources for non-compliance with assigned policies. For example, you can have a policy to allow only a certain SKU size of virtual machines in your environment. Once this policy is implemented, new and existing resources are evaluated for compliance. With the right type of policy, existing resources can be brought into compliance.

Reference: <https://docs.microsoft.com/en-us/azure/governance/policy/tutorials/create-and-manage>

---

Question 31:

**Skipped**

**For the following statement, select Yes if the statement is true. Otherwise, select**

**No.**

**Azure Pay-as-you-go pricing is an example of Capex**

- No  
**(Correct)**
- Yes

**Explanation**

One of the major changes that you will face when you move from on-premises cloud to the public cloud is the switch from **capital** expenditure (buying hardware) to **operational** expenditure (paying for service as you use it).

**Reference:** <https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/strategy/business-outcomes/fiscal-outcomes>

---

Question 32:

**Skipped**

**For the following statement, Select yes if the statement is true, otherwise select**

**No.**

**Each subscription can be managed by using a Microsoft account only.**

- No  
**(Correct)**
- Yes

**Explanation**

You don't actually need a Microsoft account to manage subscriptions.

You instead need an Azure Active Directory account to manage a subscription, not a Microsoft account. An account is created in the Azure Active Directory when you create the subscription. Further accounts can be created in the Azure Active Directory to manage the subscription.

An Azure subscription has a trust relationship with Azure Active Directory (Azure AD). A subscription trusts Azure AD to authenticate users, services, and devices.

Multiple subscriptions can trust the same Azure AD directory. Each subscription can only trust a single directory.

One or more Azure subscriptions can establish a trust relationship with an instance of Azure Active Directory (Azure AD) in order to authenticate and authorize security principals and devices against Azure services. When a subscription expires, the trusted instance of the Azure AD service remains, but the security principals lose access to Azure resources.

When a user signs up for a Microsoft cloud service, a new Azure AD tenant is created and the user is made a member of the Global Administrator role. However, when an owner of a subscription joins their subscription to an existing tenant, the owner isn't assigned to the Global Administrator role.

**Reference:** <https://docs.microsoft.com/en-us/azure/active-directory/fundamentals/active-directory-how-subscriptions-associated-directory>

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Question 33:

**Skipped**

Your Azure environment contains multiple Azure virtual machines.

You need to ensure that a virtual machine named VM1 is accessible from the Internet over HTTP.

Solution: You modify an Azure Traffic Manager profile.

**Does this meet the goal?**

- No  
**(Correct)**
- Yes

**Explanation**

The answer is NO because Traffic Manager is used to distribute traffic at DNS level across different regions. Our requirement is not satisfied.

You can filter network traffic to and from Azure resources in an Azure virtual network with a network security group. A network security group contains security rules that allow or deny inbound network traffic to, or outbound network traffic from, several types of Azure resources.

**Reference:** <https://azure.microsoft.com/nl-nl/resources/videos/how-azure-traffic-manager-works/>

Question 34:

**Skipped**

**Which of the following is an example of an Azure application platform?**

- Azure Cache for Redis
- Azure Table Storage
- Azure Load Balancer
- Azure App service  
**(Correct)**

**Explanation**

**Azure App Service** is an HTTP-based service for hosting web applications, REST APIs, and mobile back ends. You can develop in your favorite language, be it .NET, .NET Core, Java, Ruby, Node.js, PHP, or Python. Applications run and scale with ease on both Windows and Linux-based environments. For Linux-based environments, see [App Service on Linux](#).



Mobile Apps



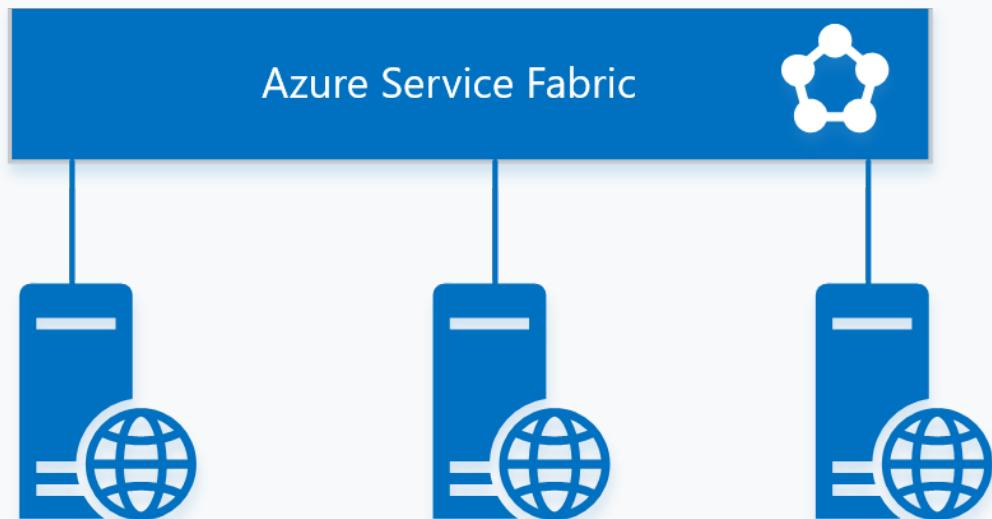
API Apps



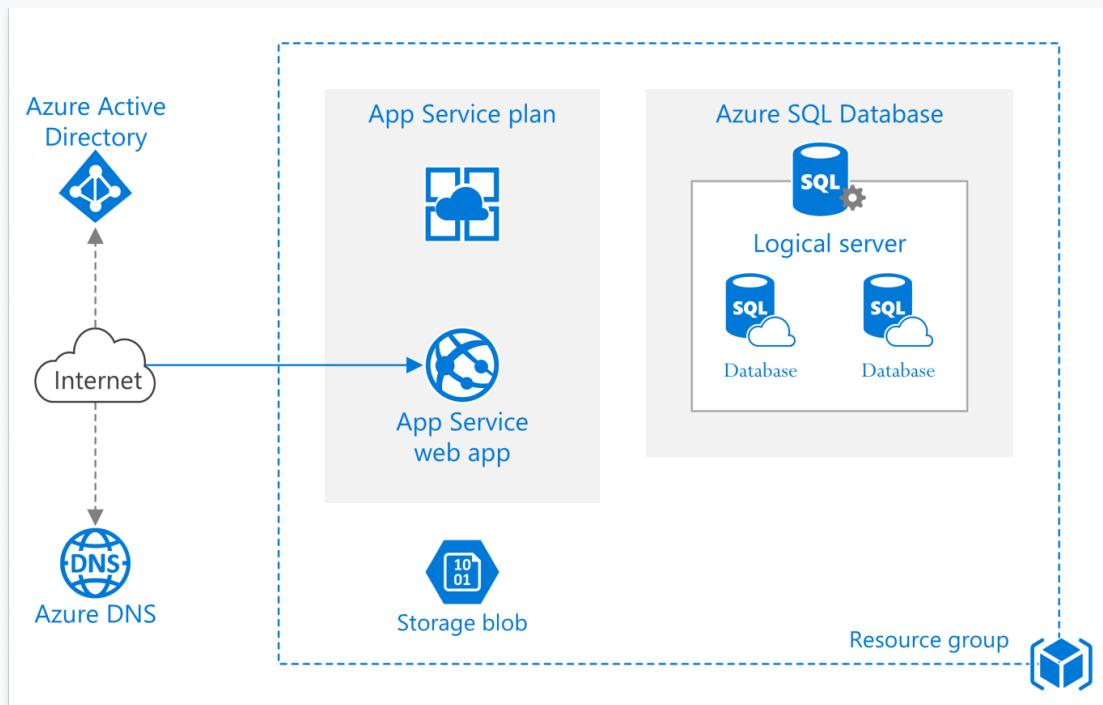
Web Apps



Function Apps



Using Azure App Service, it is also possible to scale apps on an enterprise grade platform:



Reference : <https://docs.microsoft.com/en-us/azure/app-service/overview>

Question 35:

**Skipped**

**Which two types of customers are eligible to use Azure Government to develop a cloud solution?**

**Each correct answer presents a complete solution.**

**NOTE: Each correct selection is worth one point.**

- A European government entity
- A United States government entity  
**(Correct)**
- A United States government contractor  
**(Correct)**
- A European government contractor
- A Canadian government contractor

**Explanation**

Azure Government is the mission-critical cloud, delivering breakthrough innovation to US government customers and their partners. Only US federal, state, local and tribal governments and their partners have access to this dedicated instance, operated by screened US citizens. Azure Government offers the broadest level of certifications of any cloud provider to simplify even the most critical government compliance requirements.

**Reference:** <https://docs.microsoft.com/en-us/azure/azure-government/documentation-government-welcome>

---

Question 36:

**Skipped**

**For the following statement, select Yes if the statement is true. Otherwise, select**

**No.**

**Each Azure subscription can contain multiple account administrators.**

- No  
**(Correct)**
- Yes

**Explanation**

It is possible to assign multiple administrators to a particular subscription, however there is **ONLY 1 account administrator**.

To manage access to Azure resources, you must have the **appropriate administrator role**. Azure has an authorization system called [Azure role-based access control \(Azure RBAC\)](#) with several built-in roles you can choose from. You can assign these roles at different scopes, such as management group, subscription, or resource group. **By default, the person who creates a new Azure subscription can assign other users administrative access to a subscription (account Admin).**

## To assign a user as an administrator

1. Sign in to the Azure portal as the subscription owner and open [Subscriptions](#).
2. Click the subscription where you want to grant access.
3. Click **Access control (IAM)**.
4. Click the **Role assignments** tab to view all the role assignments for this subscription.

The screenshot shows the Microsoft Azure portal interface. On the left, there's a navigation sidebar with various service icons like Home, Dashboard, All services, and Subscriptions. The 'Subscriptions' icon is highlighted with a red box. The main content area shows the 'Pay-As-You-Go - Access control (IAM)' page for a specific subscription. At the top, there are tabs for Overview, Activity log, and Access control (IAM), with 'Access control (IAM)' being the active tab and highlighted with a red box. Below the tabs, there's a search bar and filters for Name, Type, Role, and Scope. A table displays three items under the 'OWNER' category:

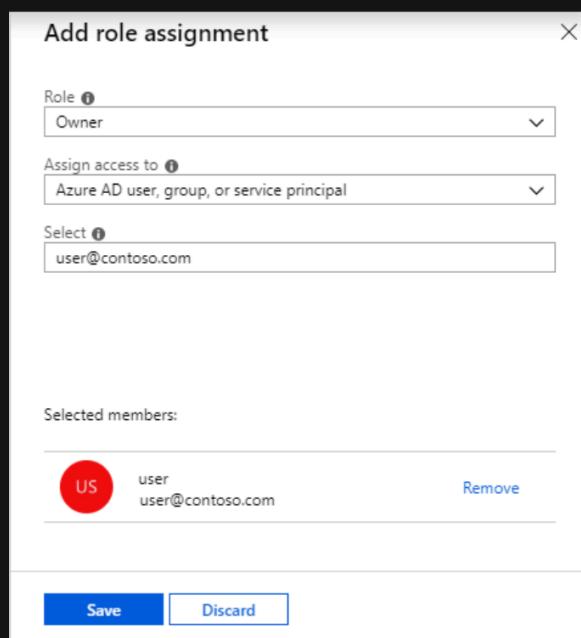
Name	Type	Role
user01 (Guest) user01@contoso.com	User	Azure Service Bus Data Sender
admin01 admin@contoso.com	User	Owner
user01 (Guest) user01@contoso.com	User	Reader

5. Click Add > Add role assignment to open the Add role assignment pane.

If you don't have permissions to assign roles, the option will be disabled.

6. In the Role drop-down list, select the Owner role.

7. In the Select list, select a user. If you don't see the user in the list, you can type in the Select box to search the directory for display names and email addresses.



8. Click Save to assign the role.

**Reference:** <https://docs.microsoft.com/en-us/azure/cost-management-billing/manage/add-change-subscription-administrator>

**Question 37:**

**Skipped**

For the following statement, Select yes if the statement is true, otherwise select

No.

An Azure Resource group contains multiple subscriptions.

- No  
**(Correct)**
- Yes

**Explanation**

This is not true, but the opposite of this is true, i.e - An Azure subscription can contain multiple resource groups.

**Reference:** <https://docs.microsoft.com/en-us/microsoft-365/enterprise/subscriptions-licenses-accounts-and-tenants-for-microsoft-cloud-offerings?view=o365-worldwide>

Question 38:

**Skipped**

You plan to deploy 20 virtual machines to an Azure environment. To ensure that a virtual machine named VM1 cannot connect to the other virtual machines, VM1 must **be deployed to a separate virtual network**.

**Instructions: Review the bolded text. If the statement is already correct, select "No change is needed". If the statement is incorrect, select the answer choice that makes the statement correct.**

- have two network interfaces
- No change is needed  
**(Correct)**
- run a different operating system than the other virtual machines
- be deployed to a separate resource group

**Explanation**

The given statement is perfectly fine and so A is correct. It explains network segmentation.

**Azure Virtual Network (VNet)** is the fundamental building block for your private network in Azure. VNet enables many types of Azure resources, such as Azure Virtual Machines (VM), to securely communicate with each other, the internet, and on-premises networks. VNet is similar to a traditional network that you'd operate in your own data center, but brings with it additional benefits of Azure's infrastructure such as scale, availability, and isolation.

### Why use an Azure Virtual network?

Azure virtual network enables Azure resources to securely communicate with each other, the internet, and on-premises networks. Key scenarios that you can accomplish with a virtual network include - communication of Azure resources with the internet, communication between Azure resources, communication with on-premises resources, filtering network traffic, routing network traffic, and integration with Azure services.

**Reference:** <https://docs.microsoft.com/en-us/azure/virtual-network/virtual-networks-overview>

Question 39:

**Skipped**

**Which of the following solutions is the BEST to store web app user data, device information and metadata?**

- Azure Cache for Redis
- Azure SQL Database
- Azure Cosmos DB
- Azure Table Storage  
**(Correct)**

**Explanation**

According to the official website :



## Supports flexible data schema

Table storage is excellent for flexible datasets—web app user data, address books, device information, and other metadata—and lets you build cloud applications without locking down the data model to particular schemas. Because different rows in the same table can have a different structure—for example, order information in one row, and customer information in another—you can evolve your application and table schema without taking it offline.

Reference : <https://azure.microsoft.com/en-us/services/storage/tables/#overview>

---

Question 40:

Skipped

Which of the following is :

- 1) An evolved version of Azure SQL Data Warehouse
- 2) A limitless analytics service that brings together enterprise data warehousing and Big Data analytics and gives you the freedom to query data on your terms, using either serverless or provisioned resources.

- Azure Synapse Analytics  
**(Correct)**
- Azure Database for MariaDB
- Azure SQL Data Warehouse
- Azure Cosmos DB

Explanation

From the official website :

Azure Synapse is an evolved version of Azure SQL Data Warehouse!

## Azure Synapse is Azure SQL Data Warehouse evolved

Azure Synapse is a limitless analytics service that brings together enterprise data warehousing and Big Data analytics. It gives you the freedom to query data on your terms, using either serverless or provisioned resources—at scale. Azure Synapse brings these two worlds together with a unified experience to ingest, prepare, manage, and serve data for immediate BI and machine learning needs.

Reference : <https://azure.microsoft.com/en-us/services/synapse-analytics/>

Question 41:

Skipped

An Azure service is said to be available to all Azure customers when it is in \_\_\_\_\_.

- fixed preview
- private preview
- general availability
- public preview  
**(Correct)**

Explanation

Public preview means that the service is available to everyone with an Azure subscription but the normal SLAs don't apply. This is different from general availability when the service is available to all Azure customers with SLA backed guarantees!

Example -

#### Azure Active Directory preview programs

Azure Active Directory provides updates and new features in the form of preview programs. Microsoft rolls out previews in phases to give Microsoft and customers the opportunity to evaluate and understand the new feature before it becomes part of the standard service of Azure AD. The phases are as follows:

1. **Private preview** – During this phase we invite a few customers to take part in early access to new concepts and features. This phase does not include formal support.
2. **Public preview** – During this phase we allow any customer with the proper Azure AD license to evaluate the new feature. Microsoft Customer Support Services will supply support services during this phase, but normal service level agreements do not apply. For new features exposed in the Azure AD Portal, customer can expect to see information banners in the user interface that draw attention to the new experience available during the preview. By clicking on the information banner customers then opt-in to the preview experience.
3. **Generally available (GA)** – After the public preview is completed, the feature is open for any licensed customer to use and is supported via all Microsoft support channels. Be aware when a new feature impacts existing functionality, it might change the way you or your users use the functionality.

Every Azure Active Directory preview program has different opt-in requirements and dependencies.

**Reference:** <https://azure.microsoft.com/en-ca/support/legal/preview-supplemental-terms/>

Question 42:

**Skipped**

**Which of the following is NOT a compute option available in Azure?**

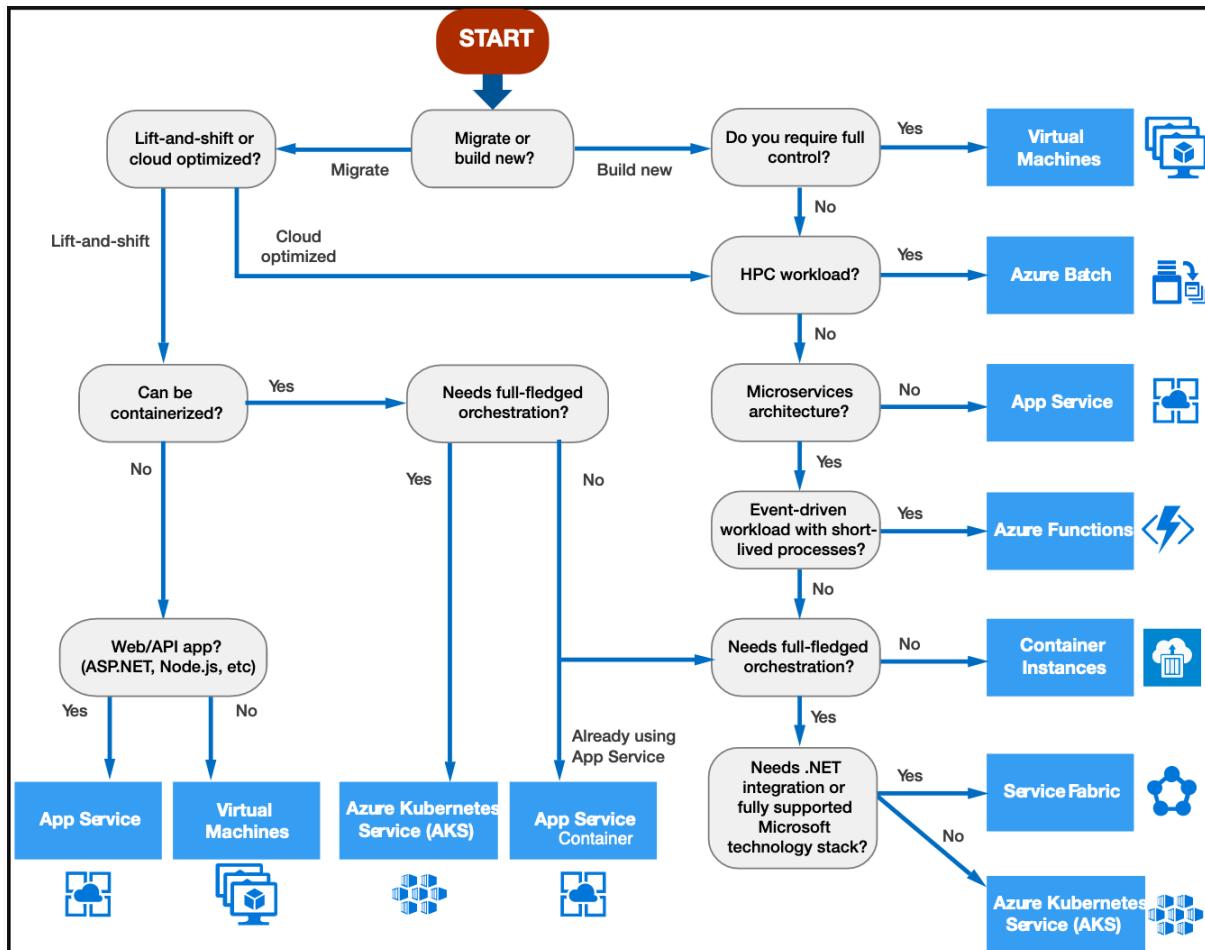
- Azure App Service
- Azure Kubernetes
- Azure Functions
- **Azure CosmosDB**

**(Correct)**

**Explanation**

CosmosDB is a **Database** and not a compute option in Azure.

Azure offers a number of ways to host your application code. The term **compute** refers to the hosting model for the computing resources that your application runs on. The following flowchart will help you to choose a compute service for your application.  
If your application consists of multiple workloads, evaluate each workload separately. A complete solution may incorporate two or more compute services.



Reference: <https://docs.microsoft.com/en-us/azure/architecture/guide/technology-choices/compute-decision-tree>

Question 43:

**Skipped**

For the following statement, select Yes if the statement is True, otherwise select No.

In Azure Active Directory Premium, at least 99% availability is guaranteed

- Yes  
**(Correct)**
- No

**Explanation**

Yes, this is true.

# SLA for Azure Active Directory

Last updated: June 2015

We guarantee at least 99.9% availability of the Azure Active Directory Basic and Premium services. The services are considered available in the following scenarios:

- Users are able to login to the service, login to the Access Panel, access applications on the Access Panel and reset passwords.
- IT administrators are able to create, read, write and delete entries in the directory or provision or de-provision users to applications in the directory.

No SLA is provided for the Free tier of Azure Active Directory.

Please note as shown above that Azure Active Directory's Free tier has no associated SLA!

Reference: [https://azure.microsoft.com/en-us/support/legal/sla/active-directory/v1\\_0/](https://azure.microsoft.com/en-us/support/legal/sla/active-directory/v1_0/)

Question 44:

Skipped

You plan to deploy Azure security services using MFA (Multi Factor Authentication) in your cloud deployment.

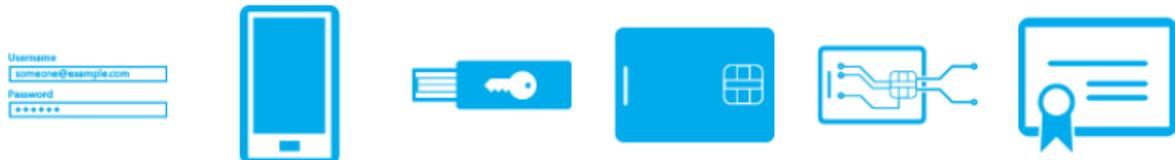
How does MFA enhance security in Azure?

- It requires password complexity
- It uses two passwords
- It requires a password and a code through the Microsoft Authenticator App (Correct)
- It requires a smart card and a password

Explanation

Multi-factor authentication is a process where a user is prompted during the sign-in process for an additional form of identification, such as to enter a code on their cellphone or to provide a fingerprint scan.

If you only use a password to authenticate a user, it leaves an insecure vector for attack. If the password is weak or has been exposed elsewhere, is it really the user signing in with the username and password, or is it an attacker? When you require a second form of authentication, security is increased as this additional factor isn't something that's easy for an attacker to obtain or duplicate.



Azure AD Multi-Factor Authentication works by requiring **two or more of the following authentication methods:**

- 1) Something you know, typically a password.
- 2) Something you have, such as a trusted device that is not easily duplicated, like a phone or hardware key.
- 3) Something you are - biometrics like a fingerprint or face scan.

Users can register themselves for both self-service password reset and Azure AD Multi-Factor Authentication in one step to simplify the on-boarding experience. Administrators can define what forms of secondary authentication can be used. Azure AD Multi-Factor Authentication can also be required when users perform a self-service password reset to further secure that process.

**Reference:** <https://docs.microsoft.com/en-us/azure/active-directory/authentication/concept-mfa-howitworks>

Question 45:

**Skipped**

You are the Cloud Solutions Architect for a large organization. In recent months, your cloud traffic has significantly increased and you would like to request an increase in the subscription quota limit for your organization.

**Which option should you choose from the Azure portal menu?**

- Accessibility
- Azure Active Directory
- Help + support  
**(Correct)**
- Azure Policy

**Explanation**

You can simply navigate to the Help+Support option from the Azure portal. See below steps from the official documentation:

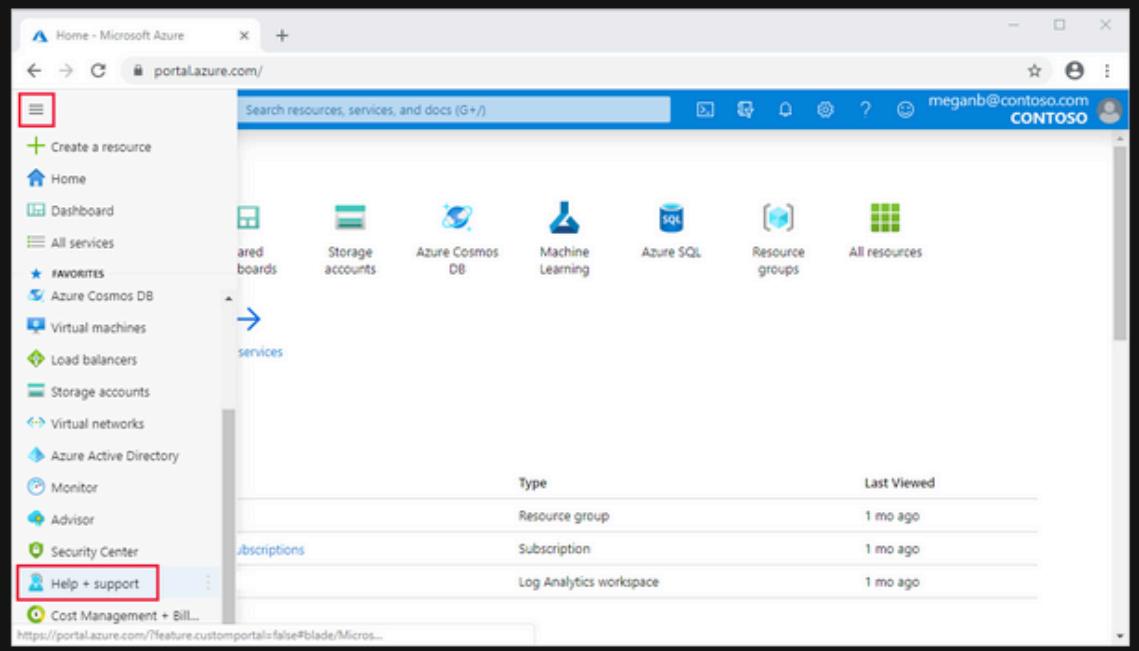
## Request a standard quota increase from Help + support

To request a standard vCPU quota increase per VM series from Help + support:

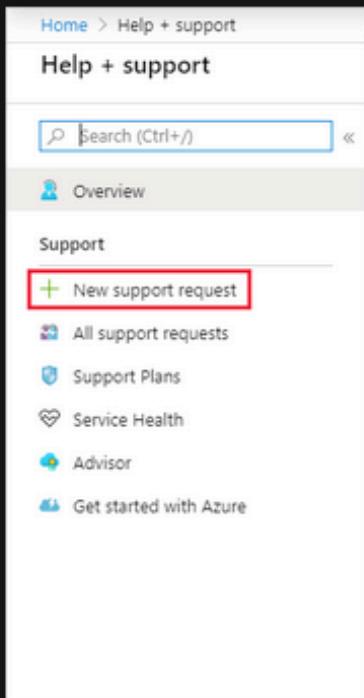
**Note**

You can also request a quota limit increase for multiple regions through a single support case. For details, see step 8.

1. On the Azure portal  menu, select Help + support.



2. In Help + support, select New support request.



3. For Issue type, select Service and subscription limits (quotas).

A screenshot of the 'Basics' tab of the support request creation form. At the top are tabs for 'Basics', 'Solutions', 'Details', and 'Review + create'. Below the tabs is a descriptive text: 'Create a new support request to get assistance with billing, subscription, technical (including advisory) or quota management issues. Complete the Basics tab by selecting the options that best describe your problem. Providing detailed, accurate information can help to solve your issues faster.' A required field 'Issue type' is followed by a dropdown menu titled 'Select an issue type'. The menu includes 'Billing', 'Service and subscription limits (quotas)' (which has a red rectangular box around it), 'Subscription management', and 'Technical'. At the bottom of the form is a 'Next: Solutions &gt;&gt;' button.

Reference: <https://docs.microsoft.com/en-us/azure/azure-portal/supportability/per-vm-quota-requests>

Question 46:

Skipped

Which of the following is an event driven, compute-on-demand service , with capabilities to implement code triggered by events occurring in Azure or third party service as well as on-premises systems?

- **Azure Functions**  
**(Correct)**
- **Azure Policies**
- **Azure Machine Learning Studio**
- **Azure CosmosDB**

#### Explanation

**Azure Functions** is an event driven, compute-on-demand experience that extends the existing Azure application platform with capabilities to implement code triggered by events occurring in Azure or third party service as well as on-premises systems.

Azure Functions allows developers to take action by connecting to data sources or messaging solutions thus making it easy to process and react to events. Developers can leverage Azure Functions to build HTTP-based API endpoints accessible by a wide range of applications, mobile and IoT devices. Azure Functions is scale-based and on-demand, so you pay only for the resources you consume.

The screenshot shows the Azure Functions developer portal interface. At the top, there are three tabs: 'Develop', 'Integrate', and 'Monitor'. The 'Develop' tab is active. Below the tabs, there are two sections: 'Code' and 'Logs'.

**Code:**

```

1  #r "Microsoft.WindowsAzure.Storage"
2  #r "System.Runtime"
3  #r "System.Threading.Tasks"
4  #r "System.IO"
5
6  using System;
7  using System.Threading.Tasks;
8  using Microsoft.WindowsAzure.Storage.Blob;
9  using Microsoft.ProjectOxford.Vision;
10
11 public static async Task Run(ICloudBlob myBlob, TraceWriter log, IAsyncCollector<object> document)
12 {
13     var visionClient = new VisionServiceClient("e6dcf6fa3e4942ac81042bfd1d8af235");
14
15     var result = await visionClient.RecognizeTextAsync(myBlob.Uri.ToString(), "en");
16
17     var words = from r in result.Regions
18                 from l in r.Lines
19                 from w in l.Words
20                 select w.Text.

```

**Logs:**

```

2016-03-29T16:53:18 Welcome, you are now connected to log-streaming service.
2016-03-29T16:54:18 No new trace in the past 1 min(s).
2016-03-29T16:54:23.661 Function started (Id=821a788a-7c72-4348-87f5-e70738fb1fc5)
2016-03-29T16:54:23.786 Function started (Id=8423dc01-533d-43d8-a61e-3babe3d85660)
2016-03-29T16:54:23.879 Function started (Id=f2262b30-b1e6-4c87-8be3-a735898ab602)
2016-03-29T16:54:24.696 Recognized words: Elia Mashkoliski
2016-03-29T16:54:24.712 Recognized words: Menu p Home Current Statement Posted Transactions DATE v MAR 3 Doing business as: Statements & Activity AMERICAN
2016-03-29T16:54:24.884 Function completed (Success, Id=821a788a-7c72-4348-87f5-e70738fb1fc5)
2016-03-29T16:54:25.102 Function completed (Success, Id=8423dc01-533d-43d8-a61e-3babe3d85660)
2016-03-29T16:54:27.002 Recognized words: Microsoft Completion eLesson: Unconscious Bias Closing Remarks/Completion I Completion Contents CREDIT RECEIVED !
2016-03-29T16:54:27.216 Function completed (Success, Id=f2262b30-b1e6-4c87-8be3-a735898ab602)

```

**Reference:** <https://azure.microsoft.com/en-in/blog/introducing-azure-functions/>

#### Question 47:

**Skipped**

Your company plans to deploy an Artificial Intelligence (AI) solution in Azure.

**What should the company use to build, test, and deploy predictive analytics solutions?**

- **Azure Machine Learning Studio**  
**(Correct)**
- **Azure Logic Apps**
- **Azure Batch**
- **Azure CosmosDB**

#### Explanation

Microsoft Azure Machine Learning Studio is a collaborative, drag-and-drop tool you can use to build, test, and deploy predictive analytics solutions on your data. Azure Machine Learning Studio (classic) publishes models as web services that can easily be consumed by custom apps or BI tools such as Excel.

Machine Learning Studio is where data science, predictive analytics, cloud resources, and your data meet.

**References:** <https://docs.microsoft.com/en-us/azure/machine-learning/studio/what-is-ml-studio>

Question 48:

**Skipped**

**A company is planning to use multiple Azure SQL Databases. Which of the following will help them to reduce costs if the databases have unpredictable usage demands?**

- Scale Sets
- Azure Policies
- Elastic Pools  
**(Correct)**
- Azure Blueprints

**Explanation**

Just like Azure VM Scale Sets are best friends with Azure VMs, for Azure SQL Databases, we have Azure SQL Database elastic pools . These are a simple, cost-effective solution for managing and scaling multiple databases that have varying and unpredictable usage demands. The databases in an elastic pool are on a single server and share a set number of resources at a set price.

Elastic pools in Azure SQL Database enable SaaS developers to optimize the price performance for a group of databases within a prescribed budget while delivering performance elasticity for each database.

**Reference:** <https://docs.microsoft.com/en-us/azure/azure-sql/database/elastic-pool-overview>

Question 49:

**Skipped**

For the following statement, select yes if the statement is True, otherwise select no.

**Azure Sphere is a Comprehensive IoT security solution – including hardware, OS and cloud components for IoT device security.**

- No
- Yes  
**(Correct)**

**Explanation**

Yes! Azure Sphere is a comprehensive IoT security solution – including hardware (crossover microcontroller), OS and cloud components for IoT device security – to actively protect your devices, your business and your customers.

## Unlock the value of IoT with confidence in your device security

With billions of new devices connected each year, it's more important than ever to secure yours. Help protect your data, privacy, physical safety and infrastructure with Azure Sphere. It has been built on decades of Microsoft experience in hardware, software and cloud services to provide a turnkey security solution for IoT devices.



Defence in depth provides multiple layers of protection to help guard devices against and respond to threats.



Deployment flexibility helps you secure existing equipment and build protection into new IoT investments.



Over-the-air (OTA) updates make it easy to add new features and improve performance throughout device lifecycles.



Error when reporting and automatic security updates help you stay ahead of new and evolving threats.

## Protect your IoT devices and equipment with in-depth defence

- ✓ Azure Sphere-certified chips from hardware partners include built-in Microsoft security technology to provide connectivity and a dependable hardware root of trust.
- ✓ Azure Sphere OS adds layers of protection and ongoing security updates to create a trustworthy platform for new IoT experiences.
- ✓ Azure Sphere Security Service brokers trust for device-to-cloud communication, detects threats and renews IoT device security.
- ✓ Microsoft best-in-class security experts monitor emerging threats, design updates and provide a decade of ongoing servicing.



Reference: <https://azure.microsoft.com/en-ca/services/azure-sphere/#features>

Question 50:

**Skipped**

For the following statement, select Yes if the statement is True, otherwise select No.

Two valid methods for Azure Multi-Factor Authentication (MFA) are picture identification and a passport number

- No  
**(Correct)**
- Yes

**Explanation**

Funny question, the answer is obviously no.

The following forms of verification can be used with Azure Multi-Factor Authentication:

- 1) Microsoft Authenticator app
- 2) OATH Hardware token
- 3) SMS
- 4) Voice call

Reference: <https://docs.microsoft.com/en-us/azure/active-directory/authentication/concept-mfa-howitworks>