

Question 1: **Correct**

Your company plans to migrate all its data and resources to Azure.

The company's migration plan states that only **Platform as a Service (PaaS)** solutions must be used in Azure.

You need to deploy an Azure environment that supports the planned migration.

Solution: You create an Azure App Service and Azure Virtual Machines that have Microsoft SQL Server installed.

Does this meet the goal?

- Yes
- No

(Correct)

Explanation

When deploying **SQL Server** onto an **Azure VM**, it's functionally identical to deploying SQL Server to an on-prem VM. You have all of the features and functionality available to you, **along with all of the overhead of managing it!**

In this scenario, you have guaranteed application compatibility, but you also have to **MANUALLY** manage:

- 1) The backup
- 2) Clustering
- 3) Failover
- 4) Patching

Additionally, all of the other day-to-day tasks that come with keeping the lights on in a SQL Server environment require your attention as well.

Therefore, clearly this does not meet our requirements!

References : <https://www.softchoice.com/blogs/advisor/cloud/considerations-for-deploying-sql-services-in-azure>

Question 2: **Correct**

You plan to migrate a web application to Azure. The web application is accessed by external users. You need to recommend a cloud deployment solution to minimize the amount of administrative effort used to manage the web application.

What should you include in the recommendation?

- Software as a service (SaaS)
- Platform as a service (PaaS)

(Correct)

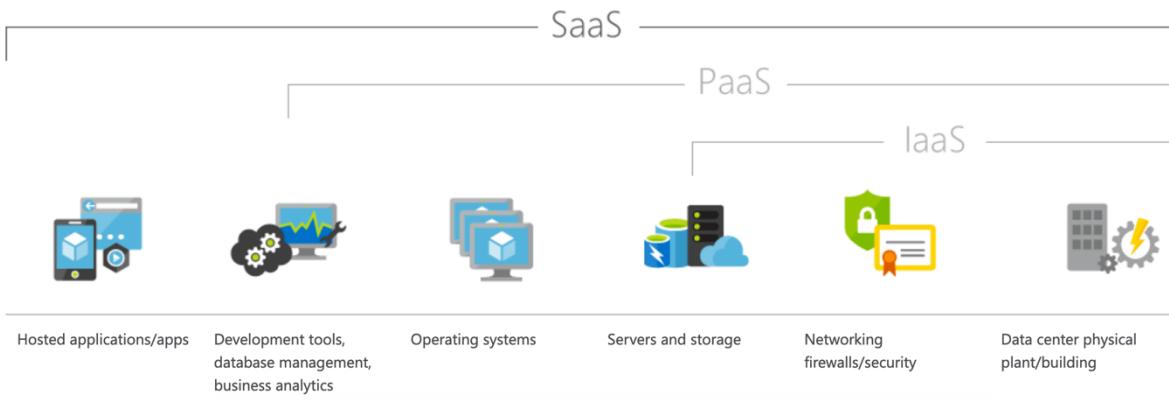
- Infrastructure as a Service (IaaS)
- Database as a Service (DaaS)

Explanation

Platform as a service (PaaS) is a complete development and deployment environment in the cloud, with resources that enable you to deliver everything from simple cloud-based apps to sophisticated, cloud-enabled enterprise applications. You purchase the resources you need from a cloud service provider on a pay-as-you-go basis and access them over a secure Internet connection.

Like IaaS, PaaS includes infrastructure—servers, storage, and networking—but also middleware, development tools, business intelligence (BI) services, database management systems, and more. PaaS is designed to support the **complete** web application lifecycle: building, testing, deploying, managing, and updating.

PaaS allows you to **avoid** the expense and complexity of buying and managing software licenses, the underlying application infrastructure and middleware, container orchestrators such as Kubernetes, or the development tools and other resources. You manage the applications and services you develop, and the cloud service provider typically manages everything else.



Since we need to reduce the overhead effort of managing everything, and create our own solution, PaaS is the best option!

References : <https://azure.microsoft.com/en-us/overview/what-is-paas/>

Question 3: **Incorrect**

You plan to migrate several servers from an on-premise network to Azure.

You need to identify the primary benefit of using a public cloud service for the servers.

What should you identify?

- The public cloud is a crowd-sourcing solution that provides corporations with the ability to enhance the cloud
- The public cloud is owned by the public, NOT a private corporation
(Incorrect)
- All public cloud resources can be freely accessed by every member of the public
- The public cloud is a shared entity whereby multiple corporations each use a portion of the resources in the cloud
(Correct)

Explanation

The public cloud is defined as computing services offered by **third-party providers** over the public Internet, making them available to anyone who wants to use or purchase them. They may be free or sold on-demand, allowing customers to pay only per usage for the CPU cycles, storage, or bandwidth they consume.

Unlike private clouds, public clouds can save companies from the expensive costs of having to purchase, manage, and maintain on-premises hardware and application infrastructure - the cloud service provider is held responsible for all management and maintenance of the system (**CAPEX COST IS SAVED - important advantage of using public cloud**).

Public clouds can also be deployed faster than on-premises infrastructures and with an almost infinitely scalable platform. Every employee of a company can use the same application from any office or branch using their device of choice as long as they can access the Internet. While security concerns have been raised over public cloud environments, when implemented correctly, the public cloud can be as secure as the most effectively managed private cloud implementation if the provider uses proper security methods, such as intrusion detection and prevention systems (IDPS).



Reference: <https://searchcloudcomputing.techtarget.com/definition/public-cloud>

Question 4: **Incorrect**

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

Deleting a resource group will delete all the resources inside it.

- Yes
(Correct)
- No
(Incorrect)

Explanation

Yes, this is true. All the resources in your group should **share the same lifecycle (MOST IMPORTANT POINT ABOUT RESOURCE GROUPS)**.

You deploy, update, and delete them together. If one resource, such as a server, needs to exist on a different deployment cycle it should be in another resource group.

More about resource groups:

Resource groups

There are some important factors to consider when defining your resource group:

- All the resources in your group should share the same lifecycle. You deploy, update, and delete them together. If one resource, such as a server, needs to exist on a different deployment cycle it should be in another resource group.
- Each resource can only exist in one resource group.
- Some resources can exist outside of a resource group. These resources are deployed to the [subscription](#), [management group](#), or [tenant](#). Only specific resource types are supported at these scopes.
- You can add or remove a resource to a resource group at any time.
- You can move a resource from one resource group to another group. For more information, see [Move resources to new resource group or subscription](#).
- A resource group can contain resources that are located in different regions.
- A resource group can be used to scope access control for administrative actions.
- A resource can interact with resources in other resource groups. This interaction is common when the two resources are related but don't share the same lifecycle (for example, web apps connecting to a database).

Reference : <https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/overview#resource-groups>

Question 5: **Correct**

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

Azure Advisor will provide you with recommendations on how to improve the security of an Azure Active Directory environment.

- Yes
- No

(Correct)

Explanation

Azure Advisor provides you with a consistent, consolidated view of recommendations for all your Azure resources. It integrates with Azure Security Center to bring you security recommendations. You can get security recommendations from the **Security** tab on the Advisor dashboard.

The screenshot shows the Microsoft Advisor portal interface. On the left, there's a navigation sidebar with links like Overview, Recommendations (High Availability, Security, Performance, Operational Excellence, Cost), Monitoring (Alerts (Preview)), Settings, and Configuration. The main content area displays five categories of recommendations:

- High Availability:** 4 Recommendations (0 High impact, 4 Medium impact, 0 Low impact). 122 Impacted resources.
- Security:** 31 Recommendations (20 High impact, 7 Medium impact, 4 Low impact). 218 Impacted resources.
- Performance:** 31 Recommendations (20 High impact, 7 Medium impact, 4 Low impact). You are following all of our performance recommendations. See list of performance recommendations.
- Operational Excellence:** 1 Recommendation (0 High impact, 0 Medium impact, 1 Low impact). 1 Impacted resource.
- Cost:** 7,437 USD savings/y* 3 Recommendations (1 High impact, 2 Medium impact, 0 Low impact). 14 Impacted resources.

At the bottom right, there's a link to 'Is Advisor helpful?'

However, it **DOES NOT** provide recommendations for Azure Active Directory.

Reference : <https://docs.microsoft.com/en-us/azure/advisor/advisor-security-recommendations>

Question 6: Incorrect

You have an Azure environment. You need to create a new Azure virtual machine from an Android laptop.

Solution: You use PowerShell in Azure Cloud Shell.

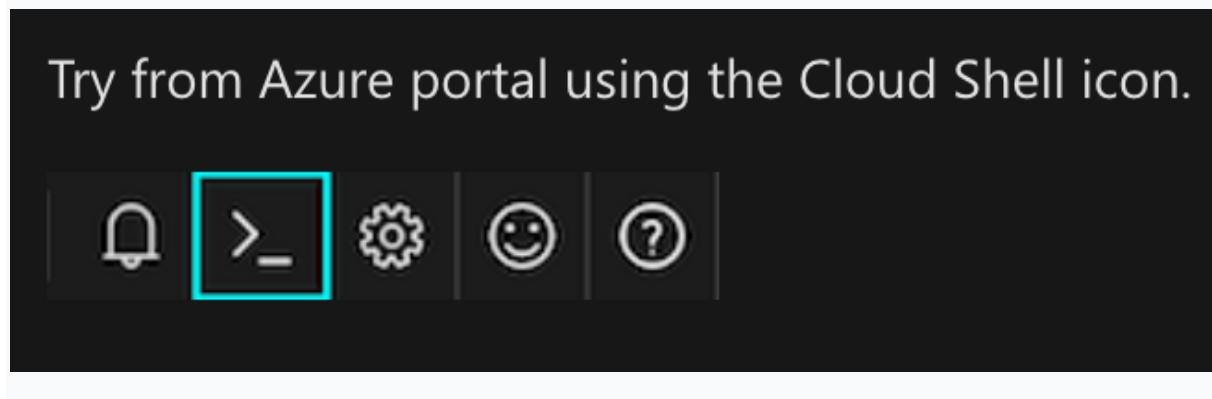
Does this meet the goal?

- Yes
(Correct)
- No
(Incorrect)

Explanation

Azure Cloud Shell is an interactive, authenticated, browser-accessible shell for managing Azure resources. It provides the flexibility of choosing the shell experience that best suits the way you work, either **Bash or PowerShell**.

[Try from shell.azure.com by clicking this line.](#)



Choice of preferred shell experience

Users can choose between Bash or PowerShell.

1. Select **Cloud Shell**.

The screenshot shows the Microsoft Azure portal homepage. At the top, there is a blue header bar with the Microsoft Azure logo and a search bar. To the right of the search bar is a 'Cloud Shell' icon, which is highlighted with a red box. Below the header, there is a section titled 'Azure services' containing various service icons like Create a resource, Azure Database for MySQL, Azure Active Directory, Digital Twins, App Services, Recent, and Resource groups. There is also a 'Service Health' and 'Quickstart Center' section. Underneath these is a 'Recent resources' table:

NAME	TYPE	LAST VIEWED
cs4316e81020662x41cbxb95	Storage account	2 d ago

At the bottom, there is a 'Navigate' section with links for Subscriptions, Resource groups, and All resources.

2. Select **Bash** or **PowerShell**.

The screenshot shows the 'Welcome to Azure Cloud Shell' screen. It features a large 'Welcome to Azure Cloud Shell' heading with a large right-pointing arrow. Below it, a message says: 'Select Bash or PowerShell. You can change shells any time via the environment selector in the Cloud Shell toolbar. The most recently used environment will be the default for your next session.' At the bottom, there are two buttons: 'Bash' and 'PowerShell', both of which are highlighted with red boxes.

Therefore, the answer is yes.

Reference: <https://docs.microsoft.com/en-us/azure/cloud-shell/overview>

Question 7: **Correct**

This question requires that you evaluate the bolded text to determine if it is correct.

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, choose the option below that would make the statement correct.

- No change is needed
(Correct)
- Have two network interfaces
- Run a different operating system than the other virtual machines
- Be deployed to a separate resource group

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.

Subnets: Subnets enable you to segment the virtual network into one or more sub-networks and allocate a portion of the virtual network's address space to each subnet. You can then deploy Azure resources in a specific subnet. Just like in a traditional network, subnets allow you to segment your VNet address space into segments that are appropriate for the organization's internal network. This also improves address allocation efficiency. You can secure resources within subnets using Network Security Groups. For more information, see [Security groups](#).

You can filter network traffic between subnets using either or both of the following options:

- 1) **Security groups:** Network security groups and application security groups can contain multiple inbound and outbound security rules that enable you to filter traffic to and from resources by source and destination IP address, port, and protocol. To learn more, see [Network security groups](#) or [Application security groups](#).
- 2) **Network virtual appliances:** A network virtual appliance is a VM that performs a network function, such as a firewall, WAN optimization, or other network function. To view a list of available network virtual appliances that you can deploy in a virtual network, see [Azure Marketplace](#).

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

Question 8: **Incorrect**

Your company is planning to purchase Azure Active Directory for their account. Will the **basic** version guarantee an SLA of 99.9%?

- Yes
(Correct)
- No
(Incorrect)

Explanation

Yes, refer to this text from the official documentation:

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.

However, note from the above image that **NO SLA is provided for the FREE tier of the Azure Active Directory!**

Reference : https://azure.microsoft.com/en-us/support/legal/sla/active-directory/v1_0/

Question 9: **Correct**

A company wants to make use of an Azure service which is in private preview. Are services in private preview accessible to all customers?

- Yes
 - No
- (Correct)**

Explanation

Private Preview means that an Azure feature is available to **specific** Azure customers for evaluation purposes. This is typically by invite only and issued directly by the product team responsible for the feature or service.

Some of the common areas you will see previews include:

- 1) New storage types
- 2) New Azure services, such as Machine Learning enhancements
- 3) New or enhanced integration with other platforms
- 4) New APIs for services

Azure feature previews are available under certain terms and conditions that are specific to each particular Azure preview. Also, some previews are not covered by customer support.

Once a feature has been evaluated and tested successfully, it might be released to customers as part of Azure's default product set. This release is referred to as **General Availability (GA)**. In some cases, it might also be determined that the feature needs additional work. When this happens, it might be removed and replaced with a different implementation.

Reference: <https://daryusman.wordpress.com/2019/01/24/access-public-and-private-preview-features/>

Question 10: **Correct**

How is the Service Level Agreement (SLA) calculated for the various Azure Services?

- On a weekly basis
 - On a monthly basis
- (Correct)**

- On a yearly basis
- On a quarterly basis

Explanation

Availability for all Azure services is calculated over a **monthly** billing cycle.

--> Click [here](#) to download SLA for most Microsoft Azure Services.

--> The SLA for Active Directory can be found [here](#).

Reference : <https://azure.microsoft.com/en-us/support/legal/sla/summary/>

Question 11: Incorrect

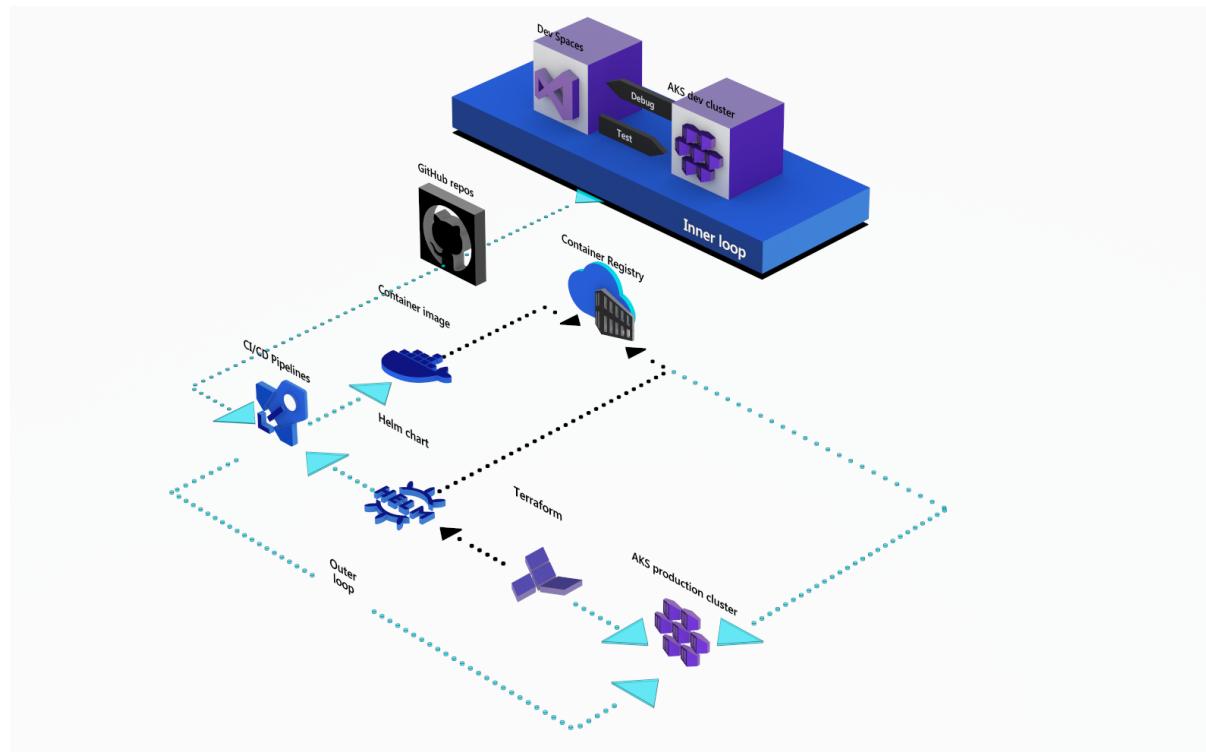
A company is planning to deploy a micro-services based application to Azure. Which of the following could help orchestrate the deployment of container-based applications?

- Azure Kubernetes
(Correct)
- Azure Logic Apps
- Azure Active Directory
(Incorrect)
- Azure Cognitive Services

Explanation

It is possible to deploy and manage containerized 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. Unite your development and operations teams on a single platform to rapidly build, deliver, and scale applications with confidence.

We can easily **define, deploy, debug, and upgrade** even the most complex Kubernetes applications, and automatically containerize our applications.



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

Question 12: **Incorrect**

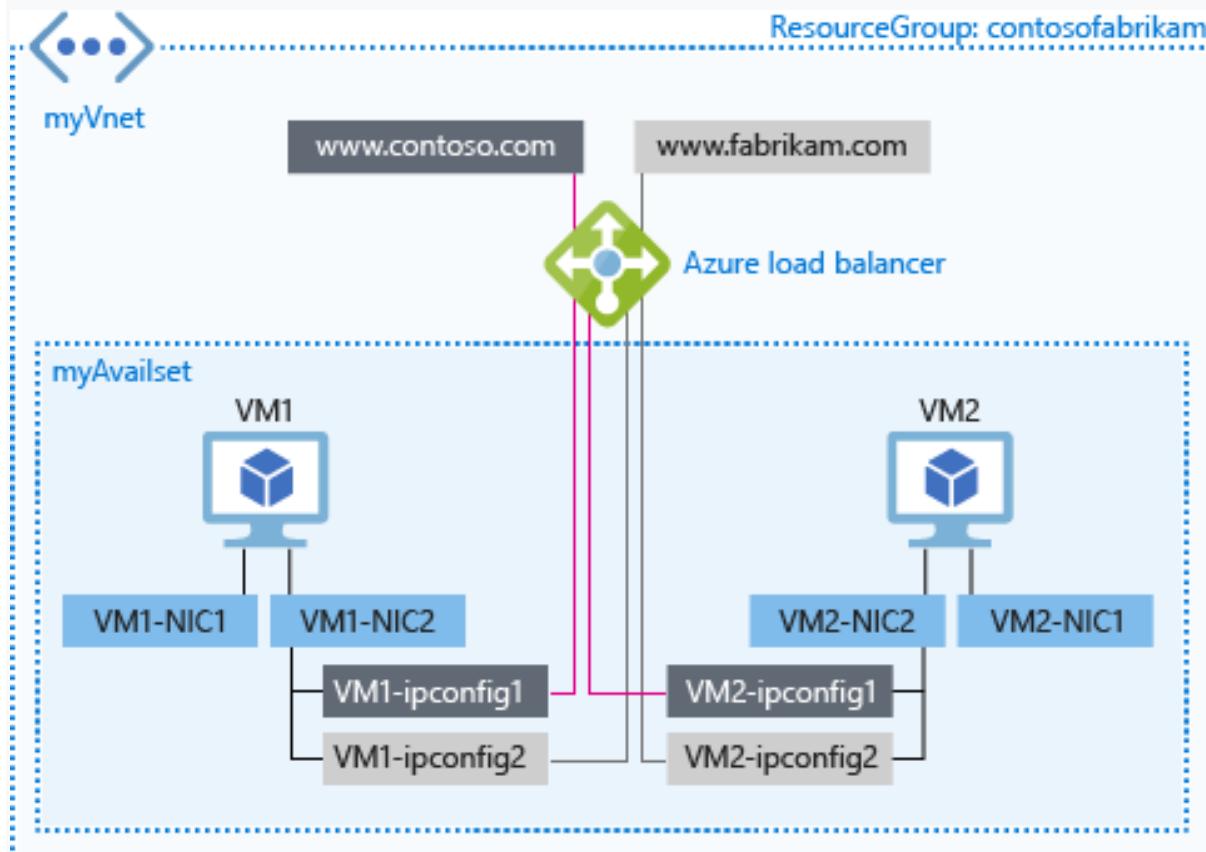
For the following statement, select Yes if the statement is True, otherwise select No.

You can use a load balancer to create highly available services.

- Yes
(Correct)
- No
(Incorrect)

Explanation

Load balancing refers to evenly distributing load (incoming network traffic) across a group of backend resources or servers.



Why use Azure Load Balancer?

With Standard Load Balancer, you can scale your applications and create **highly available** services. Load balancer supports both inbound and outbound scenarios. Load balancer provides low latency and high throughput, and scales up to millions of flows for all TCP and UDP applications.

Reference : <https://docs.microsoft.com/en-us/azure/load-balancer/load-balancer-overview>

Question 13: **Incorrect**

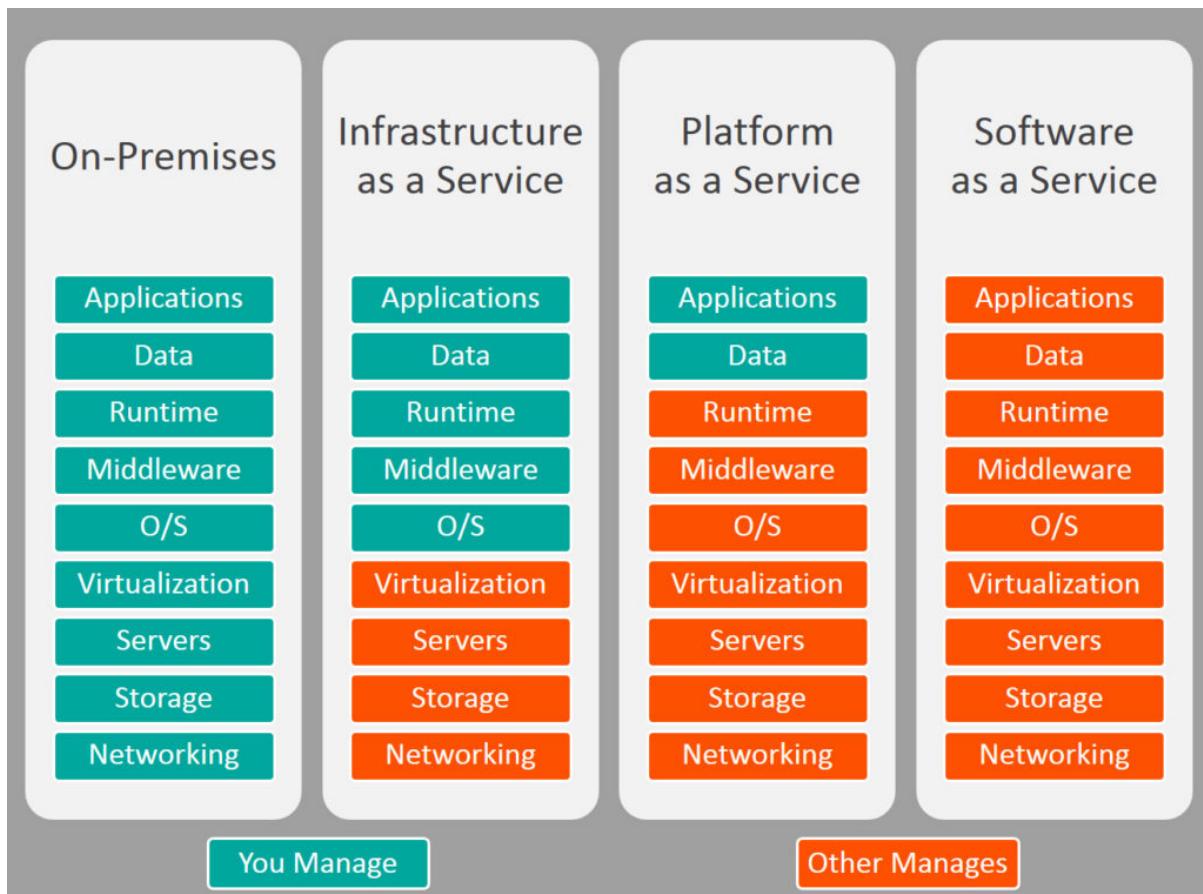
Rank the following in order of your control from "Most Control" to "Least Control" :

- Virtual Machines, Containers , Serverless Computing
(Correct)
- Containers, Serverless Computing, Virtual Machines
- Serverless Computing, Virtual Machines, Containers

(Incorrect)

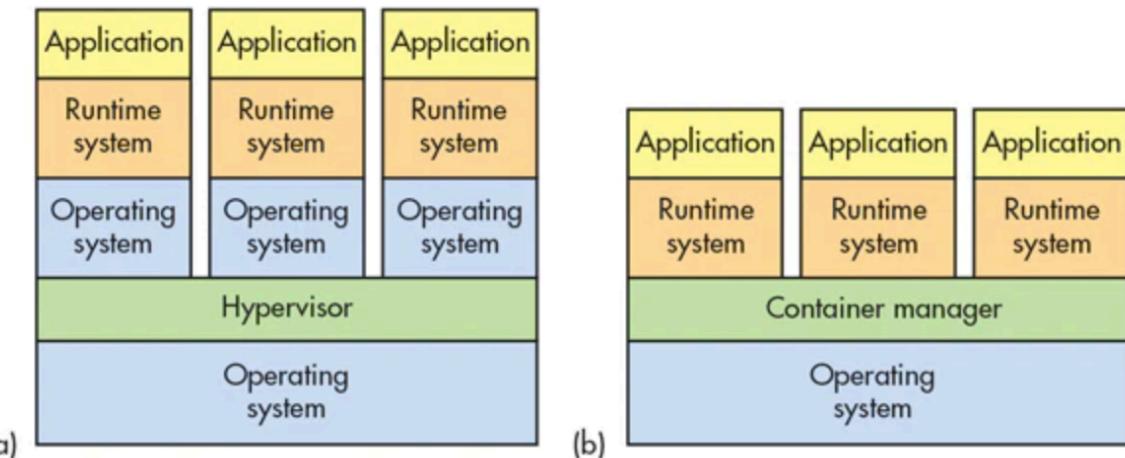
Explanation

Refer to the following image first:

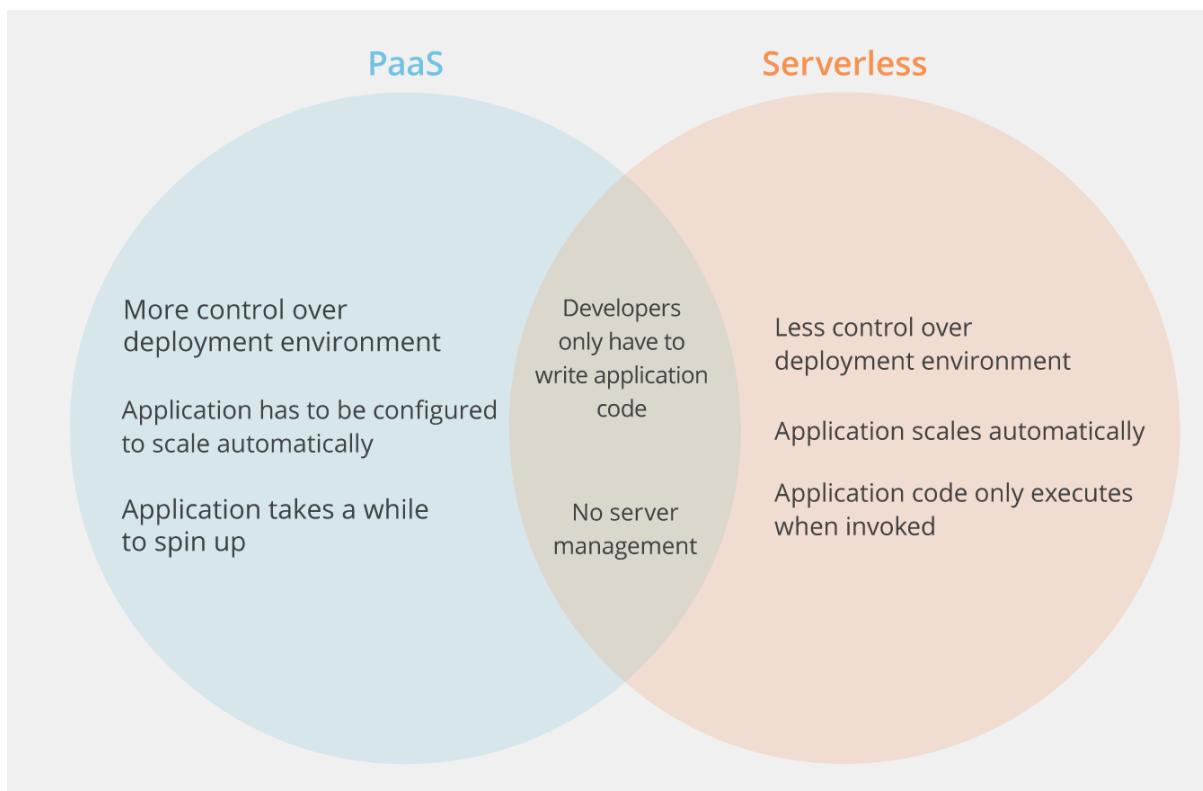


Azure Virtual Machines (VMs) belong to the IaaS Category. Therefore, you manage the Applications, Data, Runtime, Middleware, OS - i.e you have a lot of control.

Containers also provide a way to isolate applications and provide a virtual platform for applications to run on. Few differences exist between a container and a hypervisor system. The container's system requires an underlying operating system that provides the basic services to all of the containerized applications using virtual-memory support for isolation. A hypervisor, on the other hand, runs VMs that have their own operating system using hardware VM support.



Because both [serverless computing](#) and [Platform-as-a-Service \(PaaS\)](#) backend architectures keep the entire backend invisible to developers, they are somewhat similar. However, several big differences separate the two kinds of architecture, and most use cases will work best with either one or the other, but not with both. The major divergences between PaaS and serverless are scalability, pricing, startup time, tooling, and the ability to deploy at the [network edge](#).



Therefore, you get the **MOST control** in VMs, followed by Containers, and then Serverless computing.

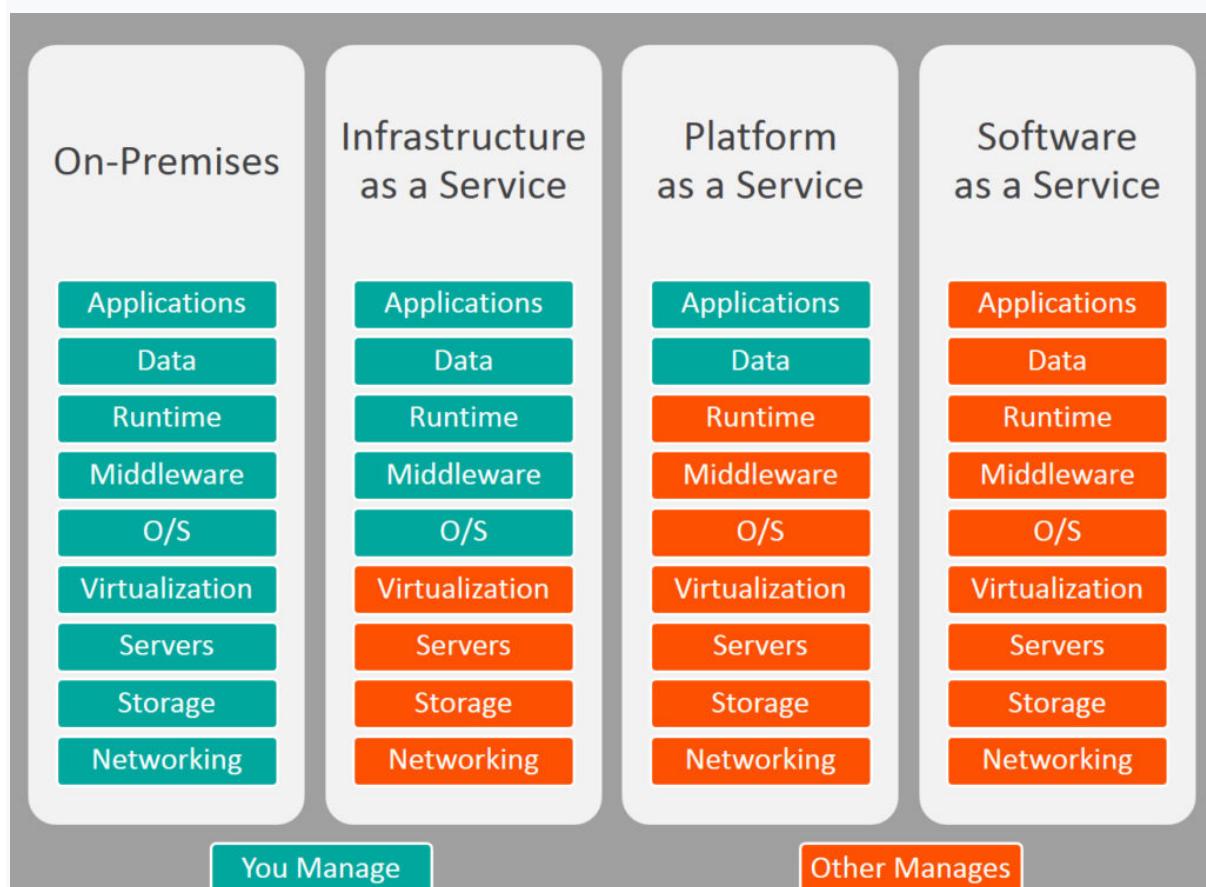
Question 14: **Incorrect**

Which of the following requires the greatest security effort on your part?

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

Explanation

IaaS (**Infrastructure as a Service**) is, in effect, where a cloud provider hosts the infrastructure components traditionally present in an on-premises data center including servers (operating systems), storage and networking hardware as well as the virtualization or hypervisor layer. From a security perspective, this offering is probably the **closest** to traditional in-house IT infrastructure, (Indeed, many companies will effectively move existing server payloads to IaaS either partially or completely resulting in a hybrid solution.) and it will require much of the same security tools as a result.



Reference : <https://www.tripwire.com/state-of-security/security-data-protection/cloud/secure-configuration-cloud-iaas-paas-saas/>

Question 15: **Incorrect**

Which of the following service would you use to securely manage and store certificates for your services in Azure?

- Azure Key Vault **(Correct)**
- Azure AIP
- Azure Firewall

(Incorrect)

- Azure SQL Database

Explanation

Secure key management is essential to protect data in the cloud . Azure Key Vault encrypts keys and small secrets like passwords that use keys stored in hardware security modules (HSMs). For more assurance, it is possible to import or generate keys in HSMs, and Microsoft processes your keys in FIPS 140-2 Level 2 validated HSMs (hardware and firmware). With Key Vault, **Microsoft doesn't see or extract your keys**.

You can monitor and audit your key use with Azure logging—pipe logs into Azure HDInsight or your security information and event management (SIEM) solution for more analysis and threat detection.

All of the control, none of the work - the motto

By using Key Vault, you don't need to provision, configure, patch, and maintain HSMs and key management software. Provision new vaults and keys (or import keys from your own HSMs) in minutes and centrally manage keys, secrets, and policies. You keep control over your keys—simply grant permission for your own and partner applications to use them as needed. Applications never have direct access to keys. Developers manage keys used for Dev/Test and seamlessly migrate to production the keys that are managed by security operations.

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

Question 16: **Incorrect**

Which of the following **DOESN'T** stand true for resource groups?

- A resource can only belong to one resource group
 - Resource groups can be nested
- (Correct)**
- Resources may be moved from one resource group to another

(Incorrect)

 - Resources from different regions can exist in the same resource group

Explanation

Resource groups can't be **nested**, i.e, a resource group cannot exist inside another resource group. It is however possible is to link resources from other resource groups within a resource group.

From the official documentation:

Resource groups

There are some important factors to consider when defining your resource group:

- All the resources in your group should share the same lifecycle. You deploy, update, and delete them together. If one resource, such as a server, needs to exist on a different deployment cycle it should be in another resource group.
- Each resource can only exist in one resource group.
- Some resources can exist outside of a resource group. These resources are deployed to the [subscription](#), [management group](#), or [tenant](#). Only specific resource types are supported at these scopes.
- You can add or remove a resource to a resource group at any time.
- You can move a resource from one resource group to another group. For more information, see [Move resources to new resource group or subscription](#).
- A resource group can contain resources that are located in different regions.
- A resource group can be used to scope access control for administrative actions.
- A resource can interact with resources in other resource groups. This interaction is common when the two resources are related but don't share the same lifecycle (for example, web apps connecting to a database).

Reference: <https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/manage-resource-groups-portal>

Question 17: **Incorrect**

Where can you obtain up-to-date details about the personal data Microsoft processes, how it processes it and for what purposes?

- **Microsoft Privacy Statement (Correct)**
- **Azure Trust Center**
- **Azure Knowledge Center**
- **Compliance Manager (Incorrect)**

Explanation

[This](#) privacy statement explains the personal data Microsoft processes, how Microsoft processes it, and for what purposes.

Microsoft offers a wide range of products, including server products used to help operate enterprises worldwide, devices you use in your home, software that students use at school, and services developers use to create and host what's next. References to Microsoft products in [this](#) statement include Microsoft services, websites, apps, software, servers, and devices. Please read the **product-specific details** in [this](#) privacy statement, which provide additional relevant information. This statement applies to the interactions Microsoft has with you and the Microsoft products listed below, as well as other Microsoft products that display this statement.



Microsoft Privacy Statement

Expand All

Print

Last Updated: March 2017 What's new?

Your privacy is important to us. This privacy statement explains what personal data we collect from you and how we use it. We encourage you to read the summaries below and to click on "Learn More" if you'd like more information on a particular topic.

The product-specific details sections provide additional information relevant to particular Microsoft products. This statement applies to the Microsoft products listed below, as well as other Microsoft products that display this statement. References to Microsoft products in this statement include Microsoft services, websites, apps, software and devices.

Personal Data We Collect

How We Use Personal Data

Reasons We Share Personal Data

How to Access & Control Your Personal Data

Cookies & Similar Technologies

Microsoft account

Other Important Privacy Information

Product-specific details:

Bing

Cortana

Groove Music/Movies & TV

Microsoft Cognitive Services

Personal Data We Collect

Microsoft collects data to operate effectively and provide you the best experiences with our products. You provide some of this data directly, such as when you create a Microsoft account, submit a search query to Bing, speak a voice command to Cortana, upload a document to OneDrive, purchase an MSDN subscription, sign up for Office 365, or contact us for support. We get some of it by recording how you interact with our products by, for example, using technologies like cookies, and receiving error reports or usage data from software running on your device. We also obtain data from third parties.

[Learn More](#)

[Top of page ↑](#)

How We Use Personal Data

Reference: <https://privacy.microsoft.com/en-ca/privacystatement>

Question 18: Incorrect

Which Azure Service allows you to create, assign and manage policies to enforce different rules and stay compliant with your Service Level Agreements (SLAs)?

- **Azure Policy**
(Correct)
- **Azure Blueprints**
- **Azure Security Center**
- **Azure Trust Portal**
(Incorrect)

Explanation

Azure Policy helps to enforce organizational standards and to assess compliance at-scale. Through its compliance dashboard, it provides an aggregated view to evaluate the overall state of the environment, with the ability to drill-down to the per-resource, per-policy granularity. It also helps to bring your resources to compliance through bulk remediation for existing resources and automatic remediation for new resources.

Common use cases for Azure Policy include implementing **governance** for resource consistency, regulatory compliance, security, cost, and management. Policy definitions for these common use cases are already available in your Azure environment as built-ins to help you get started.

References : <https://docs.microsoft.com/en-us/azure/governance/policy/overview>

Question 19: Incorrect

Which of the following can you use to filter traffic to and from an Azure Virtual Network?

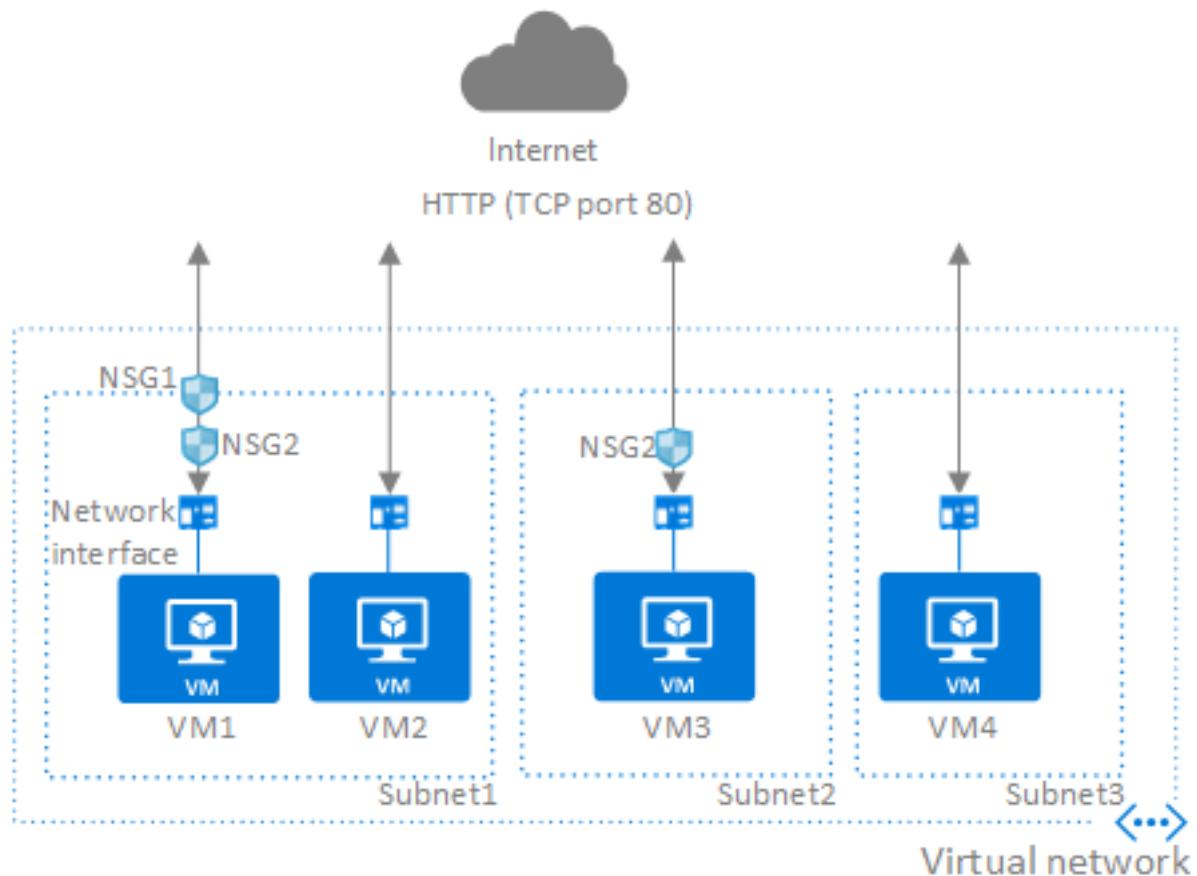
- **Azure Firewall**

- Azure Network Security Group
(Correct)
- Azure Advanced Threat Protection (ATP)
- Azure DDoS Protection
(Incorrect)

Explanation

You can use **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**. [This](#) article describes properties of a network security group rule, the [default security rules](#) that are applied, and the rule properties that you can modify to create an [augmented security rule](#).



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

Question 20: Incorrect

Composite SLAs for 2 different services can be calculated by _____

- Multiplying their SLAs
(Correct)
- Adding their SLAs
- Subtracting their SLAs
- Aggregating their SLAs
(Incorrect)

Explanation

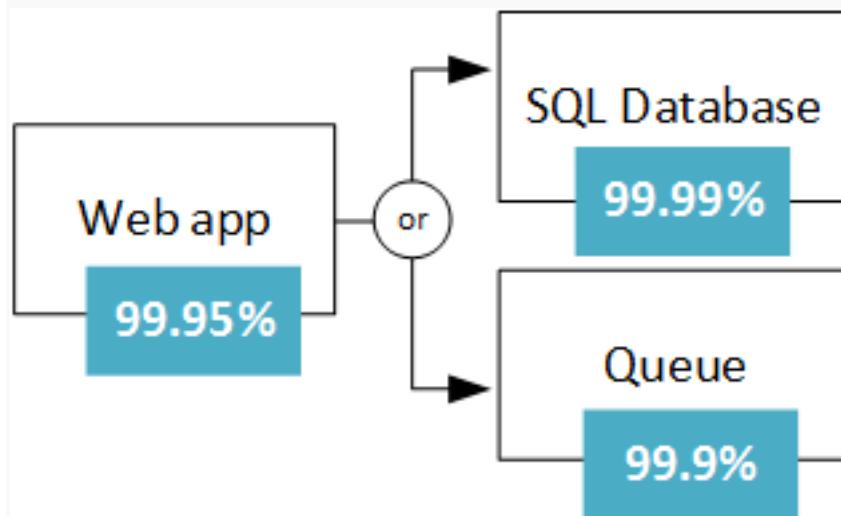
Composite SLAs involve multiple services supporting an application, each with differing levels of availability.

For example, consider an App Service web app that writes to Azure SQL Database. At the time of this writing, these Azure services have the following SLAs:

App Service web apps = 99.95%

SQL Database = 99.99%

What is the maximum downtime you would expect for this application? If either service fails, the whole application fails. The probability of each service failing is independent, so the composite SLA for this application is $99.95\% \times 99.99\% = 99.94\%$. That's lower than the individual SLAs, which isn't surprising because an application that relies on multiple services has more potential failure points. You can improve the composite SLA by creating independent fallback paths. For example, if SQL Database is unavailable, put transactions into a queue to be processed later.



With this design, the application is still available even if it can't connect to the database. However, it fails if the database and the queue both fail at the same time. The expected percentage of time for a simultaneous failure is 0.0001×0.001 , so the composite SLA for this combined path is:

Database or queue = $1.0 - (0.0001 \times 0.001) = 99.99999\%$

The **total** composite SLA is:

Web app and (database or queue) = $99.95\% \times 99.99999\% = \sim 99.95\%$

There are tradeoffs to this approach. The application logic is more complex, you are paying for the queue, and you need to consider data consistency issues.

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

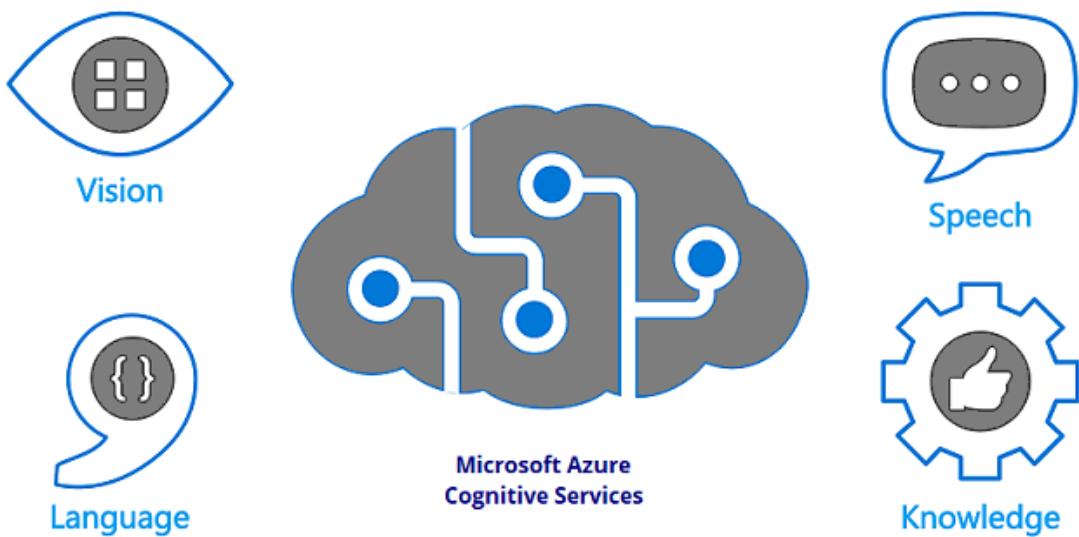
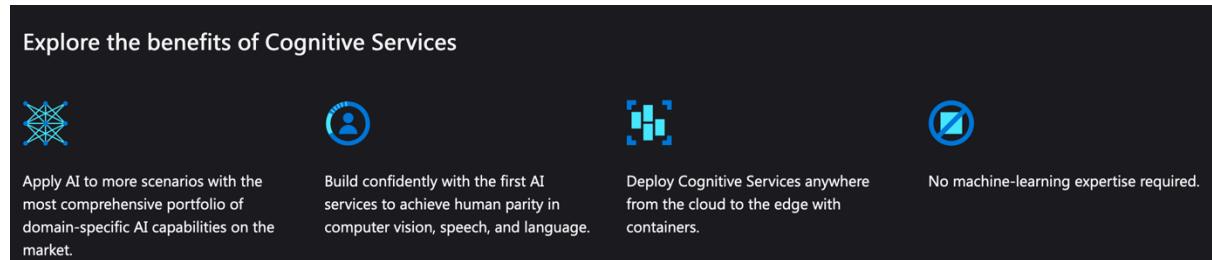
Question 21: **Incorrect**

Which of the following services would you use to embed the ability to see, hear, speak, search, understand, and accelerate decision-making into your apps without having any machine-learning expertise?

- **Azure Cognitive Services**
(Correct)
- **Azure Machine Learning Studio**
- **Azure Events Hub**
(Incorrect)
- **Azure App Service**

Explanation

Cognitive Services bring AI within reach of every developer—without requiring machine-learning expertise. All it takes is an API call to embed the ability to **see, hear, speak, search, understand, and accelerate decision-making into your apps.**



Reference : <https://azure.microsoft.com/en-us/services/cognitive-services/#features>

Question 22: Incorrect

Which of the following locks would you use to prevent deletion or modification of business critical resources?

- **CanNotModify**
- **ReadOnly**
(Correct)
- **CanNotDeleteCanNotUpdate**
(Incorrect)
- **AccessDenied**

Explanation

As an administrator, you may need to lock a subscription, resource group, or resource to prevent other users in your organization from accidentally deleting or modifying critical resources. You can set the lock level to **CanNotDelete** or **ReadOnly**. In the portal, the locks are called **Delete** and **Read-only** respectively.

CanNotDelete means authorized users can still read and modify a resource, but they can't delete the resource.

ReadOnly means authorized users can read a resource, but they can't delete or update the resource. Applying this lock is similar to restricting all authorized users to the permissions granted by the **Reader** role.

Reference : <https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/lock-resources>

Question 23: **Incorrect**

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.

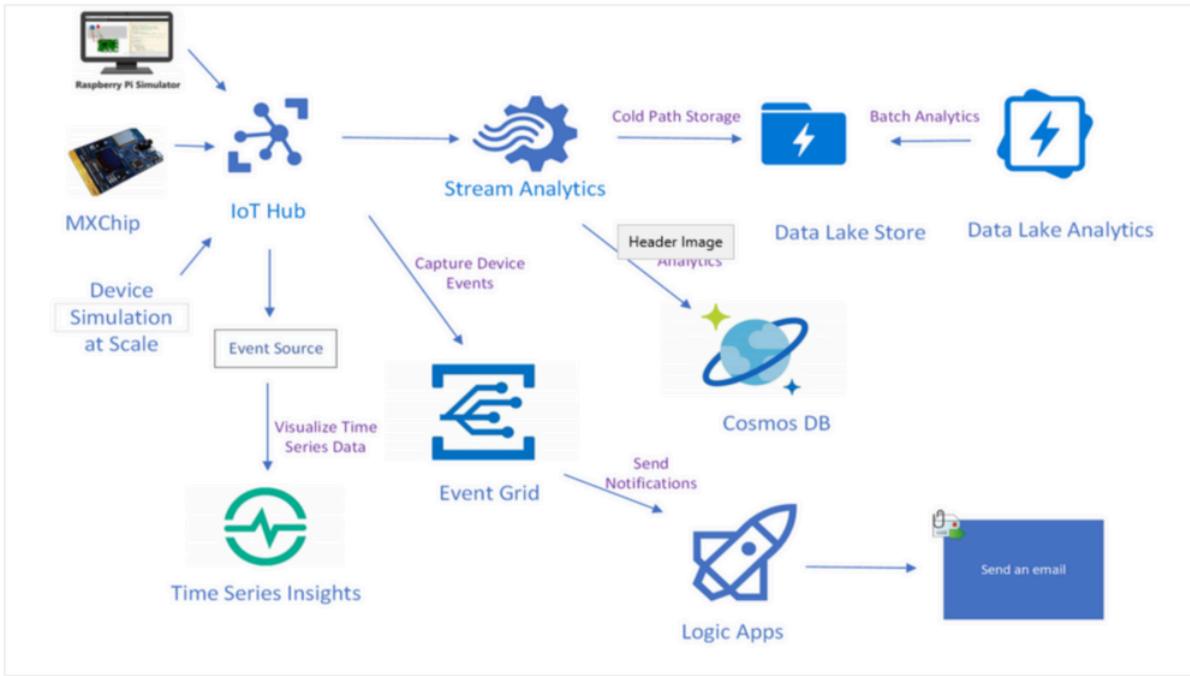
Which TWO Azure resources should you identify?

- Azure IoT Hubs
(Correct)
- Azure Notification Hubs
(Incorrect)
- Azure File Storage
- Azure Data Lake
(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. IoT Hub can further route messages to **Azure Data Lake Storage**.



Reference 1 (IoT Hub) - <https://azure.microsoft.com/en-in/services/iot-hub/>

Reference 2 (Data Lake) - <https://azure.microsoft.com/en-in/solutions/data-lake/>

Question 24: **Incorrect**

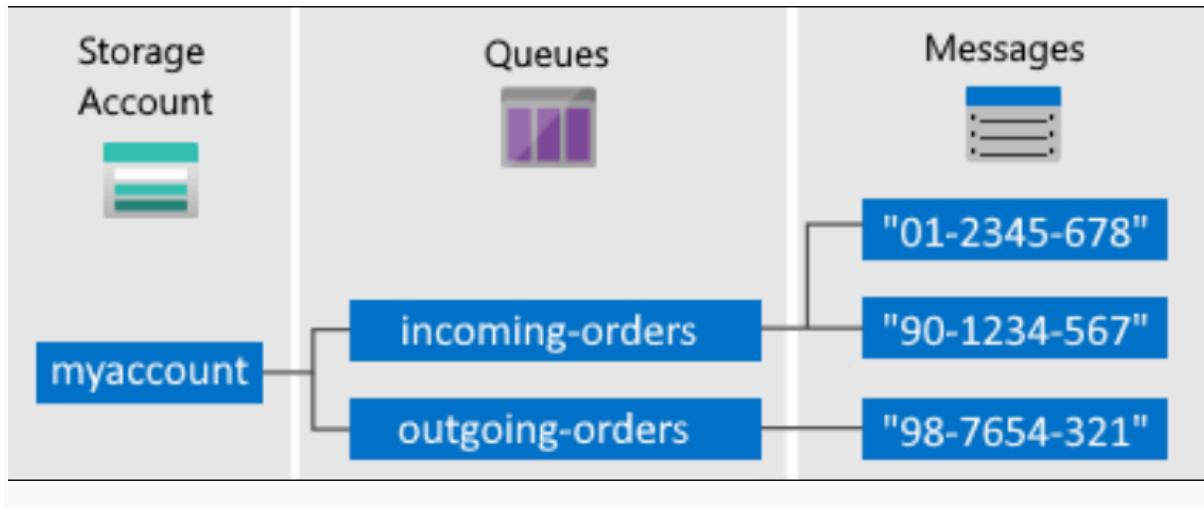
Which of the following services can help you decouple components and asynchronous message storage, for communication between application components, whether they are running in the cloud, on the desktop, on-premise, or on mobile devices?

- **Azure Queue Storage**
(Correct)
- **Azure Cosmos DB**
- **Azure Blob Storage**
(Incorrect)
- **Azure Asynchronous Communicator**

Explanation

You can use **Azure Queue Storage** to build flexible applications and separate functions for better durability across large workloads. When you design applications for scale, application components can be decoupled, so that they can scale independently. Queue storage gives you asynchronous message queueing for communication between application components, whether they are running in the cloud, on the desktop, on-premises, or on mobile devices.

A single queue message can be up to **64 KB** in size, and a queue can contain **millions** of messages, up to the total capacity limit of a storage account. Queue storage is often used to create a backlog of work to process asynchronously.



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

Question 25: **Correct**

If you setup a free Azure account, then does the **STANDARD** support plan come along with this free account?

- Yes
- No
(Correct)

Explanation

The **BASIC** Support plan is associated with all accounts but a **STANDARD** plan needs to be purchased and costs \$100/month.

	Basic	DEVELOPER	STANDARD	PROFESSIONAL DIRECT
Request support	Request support	Purchase support	Purchase support	Purchase support
Price	Included for all Azure customers	₹1,916.792 per month	₹6,609.625 per month	₹66,096.25 per month
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, personalised guide to Azure best practices	✓	✓	✓	✓
Azure health status and notifications	✓	✓	✓	✓

Reference: <https://azure.microsoft.com/en-in/support/plans/>

Question 26: **Incorrect**

Which are the **THREE** key characteristics of SLAs for Azure products and services?

- Service Credits
(Correct)
- Performance Targets
(Correct)

- **Uptime and Connectivity Guarantees**
(Correct)
- **Usage Targets**
(Incorrect)

Explanation

A **Service Level Agreement** or SLA is a formal document that provides specific terms that state the level of service that will be provided to a customer. Microsoft's Azure SLA defines three primary characteristics of Azure service, performance targets, uptime, and connectivity guarantees.

It should be noted that the free and shared tiers of many services **DO NOT** come with an SLA. (**Imp.**)

Reference : <https://cloudacademy.com/course/understanding-azure-pricing-and-support/service-level-agreements/>

Question 27: **Incorrect**

Select the **three** types of storage tiers for Azure Blob Storage?

- **Hot Tier**
(Correct)
- **Cold Tier**
(Correct)
- **Archive Storage Tier**
(Correct)
- **Infrequently Accessed Tier**
(Incorrect)

Explanation

Azure storage offers different access tiers, which allow you to store blob object data in the most cost-effective manner. The available access tiers include:

- 1) Hot Storage**- Optimized for storing data that is accessed frequently.
- 2) Cool Storage**- Optimized for storing data that is infrequently accessed and stored for at least 30 days.
- 3) Archive Storage**- Optimized for storing data that is rarely accessed and stored for at least 180 days with flexible latency requirements (on the order of hours).

Reference : <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-storage-tiers?tabs=azure-portal>

Question 28: **Incorrect**

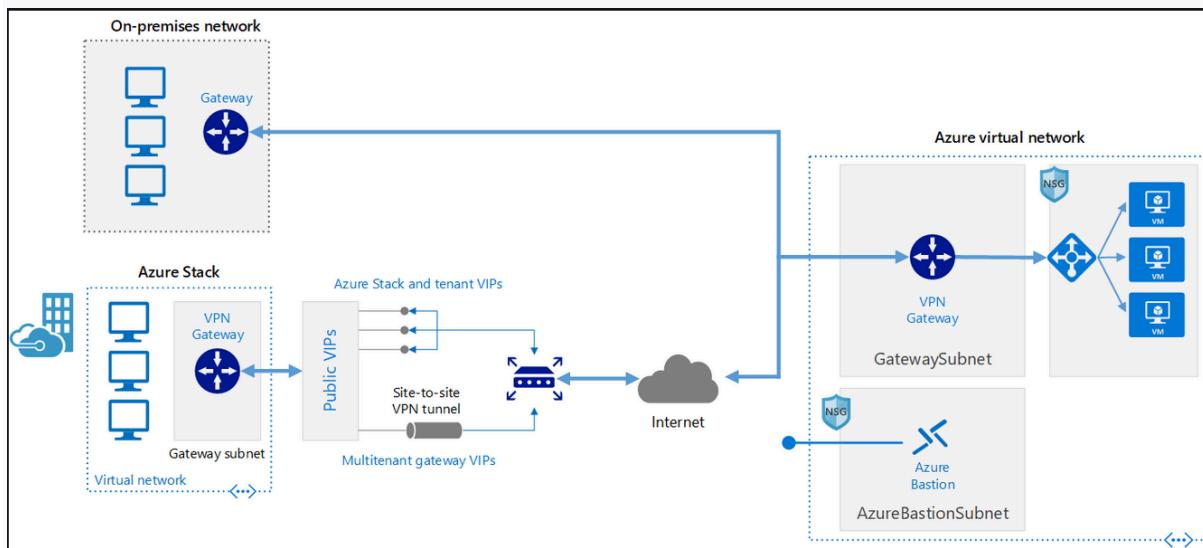
Which of the following can you use to provide connectivity between Azure Virtual Network and an on-premise location over the internet?

- **A VPN Gateway**
(Correct)
- **An Application Gateway**
- **A firewall**
- **Network Security Group (NSG)**
(Incorrect)

Explanation

A **VPN gateway** is a specific type of virtual network gateway that is used to send encrypted traffic between an Azure virtual network and an on-premises location over the public Internet. You can also use a VPN gateway to send encrypted traffic between Azure virtual networks over the Microsoft

network. Each virtual network can have only one VPN gateway. However, you can create multiple connections to the same VPN gateway. When you create multiple connections to the same VPN gateway, all VPN tunnels share the available gateway bandwidth.



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

Question 29: **Incorrect**

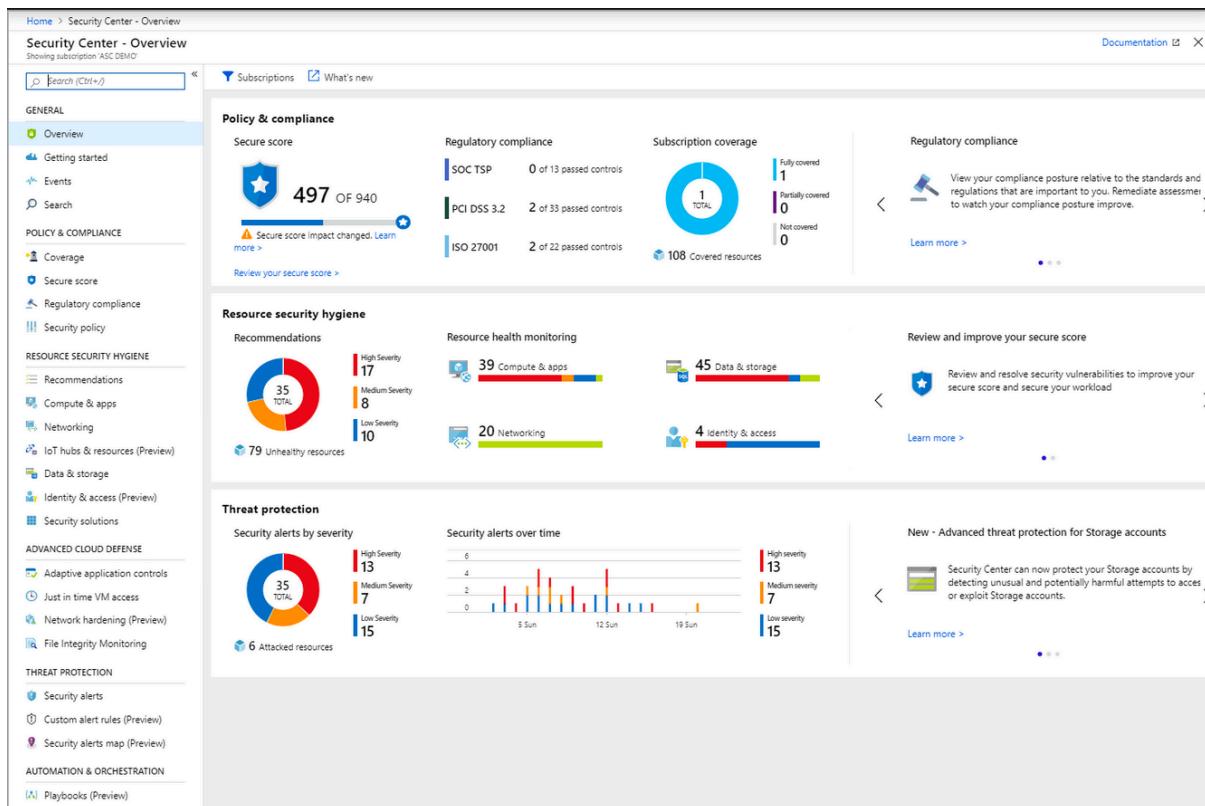
Which of the following is a great place to start when examining the security of your Azure-based solutions and provides threat protection across all of your services both in Azure, and on-premises?

- Azure Security Center
(Correct)
- Azure Advanced Threat Protection
- Azure Trust Center
- Azure Compliance Manager
(Incorrect)

Explanation

A great place to start when examining the security of your Azure-based solutions is **Azure Security Center**. Security Center is a monitoring service that provides threat protection across all of your services both in Azure, and on-premises. Security Center can:

- 1) Provide security recommendations based on your configurations, resources, and networks.
- 2) Monitor security settings across on-premises and cloud workloads, and automatically apply required security to new services as they come online.
- 3) Continuously monitor all your services, and perform automatic security assessments to identify potential vulnerabilities before they can be exploited.
- 4) Use machine learning to detect and block malware from being installed on your virtual machines and services. You can also define a list of allowed applications to ensure that only the apps you validate are allowed to execute.
- 5) Analyze and identify potential inbound attacks, and help to investigate threats and any post-breach activity that might have occurred.



Reference: <https://docs.microsoft.com/en-us/azure/security-center/security-center-recommendations>

Question 30: Incorrect

Your company has an on-premise network that contains multiple servers.

The company plans to reduce the following administrative responsibilities of network administrators:

- > Backing up application data
- > Replacing failed server hardware
- > Managing physical server security
- > Updating server operating systems
- > Managing permissions to shared documents

The company plans to migrate several servers to Azure virtual machines.

You need to identify which administrative responsibilities will be eliminated after the planned migration.

Which TWO responsibilities should you identify? Each correct answer presents a complete solution.

- Replacing failed server hardware
(Correct)
- Backing up application data
- Managing physical server security
(Correct)
- Updating server operating systems
- Managing permissions to shared documents
(Incorrect)

Explanation

Azure **virtual machines** run on Hyper-V physical servers. The physical servers are owned and managed by Microsoft. As an Azure customer, you have no access to the physical servers. Microsoft manages the replacement of failed server hardware and the security of the physical servers.

Incorrect Answers:

B: Microsoft have no control over the applications you run on the virtual machines. Therefore, it is your responsibility to ensure that application data is backed up.

D: Microsoft do not manage the operating systems you run on the virtual machines (IaaS). Therefore, it is your responsibility to ensure that the operating systems are updated.

E: Microsoft have no control over the shared folders you host on the virtual machines. Therefore, it is your responsibility to ensure that folder permissions are configured appropriately.

Question 31: **Incorrect**

You plan to provision Infrastructure as a Service (IaaS) resources in Azure.

Which resource is an example of IaaS?

- An Azure web app
- An Azure virtual machine
(Correct)
- An Azure logic app
(Incorrect)
- An Azure SQL database

Explanation

An Azure virtual machine is an example of Infrastructure as a Service (IaaS).

Azure web app, Azure logic app and Azure SQL databases are all examples of Platform as a Service (**PaaS**)

References:

<https://azure.microsoft.com/en-gb/overview/what-is-iaas/>

<https://azure.microsoft.com/en-gb/overview/what-is-paas/>

Question 32: **Incorrect**

A team of developers at your company plan to deploy, and then remove 50 virtual machines each week. All the virtual machines are configured by using Azure Resource Manager templates.

You need to recommend which Azure service will minimize the administrative effort required to deploy and remove the virtual machines.

What should you recommend?

- Azure Reserved Virtual Machine (VM) Instances
(Incorrect)
- Azure DevTest Labs
(Correct)
- Azure Virtual Machine Scale Sets
- Microsoft Managed Desktop

Explanation

DevTest Labs creates labs consisting of pre-configured bases or Azure Resource Manager templates.

By using DevTest Labs, you can test the latest versions of your applications by doing the **following** tasks:

- > Quickly provision Windows and Linux environments by using reusable templates and artifacts.
- > Easily integrate your deployment pipeline with DevTest Labs to provision on-demand environments.
- > Scale up your load testing by provisioning multiple test agents and create pre-provisioned environments for training and demos.

Reference: <https://docs.microsoft.com/en-us/azure/lab-services/devtest-lab-overview>

Question 33:

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 resource groups.

Does this meet the goal?

- Yes
- No

(Correct)

Explanation

A resource group is a logical container for Azure resources. When you create a resource group, you specify which location to create the resource group in.

However, when you create a virtual machine and place it in the resource group, the virtual machine can still be in a different location (different datacenter).

Therefore, creating multiple resource groups, even if they are in separate datacenters does not ensure that the services running on the virtual machines are available if a single data center fails.

References: <https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/overview#resource-groups>

Question 34: **Incorrect**

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 a scale set.

Does this meet the goal?

- Yes
- No

(Incorrect)

(Correct)

Explanation

This answer does not specify that the scale set will be configured across multiple data centers so this solution does not meet the goal.

Azure virtual machine scale sets let you create and manage a group of load balanced VMs. The number of VM instances can automatically increase or decrease in response to demand or a defined schedule. Scale sets provide high availability to your applications, and allow you to centrally manage, configure, and update many VMs.

Virtual machines in a scale set can be deployed across multiple update domains and fault domains to maximize availability and resilience to outages due to data center outages, and planned or unplanned maintenance events.

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

Question 35: **Correct**

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

A Platform as a Service (PaaS) solution that hosts web apps in Azure provides full control of the Operating System (OS) that hosts the applications.

- Yes
 - No
- (Correct)**

Explanation

A PaaS solution does **not** provide access to the operating system. The Azure Web Apps service provides an environment for you to host your web applications.

Behind the scenes, the web apps are hosted on virtual machines running IIS. However, you have no direct access to the virtual machine, the operating system or IIS.

Reference: <https://azure.microsoft.com/en-gb/overview/what-is-paas/>

Question 36: **Incorrect**

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

A Platform as a Service (PaaS) solution that hosts web apps in Azure can be provided with additional memory by changing its pricing tier.

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

Explanation

Absolutely! You can always scale your PaaS solution up (increase the memory) or out (add more instances).

The very beauty of PaaS is that it allows you to avoid the expense and complexity of buying and managing software licences, the underlying application infrastructure and middleware, container orchestrators such as [Kubernetes](#) or the development tools and other resources. You manage the applications and services that you develop, and the cloud service provider typically manages everything else.

Reference: <https://azure.microsoft.com/en-gb/overview/what-is-paas/>

Question 37: **Incorrect**

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

No.

A Platform as a Service (PaaS) solution that hosts web apps in Azure can be automatically configured to scale the number of instances based on demand.

- Yes
(Correct)
- No
(Incorrect)

Explanation

A PaaS solution that hosts web apps in Azure **does** provide the ability to scale the platform automatically. This is known as autoscaling. Behind the scenes, the web apps are hosted on virtual machines running IIS. Autoscaling means adding more load balanced virtual machines to host the web apps.

References: <https://azure.microsoft.com/en-gb/overview/what-is-paas/>

Question 38: **Incorrect**

Your company plans to migrate all its data and resources to Azure.

The company's migration plan states that only Platform as a Service (PaaS) solutions must be used in Azure.

You need to deploy an Azure environment that meets the company migration plan.

Solution: You create Azure SQL databases and Azure Storage accounts.

Does this meet the goal?

- Yes
(Incorrect)
- No
(Correct)

Explanation

Tricky question!

Platform as a service (PaaS) is a complete development and deployment environment in the cloud. PaaS includes infrastructure as servers, storage, and networking, but also middleware, development tools, business intelligence (BI) services, database management systems, and more.

Azure SQL Databases are PaaS, that's fine. **BUT:**

Azure Storage Accounts are IaaS not PaaS!

References: <https://azure.microsoft.com/en-us/overview/what-is-paas/>

<https://docs.microsoft.com/en-us/answers/questions/221143/azure-storage-account-is-iaas-or-paas.html>

Question 39: **Incorrect**

Your company plans to deploy several custom applications to Azure. The applications will provide invoicing services to the customers of the company. Each application will have several prerequisite applications and services installed.

You need to recommend a cloud deployment solution for all the applications.

What should you recommend?

- Software as a Service (SaaS)
- Platform as a Service (PaaS)
(Incorrect)
- Infrastructure as a Service (IaaS)
(Correct)
- Database as a Service (DBaaS)

Explanation

Infrastructure as a service (IaaS) is an instant computing infrastructure, provisioned and managed over the internet. The IaaS service provider manages the infrastructure, while you purchase, install, configure, and manage your own software

Incorrect Answers:

A: Software as a service (SaaS) allows users to connect to and use cloud-based apps over the Internet. Common examples are email, calendaring, and office tools. In this scenario, you need to run your own apps which in turn need other apps and services, and therefore require an infrastructure.

B: Platform as a service (PaaS) is a complete development and deployment environment in the cloud. PaaS includes infrastructure as servers, storage, and networking, but also middleware, development tools, business intelligence (BI) services, database management systems, and more. PaaS is designed to support the complete web application lifecycle: building, testing, deploying, managing, and updating.

C: Database as a service (DBaaS) is incorrect since we aren't talking about databases and it doesn't fit our requirements.

References:

<https://azure.microsoft.com/en-us/overview/what-is-iaas/>
<https://azure.microsoft.com/en-us/overview/what-is-saas/>
<https://azure.microsoft.com/en-us/overview/what-is-paas/>

Question 40: **Correct**

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

An Azure subscription can be associated to multiple Azure Active Directory (Azure AD) tenants

- Yes
- No
(Correct)

Explanation

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

Please Note :

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

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

Question 41: **Incorrect**

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

No.

You can change the Azure Active Directory (Azure AD) tenant to which an Azure subscription is associated.

- Yes
(Correct)
- No
(Incorrect)

Explanation

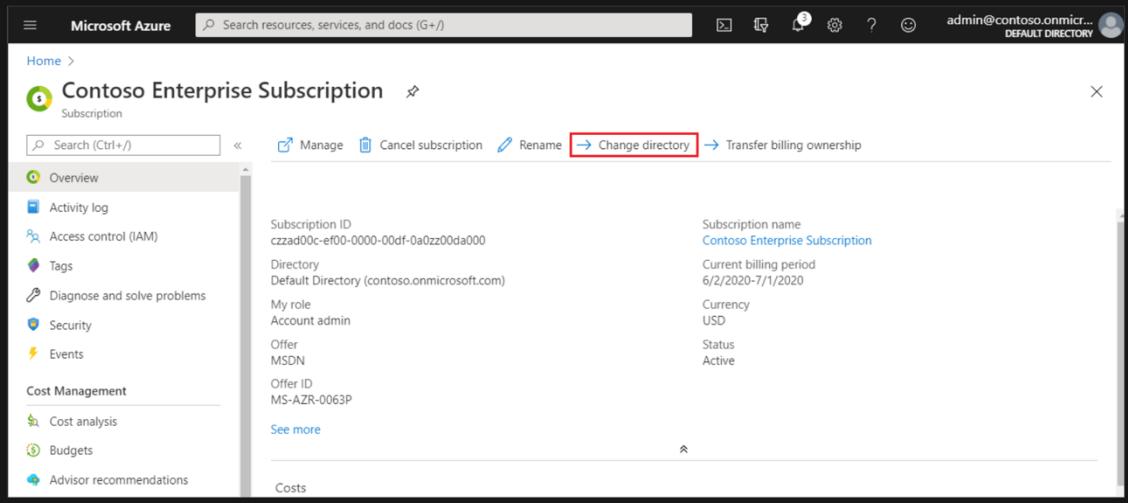
Absolutely, we can do this!

See these steps from the official Azure documentation:

Associate a subscription to a directory

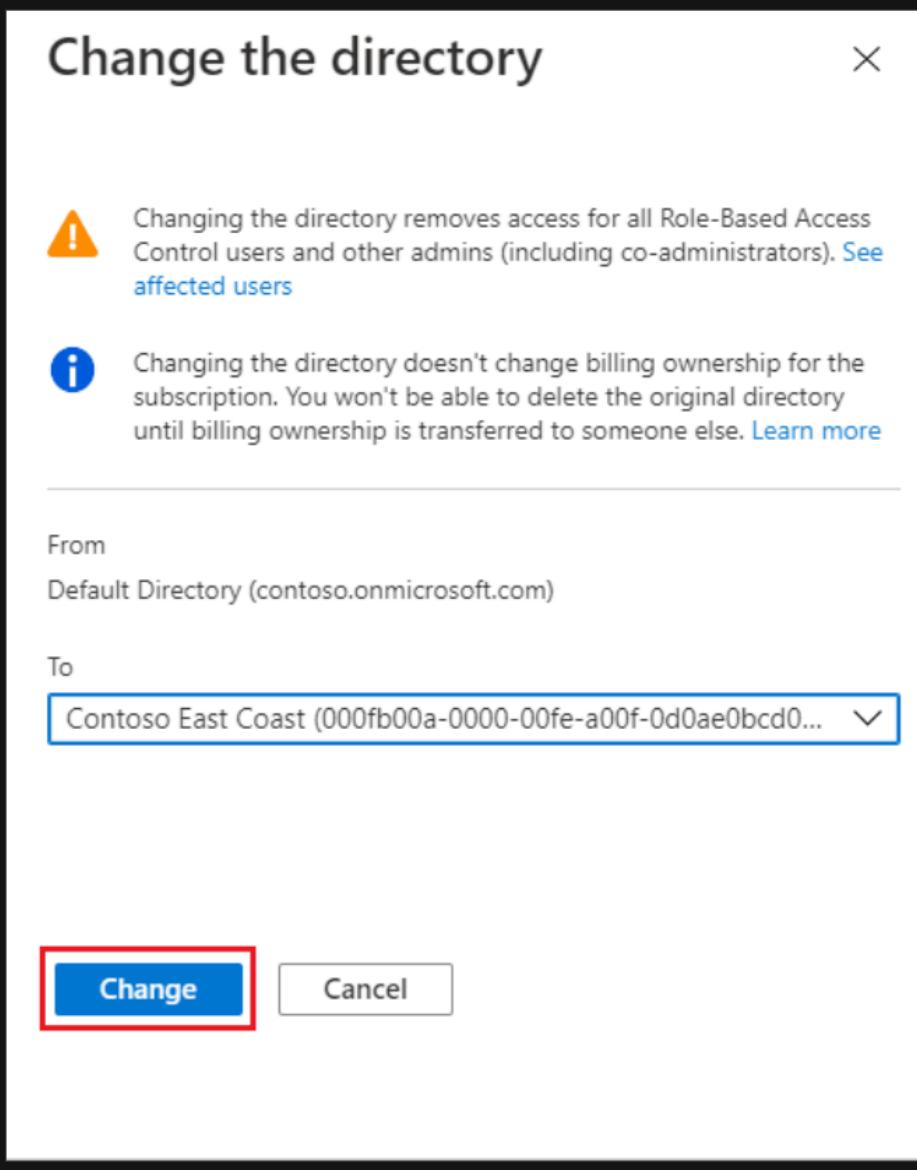
To associate an existing subscription to your Azure AD directory, follow these steps:

1. Sign in and select the subscription you want to use from the [Subscriptions page in Azure portal](#).
2. Select **Change directory**.



The screenshot shows the Azure portal interface with the title "Contoso Enterprise Subscription". The top navigation bar includes "Microsoft Azure", a search bar, and user information "admin@contoso.onmicrosoft.com DEFAULT DIRECTORY". Below the title, there's a "Subscription ID" section with "czzad00c-ef00-0000-00df-0a0zz00da000" and a "Default Directory" section with "Default Directory (contoso.onmicrosoft.com)". A "Change directory" button is highlighted with a red box. The main content area displays various subscription details: "Subscription name: Contoso Enterprise Subscription", "Current billing period: 6/2/2020-7/1/2020", "Currency: USD", and "Status: Active". On the left sidebar, there are sections for "Overview", "Activity log", "Access control (IAM)", "Tags", "Diagnose and solve problems", "Security", "Events", "Cost Management", "Cost analysis", "Budgets", and "Advisor recommendations".

3. Review any warnings that appear, and then select **Change**.



After the directory is changed for the subscription, you will get a success message.

4. Select Switch directories on the subscription page to go to your new directory.

The screenshot shows two overlapping windows from the Azure portal. On the left, the 'Subscriptions' page lists 8 selected subscriptions. A red box highlights the 'Switch directories' link under 'Showing subscriptions in Default Directory directory. Don't see a subscription?'. On the right, the 'Directory + subscription' page shows the current directory as 'ajaneaburnley@gmail.onmicrosoft.com'. It includes sections for 'Default subscription filter', 'Switch directory' (with a dropdown set to 'Sign in to your last visited directory'), and a list of directories including 'Contoso East Coast' and 'Default Directory'.

It can take several hours for everything to show up properly. If it seems to be taking too long, check the **Global subscription filter**. Make sure the moved subscription isn't hidden. You may need to sign out of the Azure portal and sign back in to see the new directory.

Changing the subscription directory is a service-level operation, so it doesn't affect subscription billing ownership. To delete the original directory, you must transfer the subscription billing ownership to a new Account Admin. To learn more about transferring billing ownership, see [Transfer ownership of an Azure subscription to another account](#).

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

Question 42: **Correct**

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

No.

When an Azure subscription expires, the associated Azure Active Directory (Azure AD) tenant is deleted automatically.

- Yes
 - No
- (Correct)**

Explanation

If your subscription expires, you lose access to all the other resources associated with the subscription. However, the Azure AD directory remains in Azure. You can associate and manage the directory using a different Azure subscription.

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

Question 43:

Skipped

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

No.

An Azure resource can have multiple delete locks.

- Yes

(Correct)

- No

Explanation

As an administrator, you can lock a subscription, resource group, or resource to prevent other users in your organization from accidentally deleting or modifying critical resources. The lock overrides any permissions the user might have. You can apply multiple delete locks.

When you apply a lock at a parent scope, all resources within that scope inherit the same lock. Even resources you add later inherit the lock from the parent. The most restrictive lock in the inheritance takes precedence.

References: <https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/lock-resources>

Question 44: **Incorrect**

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

No.

An Azure resource inherits locks from its resource group.

- Yes
- No

(Correct)

Explanation

Yes, an Azure resource inherits locks from its resource group.

When you apply a lock at a parent scope, all resources within that scope inherit the same lock. Even resources you add later inherit the lock from the parent. The most restrictive lock in the inheritance takes precedence.

As an administrator, you can lock a subscription, resource group, or resource to prevent other users in your organization from accidentally deleting or modifying critical resources. The lock overrides any permissions the user might have.

You can set the lock level to **CanNotDelete** or **ReadOnly**. In the portal, the locks are called **Delete** and **Read-only** respectively.

CanNotDelete means authorized users can still read and modify a resource, but they can't delete the resource.

ReadOnly means authorized users can read a resource, but they can't delete or update the resource. Applying this lock is similar to restricting all authorized users to the permissions granted by the **Reader** role.

Reference: <https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/lock-resources>

Question 45: **Incorrect**

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

No.

If an Azure resource has a read-only lock, you can add a delete lock to the resource.

- Yes

(Correct)

- No
(Incorrect)

Explanation

Yes, this is very much possible.

As an administrator, you can lock a subscription, resource group, or resource to prevent other users in your organization from accidentally deleting or modifying critical resources. The lock overrides any permissions the user might have.

You can set the lock level to **CanNotDelete** or **ReadOnly**. In the portal, the locks are called **Delete** and **Read-only** respectively.

- 1) **CanNotDelete** means authorized users can still read and modify a resource, but they can't delete the resource.
- 2) **ReadOnly** means authorized users can read a resource, but they can't delete or update the resource. Applying this lock is similar to restricting all authorized users to the permissions granted by the **Reader** role.

When you apply a lock at a parent scope, all resources within that scope inherit the same lock. Even resources you add later inherit the lock from the parent. The most restrictive lock in the inheritance takes precedence.

References: <https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/lock-resources>

Question 46: **Correct**

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

North America is represented by a single Azure region.

- Yes
- No
(Correct)

Explanation

No, North America has several Azure regions -

Including West US, Central US, South Central US, East Us, and Canada East.



Reference: <https://azure.microsoft.com/en-us/global-infrastructure/geographies/#overview>

Question 47: **Incorrect**

Every Azure region has multiple datacenters.

- Yes
(Correct)
- No
(Incorrect)

Explanation

A region is a set of **datacenters** deployed within a latency-defined perimeter and connected through a dedicated regional low-latency network. Each Azure region has a minimum of **three** availability zones.

What is an Azure region?



An Azure region is a set of datacenters, deployed within a latency-defined perimeter and connected through a dedicated regional low-latency network.

With more global regions than any other cloud provider, Azure gives customers the flexibility to deploy applications where they need. An Azure region has discrete pricing and service availability.

What is an Azure datacenter?



Azure datacenters are unique physical buildings—located all over the globe—that house a group of networked computer servers.

What are Azure Availability Zones?



Azure Availability Zones are unique physical locations within an Azure region and offer high availability to protect your applications and data from datacenter failures. Each zone is made up of one or more datacenters equipped with independent power, cooling, and networking.

The physical separation of availability zones within a region protects apps and data from facility-level issues. Zone-redundant services replicate your apps and data across Azure Availability Zones to protect from single points of failure.

Reference: <https://azure.microsoft.com/en-us/global-infrastructure/>

.....
Question 48: **Correct**

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

Data transfer between Azure services located in different Azure regions is always free.

- Yes
- No

(Correct)

Explanation

Outbound data transfer is charged at the normal rate and inbound data transfer is free.

Pricing details

Data Transfer	Price
Data Transfer In	Free
Data transfer between Availability Zones*	Free
Data transfer within same Availability Zone	Free
Data transfer from Azure origin to Azure CDN	Free

*Starting from July 1, 2021, Data transfer billing between Virtual machines across availability zones will begin. Please see FAQ for additional details.

Is data transfer between Azure services located within the same region charged?



No. For example, an Azure SQL database in the same region will not have any additional data transfer costs.

Is data transfer between Azure services located in two regions charged?



Yes. Outbound data transfer is charged at the normal rate and inbound data transfer is free.

References: <https://azure.microsoft.com/en-us/global-infrastructure/regions/>
<https://azure.microsoft.com/en-us/pricing/details/bandwidth/>

Question 49: Incorrect

Azure Cosmos DB is an example of a **Platform as a Service (PaaS)** offering.

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**
(Correct)
- **Infrastructure as a service (IaaS)**
(Incorrect)
- **Serverless computing**
- **Software as a Service (SaaS)**

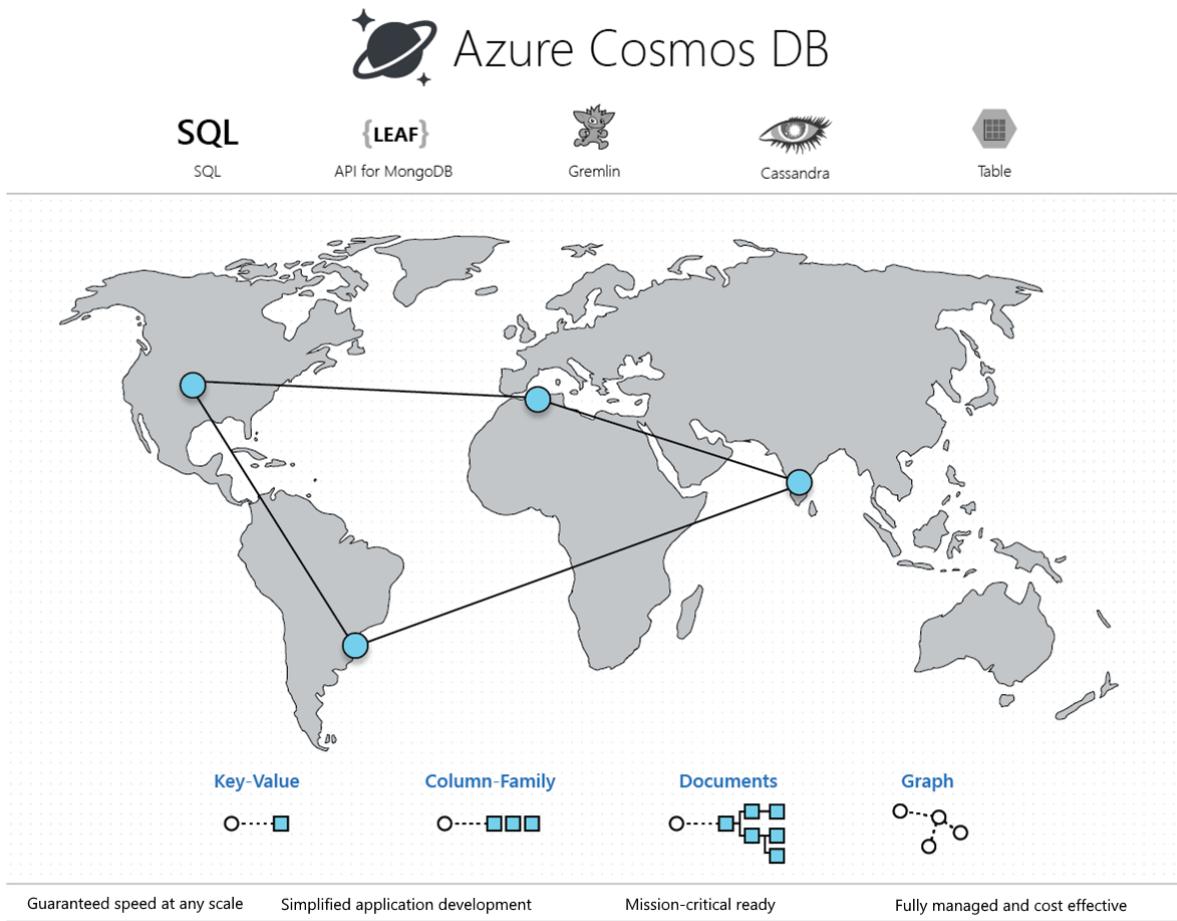
Explanation

Azure Cosmos DB is an example of a platform as a service (PaaS) cloud database provider.

From the official Azure documentation:

Azure Cosmos DB is a fully managed NoSQL database for modern app development. Single-digit millisecond response times, and automatic and instant scalability, guarantee speed at any scale. Business continuity is assured with [SLA-backed](#) availability and enterprise-grade security. App development is faster and more productive thanks to turnkey multi region data distribution

anywhere in the world, open source APIs and SDKs for popular languages. As a fully managed service, Azure Cosmos DB takes database administration off your hands with automatic management, updates and patching. It also handles capacity management with cost-effective serverless and automatic scaling options that respond to application needs to match capacity with demand.



References: <https://docs.microsoft.com/en-us/azure/cosmos-db/database-security>

Question 50: **Correct**

This question requires that you evaluate the bolded text to determine if it is correct.

An Azure region **contains one or more data centers that are connected by using a low-latency 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.

- No change is needed.
(Correct)
- Is found in each country where Microsoft has a subsidiary office
- Can be found in every country in Europe and the Americas only
- Contains one or more data centers that are connected by using a high-latency network

Explanation

A **region** is a set of data centres deployed within a latency-defined perimeter and connected through a dedicated regional low-latency network.

Regions are divided into **Availability Zones**. Availability Zones are physically separate locations within an Azure region. Each Availability Zone is made up of one or more datacenters equipped with independent power, cooling, and networking.

What is an Azure region?



An Azure region is a set of datacenters, deployed within a latency-defined perimeter and connected through a dedicated regional low-latency network.

With more global regions than any other cloud provider, Azure gives customers the flexibility to deploy applications where they need. An Azure region has discrete pricing and service availability.

What is an Azure datacenter?



Azure datacenters are unique physical buildings—located all over the globe—that house a group of networked computer servers.

What are Azure Availability Zones?



Azure Availability Zones are unique physical locations within an Azure region and offer high availability to protect your applications and data from datacenter failures. Each zone is made up of one or more datacenters equipped with independent power, cooling, and networking.

The physical separation of availability zones within a region protects apps and data from facility-level issues. Zone-redundant services replicate your apps and data across Azure Availability Zones to protect from single points of failure.

References: <https://azure.microsoft.com/en-gb/global-infrastructure/regions/>

Question 51: **Incorrect**

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

No.

Azure HDInsight can be used to run popular open-source frameworks including Apache Hadoop, Spark, Hive, Kafka, and more for open-source big data analytics.

- Yes
(Correct)
- No
(Incorrect)

Explanation

Yes! Azure HDInsight is an enterprise-ready, managed cluster service for open-source analytics.

You can run popular open-source frameworks—including Apache Hadoop, Spark, Hive, Kafka, and more—using Azure HDInsight, a customizable, enterprise-grade service for open-source analytics. You can also effortlessly process massive amounts of data and get all the benefits of the broad open-source project ecosystem with the global scale of Azure. Easily migrate your big data workloads and processing to the cloud.



Open-source projects and clusters are easy to spin up quickly without the need to install hardware or manage infrastructure



Big data clusters reduce costs through autoscaling and pricing tiers that allow you to pay for only what you use



Enterprise-grade security and industry-leading compliance with more than 30 certifications helps protect your data



Optimized components for open-source technologies such as Hadoop and Spark keep you up to date



Apache Ambari

Reference: <https://azure.microsoft.com/en-gb/services/hdinsight/#documentation>

Question 52: **Incorrect**

Which of the following is **NOT** a cost saving solution?

- Deallocate virtual machines during off hours
- Use Azure Reserved Virtual Machine instances
- Load balance your virtual machines for incoming messages
(Correct)
- Right-sized underutilised virtual machines
(Incorrect)

Explanation

Load balancing is used for **PERFORMANCE OPTIMISATION** and not cost saving.

Load balancing refers to evenly distributing load (incoming network traffic) across a group of backend resources or servers.

Azure Load Balancer operates at layer 4 of the Open Systems Interconnection (OSI) model. It's the single point of contact for clients. Load balancer distributes inbound flows that arrive at the load balancer's front end to backend pool instances. These flows are according to configured load-balancing rules and health probes. The backend pool instances can be Azure Virtual Machines or instances in a virtual machine scale set.

A **public load balancer** can provide outbound connections for virtual machines (VMs) inside your virtual network. These connections are accomplished by translating their private IP addresses to public IP addresses. Public Load Balancers are used to load balance internet traffic to your VMs.

An **internal (or private) load balancer** is used where private IPs are needed at the frontend only. Internal load balancers are used to load balance traffic inside a virtual network. A load balancer frontend can be accessed from an on-premises network in a hybrid scenario.

Reference: <https://docs.microsoft.com/en-us/azure/load-balancer/load-balancer-overview>

Question 53: **Incorrect**

Is there a default spending limit for the Azure Free account?

- Yes
(Correct)
- No
(Incorrect)

Explanation

A credit of \$200 is assigned to the Free account and is valid for 30 days from the date of activation.

Do I have to pay something after 30 days?

At the end of your first 30 days, you can continue using your free products after you upgrade your account to a [pay-as-you-go pricing](#) and remove the spending limit. If you stay within the service quantities included for free, you won't have to pay anything. The \$200 free credit acts as a spending limit.

Reference: <https://azure.microsoft.com/en-in/free/>

Question 54: **Correct**

A company has setup an Azure Virtual Private connection between their on-premise network and an Azure network. Would the company need to pay additional costs if they transfer petabytes of data from their on-premise network to Azure?

- Yes
- No
(Correct)

Explanation

Data ingress (incoming) to Azure data centers is free. How cool is that?

Pricing details

Data Transfer	Price
Data Transfer In	Free
Data transfer between Availability Zones*	Free
Data transfer within same Availability Zone	Free
Data transfer from Azure origin to Azure CDN	Free

*Starting from July 1, 2021, Data transfer billing between Virtual machines across availability zones will begin. Please see FAQ for additional details.

Reference: <https://azure.microsoft.com/en-us/pricing/details/bandwidth/>

Question 55: **Incorrect**

You attempt to create several managed Microsoft SQL Server instances in an Azure environment and receive a message that you must increase your Azure subscription limits.

What should you do to increase the limits?

- Create a service health alert
- Upgrade your support plan
(Incorrect)
- Modify an Azure policy
- Create a new support request
(Correct)

Explanation

If you want to raise the limit or quota above the default limit, you can open an online customer support request at no charge.

Reference: <https://docs.microsoft.com/en-us/azure/azure-subscription-service-limits>

Question 56: **Incorrect**

This question requires that you evaluate the bolded text to determine if it is correct.

You have several virtual machines in an Azure subscription. You create a new subscription. **The virtual machines cannot be moved to the new subscription.**

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
(Incorrect)
- The virtual machines can be moved to the new subscription
(Correct)
- The virtual machines can be moved to the new subscription only if they are all in the same resource group
- The virtual machines can be moved to the new subscription only if they run Windows Server 2016.

Explanation

Virtual Machines are resources and can be moved to a new subscription.

There is **NO** limitation on them being able to move from one subscription to other only if they're in the same resource group , or run Windows Server.

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

Question 57: **Incorrect**

Which of the following statements **BEST** describes the Modern Lifecycle Policy for Azure products and services?

- For products governed by the Modern Lifecycle Policy, Microsoft will provide a minimum of 12 months' notification prior to ending support if no successor product or service is offered—excluding free services or preview releases.
(Correct)
- For products governed by the Modern Lifecycle Policy, Microsoft will provide a minimum of 6 months' notification prior to ending support if no successor product or service is offered—excluding free services or preview releases.
- For products and services governed by the Modern Lifecycle Policy, unless otherwise noted, Microsoft's policy is to provide a *minimum 90 days'* notification when customers

are required to take action in order to avoid significant degradation to the normal use of the product or service.

(Incorrect)

- For products and services governed by the Modern Lifecycle Policy, unless otherwise noted, Microsoft's policy is to provide a *minimum 120 days' notification* when customers are required to take action in order to avoid significant degradation to the normal use of the product or service.

Explanation

The Modern Lifecycle Policy covers products and services that are serviced and supported continuously. Under this policy, the product or service remains in support if the following criteria are met:

Customers must stay current as per the servicing and system requirements published for the product or service.

Customers must be licensed to use the product or service.

Microsoft must currently offer support for the product or service.

Change notification

Changes for these products and services may be more frequent and require customers to be alert for forthcoming modifications to their product or service.

For products and services governed by the Modern Lifecycle Policy, unless otherwise noted, Microsoft's policy is to provide a *minimum 30 days' notification* when customers are required to take action in order to avoid significant degradation to the normal use of the product or service.

Continuity and migration

For products governed by the Modern Lifecycle Policy, Microsoft will provide a minimum of *12 months' notification* prior to ending support if no successor product or service is offered—excluding free services or preview releases.

Hence, only the statement - "For products governed by the Modern Lifecycle Policy, Microsoft will provide a minimum of **12 months'** notification prior to ending support if no successor product or service is offered —excluding free services or preview releases." is correct.

Question 58: **Incorrect**

Which of the following services is an Apache Spark-based analytics platform optimized for the Microsoft Azure cloud services platform?

- Azure Databricks
(Correct)
- Azure Cognitive Services
- Azure Machine Learning Studio
- Azure Bot Services
(Incorrect)

Explanation

Please read this answer carefully. 'Optimised' is the keyword in the question.

Lot of people get confused between Azure Databricks and Azure HDInsight.

Azure HDInsight is a managed Apache Hadoop service that lets you run Apache Spark, Apache Hive, Apache Kafka, Apache HBase, and more in the cloud.

Azure Databricks is a **premium Spark offering** that is ideal for customers who want their data scientists to collaborate easily and run their **Spark** based workloads efficiently and at industry leading performance.

It is essentially an Apache Spark-based analytics platform optimized for the Microsoft Azure cloud services platform.

References:

<https://docs.microsoft.com/en-us/answers/questions/26097/can-anyone-please-post-the-differences-between-azu.html>

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

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

Question 59: **Correct**

An Azure administrator plans to run a PowerShell script that creates Azure resources.

You need to recommend which computer configuration to use to run the script.

Solution: Run the script from a computer that runs Windows 10 and has the Azure PowerShell module installed.

Does this meet the goal?

- Yes
(Correct)
- No

Explanation

A Powershell script can create Azure resources, and since the Powershell module is installed on the Windows 10 computer, this solution can successfully meet our requirements.

Reference: <https://docs.microsoft.com/en-us/powershell/scripting/windows-powershell/ise/how-to-write-and-run-scripts-in-the-windows-powershell-ise?view=powershell-7.1&viewFallbackFrom=powershell-6>

Question 60: **Correct**

For the statement below, select yes if the statement is True, otherwise select No.

The private preview phase for a service includes formal support.

- Yes
- No
(Correct)

Explanation

No. Private is a phase when Azure invites a few customers to take part in early access to new concepts and features. This phase does not include formal support. It is not available to the general public as well.

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