

## AZ-204: Microsoft Certified: Azure Developer Associate

You have two Hyper-V hosts named Host1 and Host2. Host1 has an Azure virtual machine named VM1 that was deployed by using a custom Azure Resource Manager template.

You need to move VM1 to Host2.

What should you do?

- A. From the Update management blade, click Enable.
- B. From the Overview blade, move VM1 to a different subscription.
- C. From the Redeploy blade, click Redeploy.
- D. From the Profile blade, modify the usage location.



DRAG DROP -

You have downloaded an Azure Resource Manager template to deploy numerous virtual machines. The template is based on a current virtual machine, but must be adapted to reference an administrative password.

You need to make sure that the password is not stored in plain text.

You are preparing to create the necessary components to achieve your goal.

Which of the following should you create to achieve your goal? Answer by dragging the correct option from the list to the answer area.

Select and Place:

Options	Answer
---------	--------

- |   |
|---|
| An Azure Key Vault                              |
| An Azure Storage account                        |
| Azure Active Directory (AD) Identity Protection |
| An access policy                                |
| An Azure policy                                 |
| A backup policy                                 |



Your company has an Azure Kubernetes Service (AKS) cluster that you manage from an Azure AD-joined device. The cluster is located in a resource group.

Developers have created an application named MyApp. MyApp was packaged into a container image.

You need to deploy the YAML manifest file for the application.

Solution: You install the Azure CLI on the device and run the kubectl apply -f myapp.yaml command.

Does this meet the goal?

- A. Yes
- B. No

Your company has an Azure Kubernetes Service (AKS) cluster that you manage from an Azure AD-joined device. The cluster is located in a resource group.

Developers have created an application named MyApp. MyApp was packaged into a container image.

You need to deploy the YAML manifest file for the application.

Solution: You install the docker client on the device and run the docker run -it microsoft/azure-cli:0.10.17 command.

Does this meet the goal?

- A. Yes
- B. No

Your company has a web app named WebApp1.

You use the WebJobs SDK to design a triggered App Service background task that automatically invokes a function in the code every time new data is received in a queue.

You are preparing to configure the service processes a queue data item.

Which of the following is the service you should use?

- A. Logic Apps
- B. WebJobs
- C. Flow
- D. Functions

ANSWER: B (WebJobs) (The correct answer is WebJobs because it is a triggered App Service background task that automatically invokes a function in the code every time new data is received in a queue.)

Your company has an Azure subscription.

You need to deploy a number of Azure virtual machines to the subscription by using Azure Resource Manager (ARM) templates. The virtual machines will be included in a single availability set.

You need to ensure that the ARM template allows for as many virtual machines as possible to remain accessible in the event of fabric failure or maintenance.

Which of the following is the value that you should configure for the `platformFaultDomainCount` property?

- A. 10
- B. 30
- C. Min Value
- D. Max Value

Your company has an Azure subscription.

You need to deploy a number of Azure virtual machines to the subscription by using Azure Resource Manager (ARM) templates. The virtual machines will be included in a single availability set.

You need to ensure that the ARM template allows for as many virtual machines as possible to remain accessible in the event of fabric failure or maintenance.

Which of the following is the value that you should configure for the `platformUpdateDomainCount` property?

- A. 10
- B. 20
- C. 30
- D. 40

DRAG DROP -

You are creating an Azure Cosmos DB account that makes use of the SQL API. Data will be added to the account every day by a web application.

You need to ensure that an email notification is sent when information is received from IoT devices, and that compute cost is reduced.

You decide to deploy a function app.

Which of the following should you configure the function app to use? Answer by dragging the correct options from the list to the answer area.

Select and Place:

## Options

Azure Cosmos DB connector

SendGrid action

Consumption plan

Azure Event Hubs binding

SendGrid binding

## Answer



This question requires that you evaluate the underlined text to determine if it is correct. Your company has an on-premises deployment of MongoDB, and an Azure Cosmos DB account that makes use of the MongoDB API. You need to devise a strategy to migrate MongoDB to the Azure Cosmos DB account. You include the Data Management Gateway tool in your migration strategy. Instructions: Review the underlined text. If it makes the statement correct, select 'No change required.' If the statement is incorrect, select the answer choice that makes the statement correct.

- A. No change required
- B. mongorestore
- C. Azure Storage Explorer
- D. AzCopy

<https://docs.microsoft.com/en-us/azure/cosmos-db/mongodb-pre-migration>

You are developing an e-Commerce Web App. You want to use Azure Key Vault to ensure that sign-ins to the e-Commerce Web App are secured by using Azure App Service authentication and Azure Active Directory (AAD).

What should you do on the e-Commerce Web App?

- A. Run the az keyvault secret command.
- B. Enable Azure AD Connect.
- C. Enable Managed Service Identity (MSI).
- D. Create an Azure AD service principal.

This question requires that you evaluate the underlined text to determine if it is correct. Your Azure Active Directory Azure (Azure AD) tenant has an Azure subscription linked to it. Your developer has created a mobile application that obtains Azure AD access tokens using the OAuth 2 implicit grant type.

The mobile application must be registered in Azure AD.

You require a redirect URI from the developer for registration purposes.

Instructions: Review the underlined text. If it makes the statement correct, select `No change is needed.` If the statement is incorrect, select the answer choice that makes the statement correct.

- A. No change required.
- B. a secret
- C. a login hint
- D. a client ID

Answer: A

You are creating an Azure key vault using PowerShell. Objects deleted from the key vault must be kept for a set period of 90 days.

Which two of the following parameters must be used in conjunction to meet the requirement? (Choose two.)

- A. EnabledForDeployment
- B. EnablePurgeProtection
- C. EnabledForTemplateDeployment
- D. EnableSoftDelete

The `EnableSoftDelete` parameter allows the key vault to retain deleted objects for a specified duration. This parameter enables soft delete, which allows the key vault to retain deleted objects for a specified period of time (90 days in this case) before they are permanently deleted.

#### HOTSPOT -

You have an Azure Active Directory (Azure AD) tenant.

You want to implement multi-factor authentication by making use of a conditional access policy. The conditional access policy must be applied to all users when they access the Azure portal.

Which three settings should you configure? To answer, select the appropriate settings in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

#### Answer Area

The screenshot shows the 'Require MFA for Azure portal access' conditional access policy. The 'Name' field is set to 'MFA required for Azure portal access'. The 'Assignments' section shows three categories: 'Users and groups', 'Cloud apps', and 'Conditions', each with 0 selected items. The 'Access controls' section shows two categories: 'Grant' and 'Session', each with 0 selected controls. The 'Info' and 'Delete' buttons are visible at the top of the policy page.

Answer:



You manage an Azure SQL database that allows for Azure AD authentication. You need to make sure that database developers can connect to the SQL database via Microsoft SQL Server Management Studio (SSMS). You also need to make sure the developers use their on-premises Active Directory account for authentication. Your strategy should allow for authentication prompts to be kept to a minimum. Which of the following should you implement?

- A. Azure AD token.
- B. Azure Multi-Factor authentication.
- C. Active Directory integrated authentication.
- D. OATH software tokens.

You are developing an application to transfer data between on-premises file servers and Azure Blob storage. The application stores keys, secrets, and certificates in Azure Key Vault and makes use of the Azure Key Vault APIs.

You want to configure the application to allow recovery of an accidental deletion of the key vault or key vault objects for 90 days after deletion.

What should you do?

- A. Run the Add-AzKeyVaultKey cmdlet.
- B. Run the az keyvault update --enable-soft-delete true --enable-purge-protection true CLI.
- C. Implement virtual network service endpoints for Azure Key Vault.
- D. Run the az keyvault update --enable-soft-delete false CLI.

## HOTSPOT -

You have developed a Web App for your company. The Web App provides services and must run in multiple regions.

You want to be notified whenever the Web App uses more than 85 percent of the available CPU cores over a 5 minute period. Your solution must minimize costs.

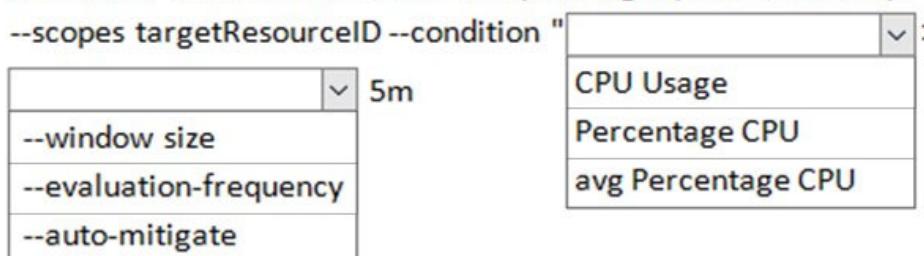
Which command should you use? To answer, select the appropriate settings in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

```
az monitor metrics alert create -n myAlert -g myResourceGroup
--scopes targetResourceId --condition "> 85"
--window-size 5m
--evaluation-frequency
--auto-mitigate
```



You are configuring a web app that delivers streaming video to users. The application makes use of continuous integration and deployment.

You need to ensure that the application is highly available and that the users' streaming experience is constant. You also want to configure the application to store data in a geographic location that is nearest to the user.

Solution: You include the use of Azure Redis Cache in your design.

Does the solution meet the goal?

- A. Yes
- B. No

You are configuring a web app that delivers streaming video to users. The application makes use of continuous integration and deployment.

You need to ensure that the application is highly available and that the users' streaming experience is constant. You also want to configure the application to store data in a geographic location that is nearest to the user.

Solution: You include the use of an Azure Content Delivery Network (CDN) in your design.

Does the solution meet the goal?

- A. Yes
- B. No

## Answer: A

You are configuring a web app that delivers streaming video to users. The application makes use of continuous integration and deployment.

You need to ensure that the application is highly available and that the users' streaming experience is constant. You also want to configure the application to store data in a geographic location that is nearest to the user.

Solution: You include the use of a Storage Area Network (SAN) in your design.

Does the solution meet the goal?

- A. Yes
- B. No

You develop a Web App on a tier D1 app service plan.

You notice that page load times increase during periods of peak traffic.

You want to implement automatic scaling when CPU load is above 80 percent. Your solution must minimize costs.

What should you do first?

- A. Enable autoscaling on the Web App.
- B. Switch to the Premium App Service tier plan.
- C. Switch to the Standard App Service tier plan.
- D. Switch to the Azure App Services consumption plan.

Your company's Azure subscription includes an Azure Log Analytics workspace.

Your company has a hundred on-premises servers that run either Windows Server 2012 R2 or Windows Server 2016, and is linked to the Azure Log Analytics workspace. The Azure Log Analytics workspace is set up to gather performance counters associated with security from these linked servers.

You must configure alerts based on the information gathered by the Azure Log Analytics workspace.

You have to make sure that alert rules allow for dimensions, and that alert creation time should be kept to a minimum. Furthermore, a single alert notification must be created when the alert is created and when the alert is resolved.

You need to make use of the necessary signal type when creating the alert rules.

Which of the following is the option you should use?

- A. The Activity log signal type.
- B. The Application Log signal type.
- C. The Metric signal type.

- D. The Audit Log signal type.

You are developing a .NET Core MVC application that allows customers to research independent holiday accommodation providers.

You want to implement Azure Search to allow the application to search the index by using various criteria to locate documents related to accommodation.

You want the application to allow customers to search the index by using regular expressions. What should you do?

- A. Configure the SearchMode property of the SearchParameters class.
- B. Configure the QueryType property of the SearchParameters class.
- C. Configure the Facets property of the SearchParameters class.
- D. Configure the Filter property of the SearchParameters class.

You are a developer at your company.

You need to update the definitions for an existing Logic App.

What should you use?

- A. the Enterprise Integration Pack (EIP)
- B. the Logic App Code View
- C. the API Connections
- D. the Logic Apps Designer

You are developing a solution for a public facing API.

The API back end is hosted in an Azure App Service instance. You have implemented a RESTful service for the API back end.

You must configure back-end authentication for the API Management service instance.

Solution: You configure Basic gateway credentials for the Azure resource.

Does the solution meet the goal?

- A. Yes
- B. No

You are developing a solution for a public facing API.

The API back end is hosted in an Azure App Service instance. You have implemented a RESTful service for the API back end.

You must configure back-end authentication for the API Management service instance.

Solution: You configure Client cert gateway credentials for the HTTP(s) endpoint.

Does the solution meet the goal?

- A. Yes
- B. No

You are developing a .NET Core MVC application that allows customers to research independent holiday accommodation providers.

You want to implement Azure Search to allow the application to search the index by using various criteria to locate documents related to accommodation venues.

You want the application to list holiday accommodation venues that fall within a specific price range and are within a specified distance to an airport.

What should you do?

- A. Configure the SearchMode property of the SearchParameters class.
- B. Configure the QueryType property of the SearchParameters class.
- C. Configure the Facets property of the SearchParameters class.
- D. Configure the Filter property of the SearchParameters class.

You are a developer at your company.

You need to edit the workflows for an existing Logic App.

What should you use?

- A. the Enterprise Integration Pack (EIP)
- B. the Logic App Code View
- C. the API Connections
- D. the Logic Apps Designer

**DRAG DROP -**

You are a developer for a company that provides a bookings management service in the tourism industry. You are implementing Azure Search for the tour agencies listed in your company's solution.

You create the index in Azure Search. You now need to use the Azure Search .NET SDK to import the relevant data into the Azure Search service.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions from left to right and arrange them in the correct order.

Select and Place:

**Answer Area**

Create a DataSource instance and set its Container property to the DataContainer.

Create an IndexBatch that contains the documents which must be added.

Set the DataSources property of the SearchServiceClient.

Create a SearchIndexClient object to connect to the search index.

Call the Documents.Index method of the SearchIndexClient and pass the IndexBatch.

Call the Documents.Suggest method of the SearchIndexClient and pass the DataSource.



You are developing an application that applies a set of governance policies for internal and external services, as well as for applications.

You develop a stateful ASP.NET Core 2.1 web application named PolicyApp and deploy it to an Azure App Service Web App. The PolicyApp reacts to events from Azure Event Grid and performs policy actions based on those events.

You have the following requirements:

- ☞ Authentication events must be used to monitor users when they sign in and sign out.
- ☞ All authentication events must be processed by PolicyApp.
- ☞ Sign outs must be processed as fast as possible.

What should you do?

- A. Create a new Azure Event Grid subscription for all authentication events. Use the subscription to process sign-out events.
- B. Create a separate Azure Event Grid handler for sign-in and sign-out events.
- C. Create separate Azure Event Grid topics and subscriptions for sign-in and sign-out events.
- D. Add a subject prefix to sign-out events. Create an Azure Event Grid subscription. Configure the subscription to use the subjectBeginsWith filter.

#### HOTSPOT -

You are developing a C++ application that compiles to a native application named process.exe.

The application accepts images as input and returns images in one of the following image formats: GIF, PNG, or JPEG.

You must deploy the application as an Azure Function.

You need to configure the function and host json files.

How should you complete the json files? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

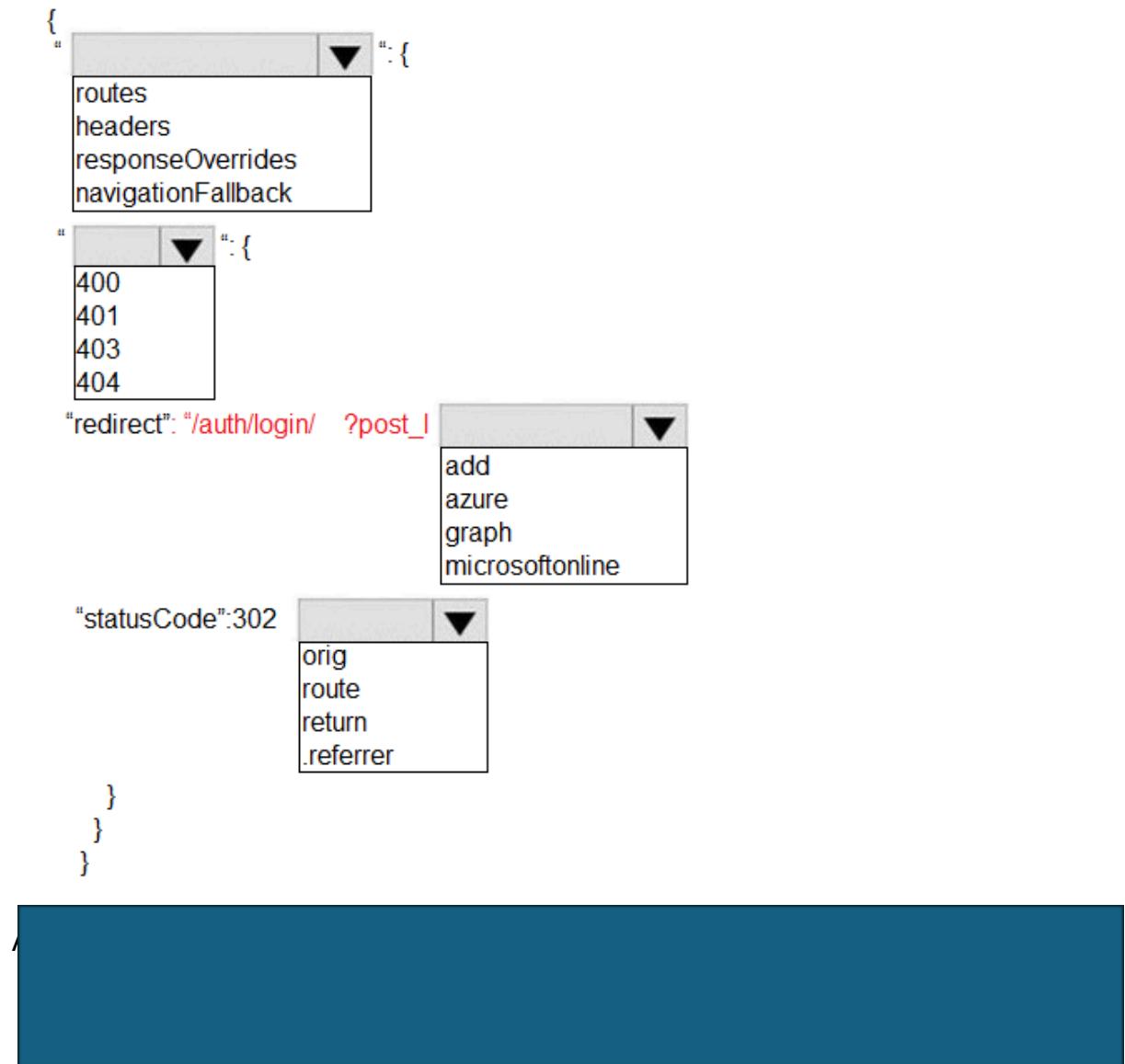
```
function.json
{
  "type": "http"
  "platform": "gcm"
  "datatype": "stream"
  "path": "process.exe"
  "direction": "out",
  "name" : "result"
}
host.json
{
  "customHandler": { "description": {
    "languageWorker": { "path": {
      "extensions": { "worker": {
        "extensionBundle": {
          "defaultExecutablePath": "process.exe"
        }
      }
    }
  }
  "enableForwardingHttpRequest": true
  "enableForwardingHttpRequest": false
}
}
```

You are developing an Azure Static Web app that contains training materials for a tool company. Each tool's training material is contained in a static web page that is linked from the tool's publicly available description page.

A user must be authenticated using Azure AD prior to viewing training.

You need to ensure that the user can view training material pages after authentication.

How should you complete the configuration file? To answer, select the appropriate options in the answer area.



You are authoring a set of nested Azure Resource Manager templates to deploy Azure resources. You author an Azure Resource Manager template named `mainTemplate.json` that contains the following linked templates: `linkedTemplate1.json`, `linkedTemplate2.json`.

You add parameters to a parameters template file named `mainTemplate.parameters.json`. You save all templates on a local device in the `C:\templates\` folder.

You have the following requirements:

- Store the templates in Azure for later deployment.
- Enable versioning of the templates.

- Manage access to the templates by using Azure RBAC.
- Ensure that users have read-only access to the templates.
- Allow users to deploy the templates.

You need to store the templates in Azure.

How should you complete the command? To answer, select the appropriate options in the answer area.

```
az ts create
storage account create
storage account update
blueprint artifact template create

--name templateStore \
--version "1.0" \
--resource-group templatesRG \
--location "eastus" \
--template-file "C:\templates\"
--tags Dept=HumanResources Environment=Production
```

You are developing a service where customers can report news events from a browser using Azure Web PubSub. The service is implemented as an Azure Function App that uses the JSON WebSocket subprotocol to receive news events.

You need to implement the bindings for the Azure Function App.

How should you configure the binding? To answer, select the appropriate options in the answer area.

```
{  
  "bindings": [  
    {  
      "type": "user",  
      "direction": "in",  
      "name": "data",  
      "eventName": "message",  
      "eventType": "user"  
    }  
  ]  
}
```



You are building a software-as-a-service (SaaS) application that analyzes DNA data that will run on Azure virtual machines (VMs) in an availability zone. The data is stored on managed disks attached to the VM. The performance of the analysis is determined by the speed of the disk attached to the VM.

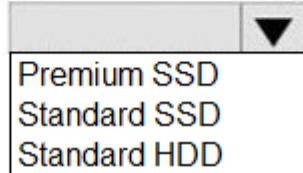
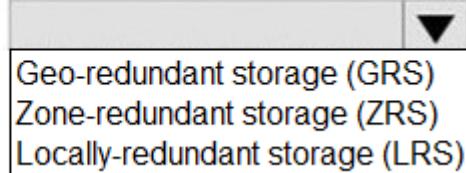
You have the following requirements:

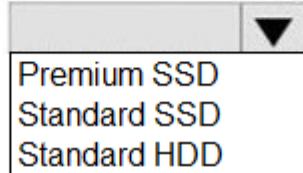
- The application must be able to quickly revert to the previous day's data if a systemic error is detected.

- The application must minimize downtime in the case of an Azure datacenter outage.

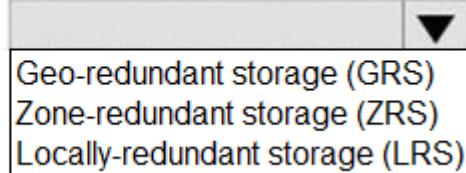
You need to provision the managed disk for the VM to maximize performance while meeting the requirements.

Which type of Azure Managed Disk should you use? To answer, select the appropriate options in the answer area.

Requirement	Solution
Disk type	 <ul style="list-style-type: none"><li>Premium SSD</li><li>Standard SSD</li><li>Standard HDD</li></ul>
Redundancy	 <ul style="list-style-type: none"><li>Geo-redundant storage (GRS)</li><li>Zone-redundant storage (ZRS)</li><li>Locally-redundant storage (LRS)</li></ul>



- Premium SSD
- Standard SSD
- Standard HDD



- Geo-redundant storage (GRS)
- Zone-redundant storage (ZRS)
- Locally-redundant storage (LRS)

You are developing an application that includes two Docker containers.

The application must meet the following requirements:

- The containers must not run as root.
- The containers must be deployed to Azure Container Instances by using a YAML file.
- The containers must share a lifecycle, resources, local network, and storage volume.
- The storage volume must persist through container crashes.
- The storage volume must be deployed on stop or restart of the containers.

You need to configure Azure Container Instances for the application.

Which configuration values should you use? To answer, select the appropriate options in the answer area.

**Configuration setting    Configuration value**

Shared lifecycle

- Container group
- Container image
- Service endpoint
- Resource group

Storage volume

- Azure file share
- Secret
- Empty directory
- Cloned Git repo



You are implementing a software as a service (SaaS) ASP.NET Core web service that will run as an Azure Web App. The web service will use an on-premises

SQL Server database for storage. The web service also includes a WebJob that processes data updates. Four customers will use the web service.

- ☞ Each instance of the WebJob processes data for a single customer and must run as a singleton instance.
- ☞ Each deployment must be tested by using deployment slots prior to serving production data.
- ☞ Azure costs must be minimized.
- ☞ Azure resources must be located in an isolated network.

You need to configure the App Service plan for the Web App.

How should you configure the App Service plan? To answer, select the appropriate settings in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

<b>App service plan setting</b>	<b>Value</b>
Number of VM instances	<div style="border: 1px solid black; padding: 5px; width: 150px; height: 150px; display: flex; align-items: center; justify-content: center; font-size: 2em; font-weight: bold;">▼</div> <div style="border: 1px solid black; padding: 5px; width: 150px; height: 150px; display: flex; align-items: center; justify-content: center; font-size: 1em; font-weight: normal; margin-top: 10px;">2</div> <div style="border: 1px solid black; padding: 5px; width: 150px; height: 150px; display: flex; align-items: center; justify-content: center; font-size: 1em; font-weight: normal; margin-top: 10px;">4</div> <div style="border: 1px solid black; padding: 5px; width: 150px; height: 150px; display: flex; align-items: center; justify-content: center; font-size: 1em; font-weight: normal; margin-top: 10px;">8</div> <div style="border: 1px solid black; padding: 5px; width: 150px; height: 150px; display: flex; align-items: center; justify-content: center; font-size: 1em; font-weight: normal; margin-top: 10px;">16</div>
Pricing tier	<div style="border: 1px solid black; padding: 5px; width: 150px; height: 150px; display: flex; align-items: center; justify-content: center; font-size: 2em; font-weight: bold;">▼</div> <div style="border: 1px solid black; padding: 5px; width: 150px; height: 150px; display: flex; align-items: center; justify-content: center; font-size: 1em; font-weight: normal; margin-top: 10px;">Isolated</div> <div style="border: 1px solid black; padding: 5px; width: 150px; height: 150px; display: flex; align-items: center; justify-content: center; font-size: 1em; font-weight: normal; margin-top: 10px;">Standard</div> <div style="border: 1px solid black; padding: 5px; width: 150px; height: 150px; display: flex; align-items: center; justify-content: center; font-size: 1em; font-weight: normal; margin-top: 10px;">Premium</div> <div style="border: 1px solid black; padding: 5px; width: 150px; height: 150px; display: flex; align-items: center; justify-content: center; font-size: 1em; font-weight: normal; margin-top: 10px;">Consumption</div>

You are a developer for a software as a service (SaaS) company that uses an Azure Function to process orders. The Azure Function currently runs on an Azure Function app that is triggered by an Azure Storage queue.

You are preparing to migrate the Azure Function to Kubernetes using Kubernetes-based Event Driven Autoscaling (KEDA).

You need to configure Kubernetes Custom Resource Definitions (CRD) for the Azure Function. Which CRDs should you configure? To answer, drag the appropriate CRD types to the correct locations. Each CRD type may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

CRD types	Setting	CRD type
Secret	Azure Function code	
Deployment	Polling interval	
ScaledObject	Azure Storage connection string	
TriggerAuthentication		

You are creating a CLI script that creates an Azure web app and related services in Azure App Service. The web app uses the following variables:

Variable name	Value
\$gitrepo	<a href="https://github.com/Contos/webapp">https://github.com/Contos/webapp</a>
\$webapppname	Webapp1103

You need to automatically deploy code from GitHub to the newly created web app.

How should you complete the script? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

```
az group create --location westeurope --name myResourceGroup
az webapp create --name $webappName --resource-group myResourceGroup --sku FREE
az appservice plan create
az webapp deployment
az group delete

az webapp create --name $webappName --resource-group myResourceGroup
az appservice plan create
az webapp deployment
az group delete

--repo-url $gitrepo --branch master --manual-integration
git clone $gitrepo
--plan $webappName

source config --name $webappName
az webapp
az appservice plan create
az webapp deployment
az group delete

--resource-group myResourceGroup
--repo-url $gitrepo --branch master --manual-integration
git clone $gitrepo
--plan $webappName
```



You develop a software as a service (SaaS) offering to manage photographs. Users upload photos to a web service which then stores the photos in Azure Storage Blob storage. The storage account type is General-purpose V2. When photos are uploaded, they must be processed to produce and save a mobile-friendly version of the image. The process to produce a mobile-friendly version of the image must start in less than one minute. You need to design the process that starts the photo processing. Solution: Trigger the photo processing from Blob storage events. Does the solution meet the goal?

- A. Yes
- B. No

You develop and deploy an Azure App Service API app to a Windows-hosted deployment slot named Development. You create additional deployment slots named Testing and Production. You enable auto swap on the Production deployment slot.

You need to ensure that scripts run and resources are available before a swap operation occurs.

Solution: Update the web.config file to include the applicationInitialization configuration element. Specify custom initialization actions to run the scripts.

Does the solution meet the goal?

- A. No
- B. Yes

You develop and deploy an Azure App Service API app to a Windows-hosted deployment slot named Development. You create additional deployment slots named Testing and Production. You enable auto swap on the Production deployment slot.

You need to ensure that scripts run and resources are available before a swap operation occurs.

Solution: Enable auto swap for the Testing slot. Deploy the app to the Testing slot.

Does the solution meet the goal?

- A. No
- B. Yes

You develop and deploy an Azure App Service API app to a Windows-hosted deployment slot named Development. You create additional deployment slots named Testing and Production. You enable auto swap on the Production deployment slot.

You need to ensure that scripts run and resources are available before a swap operation occurs.

Solution: Disable auto swap. Update the app with a method named statuscheck to run the scripts. Re-enable auto swap and deploy the app to the Production slot.

Does the solution meet the goal?

- A. No
- B. Yes

You develop a software as a service (SaaS) offering to manage photographs. Users upload photos to a web service which then stores the photos in Azure Storage Blob storage. The storage account type is General-purpose V2. When photos are uploaded, they must be processed to produce and save a mobile-friendly version of the image. The process to produce a mobile-friendly version of the image must start in less than one minute. You need to design the process that starts the photo processing. Solution: Convert the Azure Storage account to a BlockBlobStorage storage account. Does the solution meet the goal?

- A. Yes
- B. No

You are developing an Azure Web App. You configure TLS mutual authentication for the web app.

You need to validate the client certificate in the web app. To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Property	Value
Client certificate location	HTTP request header Client cookie HTTP message body URL query string
Encoding type	HTML URL Unicode Base64

You are developing a Docker/Go using Azure App Service Web App for Containers. You plan to run the container in an App Service on Linux. You identify a Docker container image to use.

None of your current resource groups reside in a location that supports Linux. You must minimize the number of resource groups required.

You need to create the application and perform an initial deployment.

Which three Azure CLI commands should you use to develop the solution? To answer, move the

appropriate commands from the list of commands to the answer area and arrange them in the correct order.

Select and Place:

**Azure CLI Commands**

**Answer Area**

az group create

az group update

az webapp update

az webapp create

az appservice plan create



Fourth Coffee has an ASP.NET Core web app that runs in Docker. The app is mapped to the [www.fourthcoffee.com](http://www.fourthcoffee.com) domain.

Fourth Coffee is migrating this application to Azure.

You need to provision an App Service Web App to host this docker image and map the custom domain to the App Service web app.

A resource group named FourthCoffeePublicWebResourceGroup has been created in the

WestUS region that contains an App Service Plan named AppServiceLinuxDockerPlan.

Which order should the CLI commands be used to develop the solution? To answer, move all of the Azure CLI commands from the list of commands to the answer area and arrange them in the correct order.

Select and Place:

Azure CLI Commands	Answer Area
az webapp config container set --docker-custom-image-name \$dockerHubContainerPath --name \$appName --resource-group fourthCoffeePublicWebResourceGroup	
az webapp config hostname add --webapp-name \$appName --resource-group fourthCoffeePublicWebResourceGroup \ --hostname \$fqdn	 
az webapp create --name \$appName --plan AppServiceLinuxDockerPlan --resource-group fourthCoffeePublicWebResourceGroup	
#/bin/bash appName="FourthCoffeePublicWeb\$random" location="WestUS" dockerHubContainerPath="FourthCoffee/publicweb:v1" fqdn="http://www.fourthcoffee.com">www.fourthcoffee.com	

me

You are developing a serverless Java application on Azure. You create a new Azure Key Vault to work with secrets from a new Azure Functions application.

The application must meet the following requirements:

- ☞ Reference the Azure Key Vault without requiring any changes to the Java code.
- ☞ Dynamically add and remove instances of the Azure Functions host based on the number of

incoming application events.

- ⇒ Ensure that instances are perpetually warm to avoid any cold starts.
- ⇒ Connect to a VNet.
- ⇒ Authentication to the Azure Key Vault instance must be removed if the Azure Function application is deleted.

You need to grant the Azure Functions application access to the Azure Key Vault.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions	Answer Area
Create a user-assigned managed identity for the application.	>
Create the Azure Functions app with a Premium plan type.	↑ ↓
Create an access policy in Azure Key Vault for the application identity.	<
Create an SSL certification in Azure Key Vault for the application identity.	↑ ↓
Create the Azure Functions app with an App Service plan type.	<
Create the Azure Functions app with a Consumption plan type.	<
Create a system-assigned managed identity for the application.	<

You develop a website. You plan to host the website in Azure. You expect the website to experience high traffic volumes after it is published.

You must ensure that the website remains available and responsive while minimizing cost.

You need to deploy the website.

What should you do?

- A. Deploy the website to a virtual machine. Configure the virtual machine to automatically scale when the CPU load is high.
- B. Deploy the website to an App Service that uses the Shared service tier. Configure the App Service plan to automatically scale when the CPU load is high.
- C. Deploy the website to a virtual machine. Configure a Scale Set to increase the virtual machine instance count when the CPU load is high.
- D. Deploy the website to an App Service that uses the Standard service tier. Configure the App Service plan to automatically scale when the CPU load is high.

A company is developing a Java web app. The web app code is hosted in a GitHub repository located at <https://github.com/Contoso/webapp>.

The web app must be evaluated before it is moved to production. You must deploy the initial code release to a deployment slot named staging.

You need to create the web app and deploy the code.

How should you complete the commands? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

#### Answer Area

```
gitrepo=https://github.com/Contoso/webapp
webappname=BusinessWebApp
resourcegroupname=BusinessAppResourceGroup
az group create --location centralus --name $resourcegroupname
az webapp create --name $webappname --resource-group $resourcegroupname --sku S3
az webapp create --name $webappname --resource-group $resourcegroupname --plan $webappname
az webapp create --name $webappname --resource-group $resourcegroupname --slot staging
az webapp config --name $webappname --resource-group $resourcegroupname \
--slot staging --repo-url $gitrepo --branch master --manual-integration
```

You have a web service that is used to pay for food deliveries. The web service uses Azure Cosmos DB as the data store.

You plan to add a new feature that allows users to set a tip amount. The new feature requires

that a property named `tip` on the document in Cosmos DB must be present and contain a numeric value.

There are many existing websites and mobile apps that use the web service that will not be updated to set the tip property for some time.

How should you complete the trigger?

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

### Hot Area:

## Answer Area

```
function ensureTip() {  
    var r = _____;  
    r.value();  
    r.readDocument('item');  
    getContext().getRequest();  
    getContext().getResponse();  
    var i = r.getBody();  
}
```

```
if (!("tip" in i)) {  
  if (request.getValue("tip") == null) {  
    if (isNaN(i["tip"]) || i["tip"] == null) {  
      if (typeof __.pluck("tip") == 'number') {
```

```
i["tip"] = 0;
```

```
r.setBody(i);
r.setValue(i);
___.upsertDocument(i);
___.replaceDocument(i);
```

1

You develop an HTTP triggered Azure Function app to process Azure Storage blob data. The app is triggered using an output binding on the blob.

The app continues to time out after four minutes. The app must process the blob data.  
You need to ensure the app does not time out and processes the blob data.  
Solution: Use the Durable Function async pattern to process the blob data.  
Does the solution meet the goal?

- A. Yes
- B. No

You develop an HTTP triggered Azure Function app to process Azure Storage blob data. The app is triggered using an output binding on the blob.

The app continues to time out after four minutes. The app must process the blob data.  
You need to ensure the app does not time out and processes the blob data.  
Solution: Pass the HTTP trigger payload into an Azure Service Bus queue to be processed by a queue trigger function and return an immediate HTTP success response.  
Does the solution meet the goal?

You develop an HTTP triggered Azure Function app to process Azure Storage blob data. The app is triggered using an output binding on the blob.

The app continues to time out after four minutes. The app must process the blob data.  
You need to ensure the app does not time out and processes the blob data.  
Solution: Configure the app to use an App Service hosting plan and enable the Always On setting.  
Does the solution meet the goal?

You develop a software as a service (SaaS) offering to manage photographs. Users upload photos to a web service which then stores the photos in Azure Storage Blob storage. The storage account type is General-purpose V2.  
When photos are uploaded, they must be processed to produce and save a mobile-friendly version of the image. The process to produce a mobile-friendly version of the image must start in less than one minute.  
You need to design the process that starts the photo processing.  
Solution: Move photo processing to an Azure Function triggered from the blob upload.  
Does the solution meet the goal?

- A. Yes
- B. No

You are developing an application that uses Azure Blob storage.  
The application must read the transaction logs of all the changes that occur to the blobs and

the blob metadata in the storage account for auditing purposes. The changes must be in the order in which they occurred, include only create, update, delete, and copy operations and be retained for compliance reasons.

You need to process the transaction logs asynchronously.

What should you do?

- A. Process all Azure Blob storage events by using Azure Event Grid with a subscriber Azure Function app.
- B. Enable the change feed on the storage account and process all changes for available events.
- C. Process all Azure Storage Analytics logs for successful blob events.
- D. Use the Azure Monitor HTTP Data Collector API and scan the request body for successful blob events.

You plan to create a Docker image that runs an ASP.NET Core application named ContosoApp. You have a setup script named setupScript.ps1 and a series of application files including ContosoApp.dll.

You need to create a Dockerfile document that meets the following requirements:

- ⇒ Call setupScript.ps1 when the container is built.
- ⇒ Run ContosoApp.dll when the container starts.

The Dockerfile document must be created in the same folder where ContosoApp.dll and setupScript.ps1 are stored.

Which five commands should you use to develop the solution? To answer, move the appropriate commands from the list of commands to the answer area and arrange them in the correct order.

Select and Place:

### Commands

```
FROM microsoft/aspnetcore:latest
WORKDIR /apps/ContosoApp
CMD ["dotnet", "ContosoApp.dll"]
COPY ./
RUN powershell ./setupScript.ps1
```

### Answer Area

You are developing an Azure Function App that processes images that are uploaded to an Azure Blob container.

Images must be processed as quickly as possible after they are uploaded, and the solution must minimize latency. You create code to process images when the Function App is triggered.

You need to configure the Function App.

What should you do?

- A. Use an App Service plan. Configure the Function App to use an Azure Blob Storage input trigger.
- B. Use a Consumption plan. Configure the Function App to use an Azure Blob Storage trigger.
- C. Use a Consumption plan. Configure the Function App to use a Timer trigger.
- D. Use an App Service plan. Configure the Function App to use an Azure Blob Storage trigger.
- E. Use a Consumption plan. Configure the Function App to use an Azure Blob Storage input trigger.

You are configuring a new development environment for a Java application. The environment requires a Virtual Machine Scale Set (VMSS), several storage accounts, and networking components.

The VMSS must not be created until the storage accounts have been successfully created and an associated load balancer and virtual network is configured.

How should you complete the Azure Resource Manager template? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

**Answer Area**

```
{  
  . . .  
  "resources": [  
    {  
      "apiVersion": "2016-01-01",  
      "type": "Microsoft.Storage/storageAccounts",  
      "name": "[concat(          (), 'storage', uniqueString(resourceGroup().id))]",  
      "copy":  
      "copyIndex":  
      "priority":  
      "dependsOn":  
      "location": "[resourceGroup().location]",  
      "sku": {  
        "name": "Standard_LRS"  
      },  
      "kind": "Storage",  
      "properties": {},  
      "copy": {  
        "name": "storagesetup",  
        "count": 3  
      }  
    },  
    {  
      "apiVersion": "2015-06-15",  
      "type": "Microsoft.Compute/virtualMachines",  
      "name": "[concat('VM', uniqueString(resourceGroup().id))]",  
      "copy": [  
        "copy":  
        "copyIndex":  
        "priority":  
        "dependsOn":  
        "[variables('loadBalancerName')]",  
        "[variables('virtualNetworkName')]",  
        "storagesetup",  
        ],  
      "copy":  
      "copyIndex":  
      "priority":  
      "dependsOn":  
      "outputs": {}  
    }  
  ]  
}
```

HOTSPOT -

You are developing an Azure Function App by using Visual Studio. The app will process orders input by an Azure Web App. The web app places the order information into Azure Queue Storage.

You need to review the Azure Function App code shown below.

```
public static class OrderProcessor
{
    [FunctionName("ProcessOrders")]
    public static void ProcessOrders([QueueTrigger("incoming-orders")]CloudQueueMessage myQueueItem, [Table("Orders")]ICollector<Order> tableBindings, TraceWriter log)
    {
        log.Info($"Processing Order: {myQueueItem.Id}");
        log.Info($"Queue Insertion Time: {myQueueItem.InsertionTime}");
        log.Info($"Queue Expiration Time: {myQueueItem.ExpirationTime}");
        tableBindings.Add(JsonConvert.DeserializeObject<Order>(myQueueItem.AsString));
    }
    [FunctionName("ProcessOrders-Poison")]
    public static void ProcessFailedOrders([QueueTrigger("incoming-orders-poison")]CloudQueueMessage myQueueItem, TraceWriter log)
    {
        log.Error($"Failed to process order: {myQueueItem.AsString}");
        ...
    }
}
```

NOTE: Each correct selection is worth one point.

Hot Area:

**Answer Area**

**Yes** **No**

The code will log the time that the order was processed from the queue.

When the ProcessOrders function fails, the function will retry up to five times for a given order, including the first try.

When there are multiple orders in the queue, a batch of orders will be retrieved from the queue and the ProcessOrders function will run multiple instances concurrently to process the orders.

The ProcessOrders function will output the order to an Orders table in Azure Table Storage.

Answer:

https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-queue

DRAG DROP -

You are developing a solution for a hospital to support the following use cases:

- The most recent patient status details must be retrieved even if multiple users in different locations have updated the patient record.
- Patient health monitoring data retrieved must be the current version or the prior version.
- After a patient is discharged and all charges have been assessed, the patient billing record contains the final charges.

You provision a Cosmos DB NoSQL database and set the default consistency level for the database account to Strong. You set the value for Indexing Mode to Consistent.

You need to minimize latency and any impact to the availability of the solution. You must override the default consistency level at the query level to meet the required consistency guarantees for the scenarios.

Which consistency levels should you implement? To answer, drag the appropriate consistency levels to the correct requirements. Each consistency level may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

<b>Consistency levels</b>		<b>Answer Area</b>
Strong	Bounded Staleness	Return the most recent patient status. <span style="float: right;">Consistency level</span>
Consistent Prefix	Eventual	Return health monitoring data that is no less than one version behind. <span style="float: right;">Consistency level</span>

Answer:

You are configuring a development environment for your team. You deploy the latest Visual Studio image from the Azure Marketplace to your Azure subscription. The development environment requires several software development kits (SDKs) and third-party components to support application development across the organization. You install and customize the deployed virtual machine (VM) for your development team. The customized VM must be saved to allow provisioning of a new team member development environment.

You need to save the customized VM for future provisioning.

Which tools or services should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

Action	Tool or service
Generalize the VM.	<input type="checkbox"/> Azure PowerShell <input type="checkbox"/> Visual Studio command prompt <input type="checkbox"/> Azure Migrate <input type="checkbox"/> Azure Backup
Store images.	<input type="checkbox"/> Azure Blob Storage <input type="checkbox"/> Azure Data Lake Storage <input type="checkbox"/> Azure File Storage <input type="checkbox"/> Azure Table Storage

Answer:

You are preparing to deploy a website to an Azure Web App from a GitHub repository. The website includes static content generated by a script.

You plan to use the Azure Web App continuous deployment feature.

You need to run the static generation script before the website starts serving traffic.

What are two possible ways to achieve this goal? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Add the path to the static content generation tool to WEBSITE\_RUN\_FROM\_PACKAGE setting in the host.json file.
- B. Add a PreBuild target in the websites csproj project file that runs the static content generation script.
- C. Create a file named run.cmd in the folder /run that calls a script which generates the static content and deploys the website.
- D. Create a file named .deployment in the root of the repository that calls a script which generates the static content and deploys the website.

Answer:

You are developing an application to use Azure Blob storage. You have configured Azure Blob storage to include change feeds.

A copy of your storage account must be created in another region. Data must be copied from the current storage account to the new storage account directly between the storage servers.

You need to create a copy of the storage account in another region and copy the data.

In which order should you perform the actions? To answer, move all actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

**Actions**

**Answer Area**

Use AZCopy to copy the data to the new storage account.



Deploy the template to create a new storage account in the target region.



Export a Resource Manager template.

Create a new template deployment.

Modify the template by changing the storage account name and region.

Answer:

- ☞ Move data to the new storage account.
- ☞ Delete the resources in the source region.

You are preparing to deploy an Azure virtual machine (VM)-based application.

The VMs that run the application have the following requirements:

- ☞ When a VM is provisioned the firewall must be automatically configured before it can access Azure resources.
- ☞ Supporting services must be installed by using an Azure PowerShell script that is stored in Azure Storage.

You need to ensure that the requirements are met.

Which features should you use? To answer, drag the appropriate features to the correct requirements. Each feature may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Features	Answer Area	
	Requirement	Feature
Run Command		
Serial console	Firewall configuration	
Hybrid Runbook Worker		
Custom Script Extension	Supporting services script	

Answer:

A company is developing a Node.js web app. The web app code is hosted in a GitHub repository located at <https://github.com/TailSpinToys/webapp>.

The web app must be reviewed before it is moved to production. You must deploy the initial code release to a deployment slot named review.

You need to create the web app and deploy the code.

How should you complete the commands? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

```
$gitrepo="https://github.com/TailSpinToys/webapp"
$webappname="TailSpinToysWeb"
$location="WestUS2"
 -Name myResourceGroup -Location $location
 New-AzWebAppSlot
 New-AzWebApp
 New-AzAppServicePlan
 New-AzResourceGroup
 -Name $webappname -Location $location -ResourceGroupName myResourceGroup -Tier Standard
 New-AzWebAppSlot
 New-AzWebApp
 New-AzAppServicePlan
 New-AzResourceGroup
 -Name $webappname -Location $location -AppServicePlan $webappname -ResourceGroupName myResourceGroup
 New-AzWebAppSlot
 New-AzWebApp
 New-AzAppServicePlan
 New-AzResourceGroup
 -Name $webappname -ResourceGroupName myResourceGroup -Slot review
 New-AzWebAppSlot
 New-AzWebApp
 New-AzAppServicePlan
 New-AzResourceGroup
$PropertiesObject = @{repoUrl = "$gitrepo";branch = "master";}
Set-AzResource -PropertyObject $PropertiesObject -ResourceGroupName myResourceGroup -ResourceType
Microsoft.Web/sites/slots/sourcecontrols -ResourceName $webappname/review/web -ApiVersion 2015-08-01 -Force
Switch-AzWebAppSlot -Name $webappname -ResourceGroupName myResourceGroup
-SourceSlotName review -DestinationSlotName production
```

Answer:

You are developing an application that needs access to an Azure virtual machine (VM).

The access lifecycle for the application must be associated with the VM service instance.

You need to enable managed identity for the VM.

How should you complete the PowerShell segment? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

```
$vm = Get-AzVM -ResourceGroupName "ContosoRG" -Name "ContosoVM"
```

```
Update-AzVM -ResourceGroupName "ContosoRG" -VM $vm
```

<input type="checkbox"/> -AssignIdentity:	<input type="checkbox"/> \$SystemAssigned
<input type="checkbox"/> -IdentityId:	<input type="checkbox"/> \$UserAssigned

Answer:

You develop a software as a service (SaaS) offering to manage photographs. Users upload photos to a web service which then stores the photos in Azure Storage Blob storage. The storage account type is General-purpose V2. When photos are uploaded, they must be processed to produce and save a mobile-friendly

version of the image. The process to produce a mobile-friendly version of the image must start in less than one minute.

You need to design the process that starts the photo processing.

Solution: Create an Azure Function app that uses the Consumption hosting model and that is triggered from the blob upload.

Does the solution meet the goal?

Answer:

You develop and deploy an Azure App Service API app to a Windows-hosted deployment slot named Development. You create additional deployment slots named Testing and Production. You enable auto swap on the Production deployment slot.

You need to ensure that scripts run and resources are available before a swap operation occurs.

Solution: Update the app with a method named statuscheck to run the scripts. Update the app settings for the app. Set the

WEBSITE\_SWAP\_WARMUP\_PING\_PATH and WEBSITE\_SWAP\_WARMUP\_PING\_STATUSES with a path to the new method and appropriate response codes.

Does the solution meet the goal?

Answer:

You create the following PowerShell script:

```
$source = New-AzScheduledQueryRuleSource -Query 'Heartbeat | where TimeGenerated > ago(1h)' -DataSourceId "contoso"
$schedule = New-AzScheduledQueryRuleSchedule -FrequencyInMinutes 60 -TimeWindowInMinutes 60
$triggerCondition = New-AzScheduledQueryRuleTriggerCondition -ThresholdOperator "LessThan" -Threshold 5
$aznsActionGroup = New-AzScheduledQueryRuleAznsActionGroup -ActionGroup "contoso" -EmailSubject "Custom email subject"
-CustomWebhookPayload "{ \"alert\": \"#alertrulename\", \"IncludeSearchResults\": true }"
$alertingAction = New-AzScheduledQueryRuleAlertingAction -AznsAction $aznsActionGroup -Severity "3" -Trigger $triggerCondition
New-AzScheduledQueryRule -ResourceGroupName "contoso" -Location "eastus" -Action $alertingAction -Enabled $true
-Description "Alert description" -Schedule $schedule -Source $source -Name "Alert Name"
```

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

NOTE: Each correct selection is worth one point.

Hot Area:

#### Answer Area

Statements	Yes	No
A log alert is created that sends an email when the CPU percentage is above 60 percent for five minutes.	<input type="radio"/>	<input type="radio"/>
A log alert is created that sends an email when the number of virtual machine heartbeats in the past hour is less than five.	<input type="radio"/>	<input type="radio"/>
The log alert is scheduled to run every two hours.	<input type="radio"/>	<input type="radio"/>

Answer:



You are developing an Azure Function app.

The app must meet the following requirements:

- ⇒ Enable developers to write the functions by using the Rust language.
- ⇒ Declaratively connect to an Azure Blob Storage account.

You need to implement the app.

Which Azure Function app features should you use? To answer, drag the appropriate features to the correct requirements. Each feature may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Features	Answer Area
Custom handler	
Extension bundle	Requirement
Trigger	Feature
Runtime	
Policy	
Hosting plan	

Enable developers to write the functions by using the Rust language.

Declaratively connect to an Azure Blob Storage account.

Answer:



## Custom Handler, Trigger

You are developing an ASP.NET Core web application. You plan to deploy the application to Azure Web App for Containers.

The application needs to store runtime diagnostic data that must be persisted across application restarts. You have the following code:

```
public void SaveDiagData(string data)
{
    var path = Environment.GetEnvironmentVariable("DIAGDATA");
    File.WriteAllText(Path.Combine(path, "data"), data);
}
```

You need to configure the application settings so that diagnostic data is stored as required.

How should you configure the web app's settings? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

App setting	Value
LOCALAPPDATA	true
WEBSITE_LOCALCACHE_ENABLED	
DOTNET_HOSTING_OPTIMIZATION_CACHE	
WEBSITES_ENABLE_APP_SERVICE_STORAGE	
DIAGDATA	/home /local D:\home D:\local

Answer:



You are developing a web app that is protected by Azure Web Application Firewall (WAF). All traffic to the web app is routed through an Azure Application Gateway instance that is used by multiple web apps. The web app address is contoso.azurewebsites.net.

All traffic must be secured with SSL. The Azure Application Gateway instance is used by multiple web apps.

You need to configure the Azure Application Gateway for the web app.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. In the Azure Application Gateway's HTTP setting, enable the Use for App service setting.
- B. Convert the web app to run in an Azure App service environment (ASE).
- C. Add an authentication certificate for contoso.azurewebsites.net to the Azure Application Gateway.
- D. In the Azure Application Gateway's HTTP setting, set the value of the Override backend path option to contoso22.azurewebsites.net.

Answer:

You develop a software as a service (SaaS) offering to manage photographs. Users upload photos to a web service which then stores the photos in Azure Storage Blob storage. The storage account type is General-purpose V2. When photos are uploaded, they must be processed to produce and save a mobile-friendly version of the image. The process to produce a mobile-friendly version of the image must start in less than one minute. You need to design the process that starts the photo processing. Solution: Use the Azure Blob Storage change feed to trigger photo processing. Does the solution meet the goal?

Answer:

You are developing a web application that runs as an Azure Web App. The web application stores data in Azure SQL Database and stores files in an Azure Storage account. The web application makes HTTP requests to external services as part of normal operations. The web application is instrumented with Application Insights. The external services are OpenTelemetry compliant. You need to ensure that the customer ID of the signed in user is associated with all operations throughout the overall system. What should you do?

- A. Add the customer ID for the signed in user to the CorrelationContext in the web application
- B. On the current SpanContext, set the Traceld to the customer ID for the signed in user
- C. Set the header Ocp-Apim-Trace to the customer ID for the signed in user

- D. Create a new SpanContext with the TraceFlags value set to the customer ID for the signed in user

Answer:

You are developing an Azure Function App. You develop code by using a language that is not supported by the Azure Function App host. The code language supports HTTP primitives.

You must deploy the code to a production Azure Function App environment.

You need to configure the app for deployment.

Which configuration values should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

Configuration parameter	Configuration value
-------------------------	---------------------

Publish	<input type="button" value="▼"/>
	Code
	Docker Container

Runtime stack	<input type="button" value="▼"/>
	Node.js
	Python
	PowerShell Core
	Custom Handler

Version	<input type="button" value="▼"/>
	14 LTS
	7.0
	custom

Answer:

You provision virtual machines (VMs) as development environments.

One VM does not start. The VM is stuck in a Windows update process. You attach the OS disk for the affected VM to a recovery VM.

You need to correct the issue.

In which order should you perform the actions? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

**Actions**

**Answer Area**

Run the following command at an elevated command prompt:

```
dism /image:\ /get=packages > c:\temp\Patch.txt
```



Run the following command at an elevated command prompt:

```
dism /Image:<Attached OS disks>:\ /Remove  
Package /PackageName:<package name to delete>
```

Detach the OS disk and recreate the VM

Open C:\temp\Patch.txt file and locate the update that is in a pending state

Answer:

You develop an HTTP triggered Azure Function app to process Azure Storage blob data. The app is triggered using an output binding on the blob.

The app continues to time out after four minutes. The app must process the blob data.

You need to ensure the app does not time out and processes the blob data.

Solution: Update the functionTimeout property of the host.json project file to 10 minutes.

Does the solution meet the goal?

Answer:

You are developing an Azure Durable Function based application that processes a list of input values. The application is monitored using a console application that retrieves JSON data from an Azure Function diagnostic endpoint.

During processing a single instance of invalid input does not cause the function to fail. Invalid input must be available to the monitoring application.

You need to implement the Azure Durable Function and the monitoring console application.

How should you complete the code segments? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

#### Answer Area

```
[FunctionName("App")]
public static async Task<List<string>> RunOrchestrator(
    [OrchestrationTrigger] IDurableOrchestrationContext context) {
    EntityId[] input = . . .
    int errIndex = . . .
    ;
    context.SetOutput(input[errIndex])
    context.SetCustomStatus(input[errIndex])
    context.SignalEntity(input[errIndex], "error")
    await context.CallEntityAsync(input[errIndex], "error")
}

using (var client = new HttpClient())
{
    while (true)
    {
        var response = await client.GetAsync(" . . .");
        response.EnsureSuccessStatusCode();
        var json = await response.Content.ReadAsStringAsync();
        dynamic result = JsonConvert.DeserializeObject(json);
        if (result.runtimeStatus == " . . .")
            ;
        {
            return result.
        }
    }
}
```



Answer:

await, Failed, input

You are developing an Azure Durable Function to manage an online ordering process. The process must call an external API to gather product discount information. You need to implement the Azure Durable Function. Which Azure Durable Function types should you use? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Orchestrator
- B. Entity
- C. Client
- D. Activity

Answer:

You are authoring a set of nested Azure Resource Manager templates to deploy multiple Azure resources. The templates must be tested before deployment and must follow recommended practices. You need to validate and test the templates before deployment. Which tools should you use? To answer, drag the appropriate tools to the correct requirements. Each tool may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Tools	Answer Area
Parameter file	<b>Requirement</b> Determine whether the templates follow recommended practices.
Template function	<b>Tool</b>
Azure Resource Manager test toolkit	<b>Requirement</b> Test and validate changes that templates will make to the environment.
User-defined function	<b>Tool</b>
What-if operation	
Azure Deployment Manager	

Answer:

see how resources will change if you deploy the template. The what-if operation doesn't make any changes to existing resources.

Instead, it predicts the changes if the specified template is deployed.

Reference:

You develop Azure Durable Functions to manage vehicle loans.

The loan process includes multiple actions that must be run in a specified order. One of the actions includes a customer credit check process, which may require multiple days to process.

You need to implement Azure Durable Functions for the loan process.

Which Azure Durable Functions type should you use?

- A. orchestrator
- B. client
- C. entity
- D. activity

All functions in the app meet the following requirements:

- Run until either a successful run or until 10 run attempts occur.
  - Ensure that there are at least 20 seconds between attempts for up to 15 minutes.

You need to configure the host.json file.

How should you complete the code segment? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

### Answer Area

```
{  
"  
    retry  
    healthMonitor  
    singleton  
": {  
    "strategy": "  
        exponentialBackoff  
        counterThreshold  
        fixedDelay  
": 10,  
    "maxRetryCount  
    healthCheckInterval  
    healthCheckThreshold  
": "00:00:20",  
    "maximumInterval": "00:15:00"  
}  
}
```

You develop Azure Web Apps for a commercial diving company. Regulations require that all divers fill out a health questionnaire every 15 days after each diving job starts.

You need to configure the Azure Web Apps so that the instance count scales up when divers are filling out the questionnaire and scales down after they are complete.

You need to configure autoscaling.

What are two possible auto scaling configurations to achieve this goal? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Recurrence profile
- B. CPU usage-based autoscaling
- C. Fixed date profile
- D. Predictive autoscaling

You are developing an online game that allows players to vote for their favorite photo that illustrates a word. The game is built by using Azure Functions and uses durable entities to track the vote count.

The voting window is 30 seconds. You must minimize latency.

You need to implement the Azure Function for voting.

How should you complete the code? To answer, select the appropriate options in the answer area.

#### Answer Area

```
[FunctionName("Vote")]
public static async Task<HttpResponseMessage> Run(
    [HttpTrigger("POST", Route = "pic/{id}")] HttpRequestMessage req,
    [DurableClient] IDurableEntityClient c,
    string id)
{
    var eid = new EntityId("pic", id);
    await c.SignalEntity(eid, "vote");
    return req.CreateResponse(HttpStatusCode.OK);
}
```

You have an App Service plan named `asp1` based on the Free pricing tier.

You plan to use `asp1` to implement an Azure Function app with a queue trigger. Your solution must minimize cost.

You need to identify the configuration options that will meet the requirements.

Which value should you configure? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

## Answer Area

Configuration option	Value
Azure App Service feature	<div style="border: 1px solid #ccc; padding: 5px; width: fit-content; margin: auto;"><input type="checkbox"/> Always On <input type="checkbox"/> Managed identity <input type="checkbox"/> Continuous deployment</div>
Azure App Service pricing tier	<div style="border: 1px solid #ccc; padding: 5px; width: fit-content; margin: auto;"><input type="checkbox"/> Basic <input type="checkbox"/> Shared <input type="checkbox"/> Standard</div>

## Answer Managed identity, Basic

You are developing several microservices to run on Azure Container Apps.

The microservices must allow HTTPS access by using a custom domain.

You need to configure the custom domain in Azure Container Apps.

In which order should you perform the actions? To answer, move all actions from the list of actions to the answer area and arrange them in the correct order.

Actions	Answer Area
<input type="checkbox"/> Validate the custom domain name.	
<input type="checkbox"/> Enable ingress.	
<input type="checkbox"/> Bind the certificate.	
<input type="checkbox"/> Add DNS records to the domain provider.	
<input type="checkbox"/> Add the custom domain name.	

Answer:



You are developing several microservices to run on Azure Container Apps. External HTTP ingress traffic has been enabled for the microservices.

The microservices must be deployed to the same virtual network and write logs to the same Log Analytics workspace.

You need to deploy the microservices.

What should you do?

- A. Enable single revision mode.
- B. Use a separate environment for each container.
- C. Use a private container registry image and single image for all containers.
- D. Use a single environment for all containers.
- E. Enable multiple revision mode.



You are developing several microservices to run on Azure Container Apps. External HTTP ingress traffic has been enabled for the microservices.

A deployed microservice must be updated to allow users to test new features. You have the following requirements:

- Enable and maintain a single URL for the updated microservice to provide to test users.
- Update the microservice that corresponds to the current microservice version.

You need to configure Azure Container Apps.

Which features should you configure? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

#### Answer Area

Requirement	Feature
Single URL for test users	<input type="checkbox"/>
Current microservice activation	<input type="checkbox"/> Revision label Revision mode Container image Container registry
Current microservice activation	<input type="checkbox"/> Revision label Revision mode Container image Container registry

You plan to develop an Azure Functions app with an HTTP trigger.

The app must support the following requirements:

- Event-driven scaling
- Ability to use custom Linux images for function execution

You need to identify the app's hosting plan and the maximum amount of time that the app function can take to respond to incoming requests.

Which configuration setting values should you use? To answer, select the appropriate values in the answer area.

NOTE: Each correct selection is worth one point.

### **Answer Area**

<b>Configuration setting</b>	<b>Value</b>
Hosting plan	<input type="button" value="▼"/> Consumption Dedicated Premium
Timeout value	<input type="button" value="▼"/> 230 seconds 10 minutes unlimited

You develop a Python application for image rendering. The application uses GPU resources to optimize rendering processes.

You have the following requirements:

- The application must be deployed to a Linux container.
- The container must be stopped when the image rendering is complete.
- The solution must minimize cost.

You need to deploy the application to Azure.

### Answer Area

Environment configuration	Configuration value
Compute target	<div style="border: 1px solid #ccc; padding: 5px; width: 200px; height: 150px; margin-bottom: 10px;"><ul style="list-style-type: none"><li>Azure Container Instances</li><li>Azure Kubernetes Service</li><li>Azure Container Apps</li><li>Azure App Service</li></ul></div>
Container termination	<div style="border: 1px solid #ccc; padding: 5px; width: 200px; height: 150px;"><ul style="list-style-type: none"><li>Restart policy</li><li>Environment variable</li><li>System-assigned Managed identity</li><li>User-assigned Managed identity</li></ul></div>

You plan to develop an Azure Functions app with an Azure Blob Storage trigger. The app will be used infrequently, with a limited duration of individual executions.

The app must meet the following requirements:

- Event-driven scaling
- Support for deployment slots
- Minimize costs

You need to identify the hosting plan and the maximum duration when executing the app.

Which configuration setting values should you use? To answer, select the appropriate values in the answer area.

NOTE: Each correct selection is worth one point.

### Answer Area

Configuration setting	Value
Hosting plan	<input type="button" value="▼"/> Consumption Dedicated Premium
Maximum execution time	<input type="button" value="▼"/> 230 seconds 10 minutes unlimited

Answer: Consumption, Terminates

You are developing an ASP.NET Core app hosted in Azure App Service.

The app requires custom claims to be returned from Microsoft Entra ID for user authorization. The claims must be removed when the app registration is removed.

You need to include the custom claims in the user access token.

What should you do?

- A. Require the `https://graph.microsoft.com/.default` scope during authentication.
- B. Configure the app to use the OAuth 2.0 authorization code flow.
- C. Implement custom middleware to retrieve role information from Azure AD.
- D. Add the groups to the `groupMembershipClaims` attribute in the app manifest.
- E. Add the roles to the `appRoles` attribute in the app manifest

You are developing a microservice to run on Azure Container Apps for a company. External HTTP ingress traffic has been enabled.

The company requires that updates to the microservice must not cause downtime.

You need to deploy an update to the microservices.

What should you do?

- A. Enable single revision mode.
- B. Use multiple environments for each container.
- C. Use a private container registry and single image for all containers.
- D. Use a single environment for all containers.
- E. Enable multiple revision mode.



A company uses Azure Container Apps. A container app named App1 resides in a resource group named RG1.

The company requires testing of updates to App1.

You enable multiple revision modes on App1.

You need to ensure traffic is routed to each revision of App1.

How should you complete the code segment?

NOTE: Each correct selection is worth one point.

### Answer Area

```
az containerapp revision create --name App1 \
--resource-group RG1 \
--revision-weight <REVISION_1>=80 <REVISION_2>=20
```

You deploy an Azure Container Apps app and disable ingress on the container app.

Users report that they are unable to access the container app. You investigate and observe that the app has scaled to 0 instances.

You need to resolve the issue with the container app.

Solution: Enable ingress, create an HTTP scale rule, and apply the rule to the container app.

Does the solution meet the goal?

You deploy an Azure Container Apps app and disable ingress on the container app.

Users report that they are unable to access the container app. You investigate and observe that the app has scaled to 0 instances.

You need to resolve the issue with the container app.

Solution: Enable ingress and configure the minimum replicas to 1 for the container app.

Does the solution meet the goal?



## Case Study

### Corporate website

- The company hosts a public website located at <http://www.munsonspicklesandpreservesfarm.com>. The site supports farmers and distributors who request agricultural production resources.

### Farms

- The company created a new customer tenant in the Microsoft Entra admin center to support authentication and authorization for applications.

### Distributors

- Distributors integrate their applications with data that is accessible by using APIs hosted at <http://www.munsonspicklesandpreservesfarm.com/api> to receive and update resource data.

### Corporate website

- The site must be migrated to Azure App Service.
  - Costs must be minimized when hosting in Azure.
  - Applications must automatically scale independent of the compute resources.
  - All code changes must be validated by internal staff before release to production.
  - File transfer speeds must improve, and webpage-load performance must increase.
  - All site settings must be centrally stored, secured without using secrets, and encrypted at rest and in transit.
  - A queue-based load leveling pattern must be implemented by using Azure Service Bus queues to support high volumes of website agricultural production resource requests.
- storage costs must be reduced while preserving a statistically correct analysis of the data points sent by the APIs.

You need to configure App Service to support the corporate website migration.

Which configuration should you use? To answer, select the appropriate options in the answer area.

## Azure App Service configuration

Configuration setting	Configuration value
App Service plan	<div style="border: 1px solid #ccc; padding: 5px; width: fit-content; margin-bottom: 10px;"><span>Basic</span><span>Standard</span><span>Premium</span><span>Isolated</span></div>
Code change validation feature	<div style="border: 1px solid #ccc; padding: 5px; width: fit-content; margin-bottom: 10px;"><span>Deployment slot</span><span>Custom container</span><span>Domain certificate</span><span>Deployment credentials</span></div>

VanArsdel, Ltd. is a global office supply company. The company is based in Canada and has retail store locations across the world. The company is developing several cloud-based solutions to support their stores, distributors, suppliers, and delivery services.

#### Corporate website

-

The company provides a public website located at <http://www.vanarsdelltd.com>. The website consists of a React JavaScript user interface, HTML, CSS, image assets, and several APIs hosted in Azure Functions.

#### Retail Store Locations

-

The company supports thousands of store locations globally. Store locations send data every hour to an Azure Blob storage account to support inventory, purchasing and delivery services. Each record includes a location identifier and sales transaction information.

#### Corporate website

- 
- Secure the website by using SSL.
  - Minimize costs for data storage and hosting.
  - Implement native GitHub workflows for continuous integration and continuous deployment (CI/CD).
  - Distribute the website content globally for local use.
  - Implement monitoring by using Application Insights and availability web tests including SSL certificate validity and custom header value verification.
  - The website must have 99.95 percent uptime.
- 
- You must perform a point-in-time restoration of the retail store location data due to an unexpected and accidental deletion of data.
  - Azure Cosmos DB queries from the Azure Function exhibit high Request Unit (RU) usage and contain multiple, complex queries that exhibit high point read latency for large items as the function app is scaling.

You need to implement the delivery service telemetry data.

How should you configure the solution? To answer, select the appropriate options in the answer area.

## Azure Cosmos DB

## Value

API

Core (SQL)
Gremlin
Table
MongoDB

Partition Key

Item id
Vehicle license plate
Vehicle package capacity
Vehicle location coordinates

Hot Area

You need to implement event routing for retail store location data.

Which configurations should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

#### Event data

#### Configuration

Source

Azure Blob Storage
Azure Event Grid
Azure Service Bus
Azure Event Hub

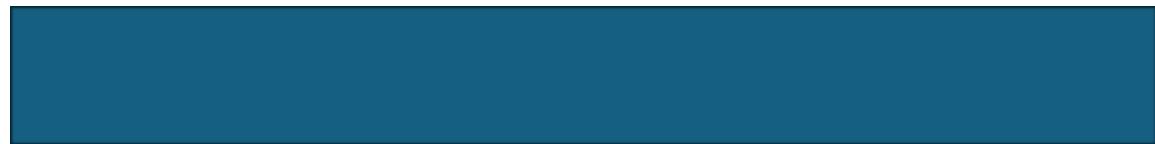
Receiver

Azure Event Grid
Azure Event Hub
Azure Service Bus
Azure Blob Storage

Handler

Azure Function App
Azure Logic App
Azure Event Grid
Azure Blob Storage

Answer:



VanArsdel, Ltd. is a global office supply company. The company is based in Canada and has retail store locations across the world. The company is developing several cloud-based solutions to support their stores, distributors, suppliers, and delivery services.

Issues -

Retail Store Locations -

- You must perform a point-in-time restoration of the retail store location data due to an unexpected and accidental deletion of data.
- Azure Cosmos DB queries from the Azure Function exhibit high Request Unit (RU) usage and contain multiple, complex queries that exhibit high point read latency for large items as the function app is scaling.

You need to test the availability of the corporate website.

Which two test types can you use? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Standard
- B. URL ping
- C. Custom testing using the TrackAvailability API method
- D. Multi-step



You need to reduce read latency for the retail store solution.

What are two possible ways to achieve the goal? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Create a new composite index for the store location data queries in Azure Cosmos DB. Modify the queries to support parameterized SQL and update the Azure Function app to call the new queries.
- B. Provision an Azure Cosmos DB dedicated gateway. Update the Azure Function app connection string to use the new dedicated gateway endpoint.

- C. Configure Azure Cosmos DB consistency to session consistency. Cache session tokens in a new Azure Redis cache instance after every write. Update reads to use the session token stored in Azure Redis.
- D. Provision an Azure Cosmos DB dedicated gateway. Update blob storage to use the new dedicated gateway endpoint.
- E. Configure Azure Cosmos DB consistency to strong consistency. Increase the RUs for the container supporting store location data.

You need to audit the retail store sales transactions.

What are two possible ways to achieve the goal? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Update the retail store location data upload process to include blob index tags. Create an Azure Function to process the blob index tags and filter by store location.
- B. Process the change feed logs of the Azure Blob storage account by using an Azure Function. Specify a time range for the change feed data.
- C. Enable blob versioning for the storage account. Use an Azure Function to process a list of the blob versions per day.
- D. Process an Azure Storage blob inventory report by using an Azure Function. Create rule filters on the blob inventory report.
- E. Subscribe to blob storage events by using an Azure Function and Azure Event Grid. Filter the events by store location.

VanArsdel, Ltd. is a global office supply company. The company is based in Canada and has retail store locations across the world. The company is developing several cloud-based solutions to support their stores, distributors, suppliers, and delivery services.

You need to implement the Azure Function for delivery driver profile information.

Which configurations should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Configuration	Value
Code library	<ul style="list-style-type: none"><li>Microsoft Authentication Library (MSAL)</li><li>Microsoft Azure Key Vault SDK</li><li>Azure Identity library</li></ul>
API	<ul style="list-style-type: none"><li>Microsoft Graph</li><li>Azure Active Directory Graph</li><li>Azure Key Vault</li></ul>

Answer:

Retail Store Locations -

You must perform a point-in-time restoration of the retail store location data due to an unexpected and accidental deletion of data.

Azure Cosmos DB queries from the Azure Function exhibit high Request Unit (RU) usage and contain multiple, complex queries that exhibit high point read latency for large items as the function app is scaling.

You need to grant access to the retail store location data for the inventory service development effort.

What should you use?

- A. Azure AD access token
- B. Azure RBAC role
- C. Shared access signature (SAS) token
- D. Azure AD ID token
- E. Azure AD refresh token

Store service telemetry data in Azure Cosmos DB by using an Azure Function. Data must include an item id, the delivery vehicle license plate, vehicle package capacity, and current vehicle location coordinates.

Store delivery driver profile information in Azure Active Directory (Azure AD) by using an Azure Function called from the corporate website.

You need to reliably identify the delivery driver profile information.

How should you configure the system? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Configuration	Value
JSON web token (JWT) type	<input type="checkbox"/> ID <input type="checkbox"/> Refresh <input type="checkbox"/> Access
Payload claim value	<input type="checkbox"/> oid <input type="checkbox"/> aud <input type="checkbox"/> idp

## Security -

All Azure Functions must centralize management and distribution of configuration data for different environments and geographies, encrypted by using a company-provided RSA-HSM key. Authentication and authorization must use Azure AD and services must use managed identities where possible.

You need to secure the Azure Functions to meet the security requirements.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Store the RSA-HSM key in Azure Key Vault with soft-delete and purge-protection features enabled.
- B. Store the RSA-HSM key in Azure Blob storage with an immutability policy applied to the container.
- C. Create a free tier Azure App Configuration instance with a new Azure AD service principal.
- D. Create a standard tier Azure App Configuration instance with an assigned Azure AD managed identity.
- E. Store the RSA-HSM key in Azure Cosmos DB. Apply the built-in policies for customer-managed keys and allowed locations.

You need to implement the retail store location Azure Function.

How should you configure the solution? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

### Answer Area

Configuration	Value
Binding	<input type="button" value="▼"/>
	Blob storage
	Azure Cosmos DB
	Event Grid
	HTTP
Binding Direction	<input type="button" value="▼"/>
	Input
	Output
Trigger	<input type="button" value="▼"/>
	Blob storage
	Azure Cosmos DB
	Event Grid
	HTTP

You need to implement the corporate website.

How should you configure the solution? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Plan
Free
Standard
Premium
Isolated

Service
App Service Web App
App Service Static Web App
Azure Function App
Azure Blob Storage

Answer: Box 1: Standard - Box 2: App Service Web App -

You need to implement a solution to resolve the retail store location data issue. Which three Azure Blob features should you enable? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Soft delete
- B. Change feed
- C. Snapshots
- D. Versioning
- E. Object replication
- F. Immutability

Background -

Munson's Pickles and Preserves Farm is an agricultural cooperative corporation based in Washington, US, with farms located across the United States. The company supports agricultural production resources by distributing seeds, fertilizers, chemicals, fuel, and farm machinery to the farms.

Current Environment -

The company is migrating all applications from an on-premises datacenter to Microsoft Azure. Applications support distributors, farmers, and internal company staff.

Corporate website -

- The company hosts a public website located at <http://www.munsonspicklesandpreservesfarm.com>. The site supports farmers and distributors who request agricultural production resources.

Farms -

- The company created a new customer tenant in the Microsoft Entra admin center to support authentication and authorization for applications.

Distributors -

- Distributors integrate their applications with data that is accessible by using APIs hosted at <http://www.munsonspicklesandpreservesfarm.com/api> to receive and update resource data.

Corporate website -

- The site must be migrated to Azure App Service.
- Costs must be minimized when hosting in Azure.
- Applications must automatically scale independent of the compute resources.
- All code changes must be validated by internal staff before release to production.
- File transfer speeds must improve, and webpage-load performance must increase.
- All site settings must be centrally stored, secured without using secrets, and encrypted at rest and in transit.
- A queue-based load leveling pattern must be implemented by using Azure Service Bus queues to support high volumes of website agricultural production resource requests.

Farms -

- Farmers must authenticate to applications by using Microsoft Entra ID.

Distributors -

- The company must track a custom telemetry value with each API call and monitor performance of all APIs.
- API telemetry values must be charted to evaluate variations and trends for resource data.

Internal staff -

- App and API updates must be validated before release to production.
- Staff must be able to select a link to direct them back to the production app when validating an app or API update.
- Staff profile photos and email must be displayed on the website once they authenticate to applications by using their Microsoft Entra ID.

Security -

- All web communications must be secured by using TLS/HTTPS.
- Web content must be restricted by country/region to support corporate compliance standards.
- The principle of least privilege must be applied when providing any user rights or process access rights.
- Managed identities for Azure resources must be used to authenticate services that support Microsoft Entra ID authentication.

Issues -

Corporate website -

- Farmers report HTTP 503 errors at the same time as internal staff report that CPU and memory usage are high.
- Distributors report HTTP 502 errors at the same time as internal staff report that average response times and networking traffic are high.
- Internal staff report webpage load sizes are large and take a long time to load.
- Developers receive authentication errors to Service Bus when they debug locally.

You need to implement farmer authentication.

Which three actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Add the shared access signature (SAS) token to the app.
- B. Create a shared access signature (SAS) token.
- C. Create a user flow.
- D. Add the app to the user flow.
- E. Register the app in Microsoft Entra ID.

You need to secure the corporate website to meet the security requirements.

What should you do?

- A. Create an Azure Cache for Redis instance. Update the code to support the cache.
- B. Create an Azure Content Delivery Network profile and endpoint. Configure the endpoint.
- C. Create an App Service instance with a standard plan. Configure the custom domain with a TLS/SSL certificate.
- D. Create an Azure Application Gateway with a Web Application Firewall (WAF). Configure end-to-end TLS encryption and the WAF.

Which Microsoft Graph configuration should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

### Microsoft Graph configuration

Configuration setting	Configuration value
Endpoint	<input type="checkbox"/> /v1.0/me <input type="checkbox"/> /v1.0/me/people/?\$search=me <input type="checkbox"/> /v1.0/users?\$select=profilePhoto,mail
Permission	<input type="checkbox"/> User.Read <input type="checkbox"/> User.Export.All <input type="checkbox"/> User.ReadWrite <input type="checkbox"/> User.ManageIdentities.All

Which three actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Create a managed identity.
- B. Update the role assignments for the Azure Key Vault.
- C. Create an Azure App Configuration store.
- D. Update the role assignments for the Azure App Configuration store.
- E. Create an Azure Key Vault.

Answer: A C D

Munson's Pickles and Preserves Farm is an agricultural cooperative corporation based in Washington, US, with farms located across the United States. The company supports agricultural production resources by distributing seeds, fertilizers, chemicals, fuel, and farm machinery to the farms.

Distributors -

- Many API telemetry values are sent in a short period of time. Telemetry traffic, data costs, and storage costs must be reduced while preserving a statistically correct analysis of the data points sent by the APIs.

You need to implement an aggregate of telemetry values for distributor API calls.

Which Application Insights API method should you use?

- A. TrackEvent
- B. TrackDependency
- C. TrackMetric
- D. TrackException
- E. TrackTrace

A. TrackEvent

## Corporate website

- Farmers report HTTP 503 errors at the same time as internal staff report that CPU and memory usage are high.
- Distributors report HTTP 502 errors at the same time as internal staff report that average response times and networking traffic are high.
- Internal staff report webpage load sizes are large and take a long time to load.
- Developers receive authentication errors to Service Bus when they debug locally.

You need to correct the internal staff issue with webpages.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Actions	Answer area
Create an Azure Content Delivery Network profile.	
Create an Azure Content Delivery Network origin group.	
Configure Azure Content Delivery Network compression.	
Create an Azure Content Delivery Network endpoint.	
Configure a new Azure Content Delivery Network origin.	
Add the Azure Content Delivery Network origin to the origin group.	

Answer:



You need to correct the errors for farmers and distributors.

Which solution should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

#### **Farmer and distributor errors**

<b>Issue</b>	<b>Solution</b>
Farmers' errors	<ul style="list-style-type: none"><li>Scale up the App Service plan to Premium.</li><li>Add an App Service staging deployment slot.</li><li>Configure the App Service Local Cache feature.</li><li>Create an Azure Content Delivery Network profile and endpoint.</li></ul>
Distributors' errors	<ul style="list-style-type: none"><li>Scale up the App Service plan to Premium.</li><li>Configure the App Service Local Cache feature.</li><li>Restart the application from the App Service portal.</li><li>Create a custom autoscale rule to increase the instance count.</li></ul>

Answer:



You need to resolve the authentication errors for developers.

Which Service Bus security configuration should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

#### Azure Service Bus security configuration

Security configuration setting	Security configuration value
Azure role-based access control (RBAC) role	<input type="checkbox"/> Owner <input type="checkbox"/> Contributor <input type="checkbox"/> Service Bus Data Owner <input type="checkbox"/> Service Bus Data Sender
Service Bus scope	<input type="checkbox"/> Queue <input type="checkbox"/> Namespace <input type="checkbox"/> Subscription <input type="checkbox"/> Resource group

Answer:



Munson's Pickles and Preserves Farm is an agricultural cooperative corporation based in Washington, US, with farms located across the United States. The company supports agricultural production resources by distributing seeds fertilizers, chemicals, fuel, and farm machinery to the farms.

Corporate website

- The site must be migrated to Azure App Service.
- Costs must be minimized when hosting in Azure.
- Applications must automatically scale independent of the compute resources.
- All code changes must be validated by internal staff before release to production.
- File transfer speeds must improve, and webpage-load performance must increase.
- All site settings must be centrally stored, secured without using secrets, and encrypted at rest and in transit.
- A queue-based load leveling pattern must be implemented by using Azure Service Bus queues to support high volumes of website agricultural production resource requests.

You need to provide internal staff access to the production site after a validation.

How should you complete the code segment? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

**Answer Area**

```
<a href="https://www.munsonspicklesandpreservesfarm.com/?"  
">Go back to production app</a>
```

x-ms-app	=	self
x-ms-user		staging
x-ms-routing-name		production
x-ms-client-request-id		

Wide World Importers is moving all their datacenters to Azure. The company has developed several applications and services to support supply chain operations and would like to leverage serverless computing where possible.

Current environment -

Windows Server 2016 virtual machine

This virtual machine (VM) runs BizTalk Server 2016. The VM runs the following workflows:

Ocean Transport `" This workflow gathers and validates container information including container contents and arrival notices at various shipping ports.

Inland Transport `" This workflow gathers and validates trucking information including fuel usage, number of stops, and routes.

The VM supports the following REST API calls:

Container API `" This API provides container information including weight, contents, and other attributes.

Location API `" This API provides location information regarding shipping ports of call and trucking stops.

Shipping REST API `" This API provides shipping information for use and display on the shipping website.

You need to configure Azure CDN for the Shipping web site.

Which configuration options should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Option	Value
Tier	
	Standard
	Premium
Profile	
	Akamai
	Microsoft
Optimization	
	general web delivery
	large file download
	dynamic site acceleration
	video-on-demand media streaming

Answer:

A large rectangular area of the page is completely redacted with a solid red color, obscuring any content that might have been present there.

#### Windows Server 2016 VM -

The VM shows high network latency, jitter, and high CPU utilization. The VM is critical and has not been backed up in the past. The VM must enable a quick restore from a 7-day snapshot to include in-place restore of disks in case of failure.

You need to correct the VM issues.

Which tools should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Issue	Tool
Backup and Restore	<ul style="list-style-type: none"><li>Azure Site Recovery</li><li>Azure Backup</li><li>Azure Data Box</li><li>Azure Migrate</li></ul>
Performance	<ul style="list-style-type: none"><li>Azure Network Watcher</li><li>Azure Traffic Manager</li><li>ExpressRoute</li><li>Accelerated Networking</li></ul>

Answer:

Shipping Function app -

Implement secure function endpoints by using app-level security and include Azure Active Directory (Azure AD).

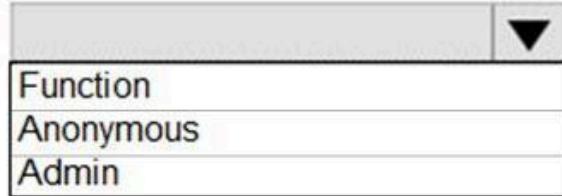
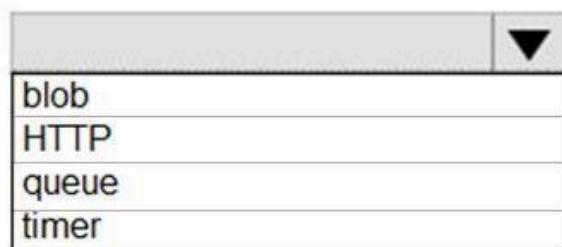
You need to secure the Shipping Function app.

How should you configure the app? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Setting	Value
Authorization level	
User claims	
Trigger type	

Shipping Logic app -

The Shipping Logic app must meet the following requirements:

Support the ocean transport and inland transport workflows by using a Logic App.

Support industry-standard protocol X12 message format for various messages including vessel content details and arrival notices.

Secure resources to the corporate VNet and use dedicated storage resources with a fixed costing model.

Maintain on-premises connectivity to support legacy applications and final BizTalk migrations.

You need to secure the Shipping Logic App.  
What should you use?

- A. Azure App Service Environment (ASE)
- B. Integration Service Environment (ISE)
- C. VNet service endpoint
- D. Azure AD B2B integration

You need to support the message processing for the ocean transport workflow.  
Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.  
Select and Place:

Actions	Answer Area
Link the Logic App to the integration account.	
Add partners, schemas, certificates, maps, and agreements.	
Update the Logic App to use the partners, schemas, certificates, maps, and agreements.	
Create a custom connector for the Logic App.	
Link the custom connector to the Logic App.	
Create an integration account in the Azure portal.	

Answer:

You need to support the requirements for the Shipping Logic App.  
What should you use?

- A. Azure Active Directory Application Proxy
- B. Site-to-Site (S2S) VPN connection
- C. On-premises Data Gateway
- D. Point-to-Site (P2S) VPN connection

Answer: C

You are a developer for Litware Inc., a SaaS company that provides a solution for managing employee expenses. The solution consists of an ASP.NET Core Web API project that is deployed as an Azure Web App.

Overall architecture -

Employees upload receipts for the system to process. When processing is complete, the employee receives a summary report email that details the processing results. Employees then

use a web application to manage their receipts and perform any additional tasks needed for reimbursement.

Processing.cs -

```
PC01 public static class Processing
PC02 {
PC03     public static class Function
PC04     {
PC05         [FunctionName("IssueWork")]
PC06         public static async Task Run([TimerTrigger("0 */5 * * *")] TimerInfo timer, ILogger
log)
PC07         {
PC08             var container = await GetCloudBlobContainer();
PC09             foreach (var fileItem in await ListFiles())
PC10             {
PC11                 var file = new CloudFile(fileItem.StorageUri.PrimaryUri);
PC12                 var ms = new MemoryStream();
PC13                 await file.DownloadToStreamAsync(ms);
PC14                 var blob = container.GetBlockBlobReference(fileItem.Uri.ToString());
PC15                 await blob.UploadFromStreamAsync(ms);
PC16
PC17             }
PC18         }
PC19         private static CloudBlockBlob GetDRBlockBlob(CloudBlockBlob sourceBlob)
PC20         {
PC21             . . .
PC22         }
PC23         private static async Task<CloudBlobContainer> GetCloudBlobContainer()
PC24         {
PC25             var cloudBlobClient = new CloudBlobClient(new Uri(" . . ."), await GetCredentials());
PC26
PC27             await cloudBlobClient.GetRootContainerReference().CreateIfNotExistsAsync();
PC28             return cloudBlobClient.GetRootContainerReference();
PC29         }
PC30         private static async Task<StorageCredentials> GetCredentials()
PC31         {
PC32             . . .
PC33         }
PC34         private static async Task<List<IListFileItem>> ListFiles()
PC35         {
PC36             . . .
PC37         }
PC38         private KeyVaultClient _keyVaultClient = new KeyVaultClient(" . . .");
PC39     }
```

You need to add code at line PC32 in Processing.cs to implement the GetCredentials method in the Processing class.

How should you complete the code? To answer, drag the appropriate code segments to the correct locations. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

## Select and Place:

Code segments	Answer Area
MSITokenProvider("...", null)	code segment
tp.GetAccessTokenAsync("...")	code segment
AzureServiceTokenProvider()	
StringTokenProvider("storage", "msi")	
tp.GetAuthenticationHeaderAsync(CancellationToken.None)	

Answer:

For more information, contact the Office of the Vice President for Research and Economic Development at 319-273-2500 or [research@uiowa.edu](mailto:research@uiowa.edu).

You need to ensure disaster recovery requirements are met.

What code should you add at line PC16?

To answer, drag the appropriate code fragments to the correct locations. Each code fragment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

### Select and Place:

Values	Answer Area
true	<code>var copyOptions = new CopyOptions { };</code>
SingleTransferContext	<code>var context = new Value</code>
ShouldTransferCallbackAsync	<code>= (source, destination) =&gt; Task.FromResult(true);</code>
false	<code>context. Value</code>
DirectoryTransferContext	<code>= (source, destination) =&gt; Task.FromResult(true);</code>
ShouldOverwriteCallbackAsync	<code>await TransferManager.CopyAsync(blob, GetDRBlob(blob), isServiceCopy: Value</code>
	<code>, context: context, options:copyOptions);</code>

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You need to add code at line PC26 of Processing.cs to ensure that security policies are met. How should you complete the code that you will add at line PC26? To answer, select the appropriate options in the answer area.

appropriate options in the answer area.

Hot Area:

### Answer Area

```
var resolver = new KeyVaultKeyResolver(_keyVaultClient);
var keyBundle = await _keyVaultClient.GetKeyAsync("...", "...");
```

```
var key = keyBundle.Key;
var key = keyBundle.KeyIdentifier.Identifier;
var key = await resolver.ResolveKeyAsync("encrypt", null);
var key = await resolver.ResolveKeyAsync(keyBundle.KeyIdentifier.Identifier, CancellationToken.None);
```

```
var x = keyBundle.Managed;
var x = AuthenticationScheme.SharedKey;
var x = new BlobEncryptionPolicy(key, resolver);
var x = new DeleteRetentionPolicy {Enabled = key.Kid != null};
```

```
cloudBlobClient.AuthenticationScheme = x;
cloudBlobClient.DefaultRequestOptions.RequireEncryption = x;
cloudBlobClient.DefaultRequestOptions.EncryptionPolicy = x;
cloudBlobClient.SetServiceProperties(new ServiceProperties(deleteRetentionPolicy:x));
```

Answer:

ConfigureSSE.ps1 -

```
CS01 $storageAccount = Get-AzureRmStorageAccount -ResourceGroupName "..." -AccountName "..."  
CS02 $keyVault = Get-AzureRmKeyVault -VaultName "..."  
CS03 $key = Get-AzureKeyVaultKey -VaultName $keyVault.VaultName -Name "..."  
CS04 Set-AzureRmKeyVaultAccessPolicy `  
CS05 -VaultName $keyVault.VaultName `  
CS06 -ObjectId $storageAccount.Identity.PrincipalId `  
CS07  
CS08  
CS09 Set-AzureRmStorageAccount `  
CS10 -ResourceGroupName $storageAccount.ResourceGroupName `  
CS11 -AccountName $storageAccount.StorageAccountName `  
CS12 -EnableEncryptionService File `  
CS13 -KeyvaultEncryption `  
CS14 -KeyName $key.Name  
CS15 -KeyVersion $key.Version `  
CS16 -KeyVaultUri $keyVault.VaultUri
```

You need to ensure the security policies are met.

What code do you add at line CS07 of ConfigureSSE.ps1?

- A. "PermissionsToKeys create, encrypt, decrypt
- B. "PermissionsToCertificates create, encrypt, decrypt
- C. "PermissionsToCertificates wrapkey, unwrapkey, get
- D. "PermissionsToKeys wrapkey, unwrapkey, get

You need to ensure receipt processing occurs correctly.

What should you do?

- A. Use blob properties to prevent concurrency problems
- B. Use blob SnapshotTime to prevent concurrency problems
- C. Use blob metadata to prevent concurrency problems
- D. Use blob leases to prevent concurrency problems

Capacity issue -

During busy periods, employees report long delays between the time they upload the receipt and when it appears in the web application.

You need to resolve the capacity issue.

What should you do?

- A. Convert the trigger on the Azure Function to an Azure Blob storage trigger
- B. Ensure that the consumption plan is configured correctly to allow scaling
- C. Move the Azure Function to a dedicated App Service Plan
- D. Update the loop starting on line PC09 to process items in parallel

Log capacity issue -

Developers report that the number of log messages in the trace output for the processor is too high, resulting in lost log messages.

You need to resolve the log capacity issue.

What should you do?

- A. Create an Application Insights Telemetry Filter
- B. Change the minimum log level in the host.json file for the function
- C. Implement Application Insights Sampling
- D. Set a LogCategoryFilter during startup

LabelMaker app -

Coho Winery produces, bottles, and distributes a variety of wines globally. You are a developer implementing highly scalable and resilient applications to support online order processing by using Azure solutions.

Coho Winery has a LabelMaker application that prints labels for wine bottles. The application sends data to several printers. The application consists of five modules that run independently on virtual machines (VMs). Coho Winery plans to move the application to Azure and continue to support label creation.

External partners send data to the LabelMaker application to include artwork and text for custom label designs.

You identify the following requirements for data management and manipulation:

Order data is stored as nonrelational JSON and must be queried using SQL.

Changes to the Order data must reflect immediately across all partitions. All reads to the Order data must fetch the most recent writes.

You need to configure Azure Cosmos DB.

Which settings should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

## Answer Area

Setting	Value
Consistency Level	<div style="border: 1px solid black; padding: 5px; display: inline-block;"><span style="font-size: 2em;">▼</span></div> <div style="border: 1px solid black; padding: 5px; display: inline-block; width: fit-content;"><p>Strong</p><p>Bounded-staleness</p><p>Session</p><p>Eventual</p></div>
API	<div style="border: 1px solid black; padding: 5px; display: inline-block;"><span style="font-size: 2em;">▼</span></div> <div style="border: 1px solid black; padding: 5px; display: inline-block; width: fit-content;"><p>SQL</p><p>MongoDB</p><p>Graph</p><p>Table</p></div>

Answer: Strong, SQL

Relevant portions of the app files are shown below. Line numbers are included for reference only.

This JSON file contains a representation of the data for an order that includes a single item.

Order.json -

### Order.json

```
01 {
02   "id" : 1,
03   "customers" : [
04     {
05       "familyName" : "Doe",
06       "givenName" : "John",
07       "customerid" : 5
08     }
09   ],
10   "line_items" : [
11     {
12       "fulfillable_quantity" : 1,
13       "id": 6,
14       "price" : "199.99" ,
15       "product_id" : 7513594,
16       "quantity": 1,
17       "requires_shipping" : true ,
18       "sku": "SFC-342-N" ,
19       "title" : "Surface Go" ,
20       "vendor" : "Microsoft" ,
21       "name" : "Surface Go - 8GB" ,
22       "taxable" : true ,
23       "tax_lines" : [
24         {
25           "title" : "State Tax" ,
26           "price" : "3.98" ,
27           "rate" : 0.06
28         }
29       ],
30       "total_discount" : "5.00" ,
31       "discount_allocations" : [
32         {
33           "amount" : "5.00" ,
34           "discount_application_index" : 2
35         }
36       ]
37 }
```

You need to retrieve all order line items from Order.json and sort the data alphabetically by the city.

How should you complete the code? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

```
SELECT li.id AS lineitemid, li.price
FROM
  Orders o
  Lineltems li
JOIN
  li
  IN
    o.line_items
    li.line_items
    o.address
ORDER BY
  o.address.city
  li.address.city
  o.city
  li.city
ASC
```

Answer:



You need to troubleshoot the order workflow.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Review the API connections.
- B. Review the activity log.
- C. Review the run history.
- D. Review the trigger history.

Answer: C,D

Calls to the Printer API App fail periodically due to printer communication timeouts.

Printer communication timeouts occur after 10 seconds. The label printer must only receive up to 5 attempts within one minute.

The order workflow fails to run upon initial deployment to Azure.

You need to update the order workflow to address the issue when calling the Printer API App. How should you complete the code? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

```
"print_label": {  
    "type": "Http",  
    "inputs": {  
        "method": "POST",  
        "uri": "https://www.cohowinery.com/printer/printlabel",  
        "retryPolicy": {  
            "type": "",  


|             |
|-------------|
| default     |
| none        |
| fixed       |
| exponential |

  
            "interval": "",  


|       |
|-------|
| PT10S |
| PT30S |
| PT60S |
| PT1D  |

  
            "count": "",  


|    |
|----|
| 5  |
| 10 |
| 60 |

  
        }  
    }  
}
```

You need to deploy a new version of the LabelMaker application to ACR.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions	Answer area
Log in to the registry and push image.	
Create an alias of the image with a new build number.	
Create an alias of the image with the fully qualified path to the registry.	
Download the image to your local computer.	
Build a new application image by using dockerfile.	

You need to access data from the user claim object in the e-commerce web app.

What should you do first?

- A. Write custom code to make a Microsoft Graph API call from the e-commerce web app.
- B. Assign the Contributor RBAC role to the e-commerce web app by using the Resource Manager create role assignment API.
- C. Update the e-commerce web app to read the HTTP request header values.
- D. Using the Azure CLI, enable Cross-origin resource sharing (CORS) from the e-commerce checkout API to the e-commerce web app.

You are a developer for Contoso, Ltd. The company has a social networking website that is developed as a Single Page Application (SPA). The main web application for the social networking website loads user uploaded content from blob storage.

You are developing a solution to monitor uploaded data for inappropriate content. The following process occurs when users upload content by using the SPA:

- \* Messages are sent to ContentUploadService.
- \* Content is processed by ContentAnalysisService.
- \* After processing is complete, the content is posted to the social network or a rejection message is posted in its place.

The ContentAnalysisService is deployed with Azure Container Instances from a private Azure Container Registry named contosoimages.

The solution will use eight CPU cores.

ApplicationManifest -

```
AM01 {  
AM02     "id" : "2b079f03-9b06-2d44-98bb-e9182901fcb6",  
AM03     "appId" : "7118a7f0-b5c2-4c9d-833c-3d711396fe65",  
AM04  
AM05     "createdDateTime" : "2019-12-24T06:01:44Z",  
AM06     "logoUrl" : null,  
AM07     "logoutUrl" : null,  
AM08     "name" : "ContentAnalysisService",  
AM09  
AM10  
AM11     "orgRestrictions" : [],  
AM12     "parentalControlSettings" : {  
AM13         "countriesBlockedForMinors" : [],  
AM14         "legalAgeGroupRule" : "Allow"  
AM15     },  
AM16     "passwordCredentials" : []  
AM17 }
```

DRAG DROP -

You need to add markup at line AM04 to implement the ContentReview role.

How should you complete the markup? To answer, drag the appropriate json segments to the correct locations. Each json segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Json segments	Answer Area
User	<code>"appRoles": [</code>
value	<code>{ " [ ] ":" [</code>
role	<code> " [ ] " "</code>
Application	<code> ],</code>
allowedMemberTypes	<code> " [ ] ", "ContentReviewer",</code>
allowedAccountTypes	<code> " [ ] " : "ContentReviewer"</code>

Answer:

You need to add code at line AM09 to ensure that users can review content using ContentAnalysisService.

How should you complete the code? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

"allowPublicClient":true  
 "oauth2Permissions": ["login"]  
 "oauth2AllowUrlPathMatching":true  
 "oauth2AllowIdTokenImplicitFlow":true

"oauth2AllowImplicitFlow": true  
 "oauth2RequiredPostResponse":true  
 "preAuthorizedApplications": ["SPA"]  
 "knownClientApplications": ["ContentAnalysisService"]

Answer:



You have the following security requirements:

Any web service accessible over the Internet must be protected from cross site scripting attacks.

All websites and services must use SSL from a valid root certificate authority.

Azure Storage access keys must only be stored in memory and must be available only to the service.

All Internal services must only be accessible from internal Virtual Networks (VNets).

All parts of the system must support inbound and outbound traffic restrictions.

All service calls must be authenticated by using Azure AD.

You need to ensure that network security policies are met.

How should you configure network security? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Technology	Value
SSL certificate	<input type="button" value="▼"/> Valid root certificate Self-signed certificate
Proxy type	<input type="button" value="▼"/> nginx Azure Application Gateway

## ContentUploadService -

```
CS01 apiVersion: '2018-10-01'
CS02 type: Microsoft.ContainerInstance/containerGroups
CS03 location: westus
CS04 name: contentUploadService
CS05 properties:
CS06   containers:
CS07     - name: service
CS08       properties:
CS09         image: contoso/contentUploadService:latest
CS10       ports:
CS11         - port: 80
CS12           protocol: TCP
CS13       resources:
CS14         requests:
CS15           cpu: 1.0
CS16           memoryInGB: 1.5
CS17
CS18 ipAddress:
CS19   ip: 10.23.121.112
CS20   ports:
CS21     - port: 80
CS22       protocol: TCP
CS23
CS24
CS25 networkProfile:
CS26
id: /subscriptions/98...19/resourceGroups/container/providers/Microsoft.Network/networkProfiles/subnet
```

You need to add YAML markup at line CS17 to ensure that the ContentUploadService can access Azure Storage access keys.

How should you complete the YAML markup? To answer, drag the appropriate YAML segments to the correct locations. Each YAML segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

### YAML segments

secret

envVar

secretValues

volumes

volumeMounts

environmentVariables

### Answer Area

YAML segment :

- mountPath: /mnt/secrets  
 name: accesskey

YAML segment :

- name: accesskey

YAML segment :

key: TXkgZmlyc3Qgc2VjcmV0IEZPTwo=

You need to add code at line AM10 of the application manifest to ensure that the requirement for manually reviewing content can be met.

How should you complete the code? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

```
"optionalClaims": [  
    "acct",  
    "platf",  
    "sid",  
    "tenant_ctry",  
    "sid",  
    "upn",  
    "email",  
    "enfpolids"],
```

You need to monitor ContentUploadService according to the requirements.

Which command should you use?

- A. az monitor metrics alert create  `--n alert --g --! -scopes --! -condition "avg Percentage CPU > 8"`
- B. az monitor metrics alert create  `--n alert --g --! -scopes --! -condition "avg Percentage CPU > 800"`
- C. az monitor metrics alert create  `--n alert --g --! -scopes --! -condition "CPU Usage > 800"`
- D. az monitor metrics alert create  `--n alert --g --! -scopes --! -condition "CPU Usage > 8"`

You need to investigate the http server log output to resolve the issue with the ContentUploadService.

Which command should you use first?

- A. az webapp log
- B. az ams live-output
- C. az monitor activity-log
- D. az container attach

You need to ensure that validation testing is triggered per the requirements.

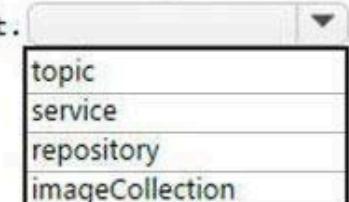
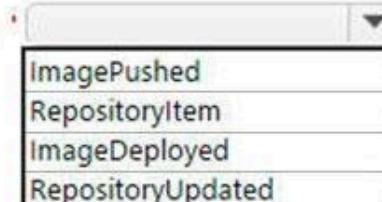
How should you complete the code segment? To answer, select the appropriate values in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

```
var event = getEvent();
if (event.eventType === 'ImagePushed'
    && event.data.target === 'contentanalysiservice'
    && event.data.repository.contains('contosoimages'))
{
    startValidationTesting();
}
```



Answer: 1. ImagePushed 2. repository 3. topic

You need to deploy the CheckUserContent Azure Function. The solution must meet the security and cost requirements.

Which hosting model should you use?

- A. Premium plan
- B. App Service plan
- C. Consumption plan

You need to store the user agreements.

Where should you store the agreement after it is completed?

- A. Azure Storage queue
- B. Azure Event Hub
- C. Azure Service Bus topic
- D. Azure Event Grid topic

You need to implement the bindings for the CheckUserContent function.

How should you complete the code segment? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

### Answer Area

```
public static class CheckUserContent
{
    [FunctionName("CheckUserContent")]
    public static void Run(
        [QueueTrigger("userContent")]
        [BlobTrigger("userContent/{name}")]
        [CosmosDBTrigger("content", "userContent")]
        [Table("content", "userContent", "{name}")]
        string content,
        Stream output)
    {
        ...
    }
}
```

You need to configure the ContentUploadService deployment.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Add the following markup to line CS23: type: Private
- B. Add the following markup to line CS24: osType: Windows
- C. Add the following markup to line CS24: osType: Linux
- D. Add the following markup to line CS23: type: Public

City Power & Light company provides electrical infrastructure monitoring solutions for homes and businesses. The company is migrating solutions to Azure.

The company has a public website located at <http://www.cpandl.com/>. The site is a single-page web application that runs in Azure App Service on Linux. The website uses files stored in Azure Storage and cached in Azure Content Delivery Network (CDN) to serve static content.

Azure Database for PostgreSQL -

The database connection string is stored in Azure Key Vault with the following attributes:

Azure Key Vault name: cpandlkeyvault

Secret name: PostgreSQLConn

Id: 80df3e46ffcd4f1cb187f79905e9a1e8

The connection information is updated frequently. The application must always use the latest information to connect to the database.

Azure Service Bus and Azure Event Grid

You need to retrieve the database connection string.

Which values should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

REST API Endpoint:

https://	.vault.azure.net/secrets/	/
	cpandlkeyvault	
	PostgreSQLConn	
	80df3e46ffcd4f1cb187f79905e9a1e8	

Variable type to access Azure Key Vault secret values:

Environment
Session
ViewState
QueryString

While testing the site, the following error message displays:

CryptographicException: The system cannot find the file specified.

Corporate website -

Security.cs:

```
SC01 public class Security
SC02 {
SC03 var bytes = System.IO.File.ReadAllBytes("~/var/ssl/private");
SC04 var cert = new System.Security.Cryptography.X509Certificate2(bytes);
SC05 var certName = cert.FriendlyName;
SC06 }
```

You need to correct the corporate website error.

Which four actions should you recommend be performed in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions	Answer Area
Upload the certificate to Azure Key Vault.	
Update line SC05 of Security.cs to include error handling and then redeploy the code.	
Update line SC03 of Security.cs to include a using statement and then re-deploy the code.	 
Add the certificate thumbprint to the WEBSITE_LOAD_CERTIFICATES app setting.	
Upload the certificate to source control.	
Import the certificate to Azure App Service.	
Generate a certificate.	

You need to configure API Management for authentication.

Which policy values should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Setting	Value
Policy	<div style="border: 1px solid black; padding: 5px; display: inline-block;"><a href="#">Check HTTP header</a> <a href="#">Restrict caller IPs</a> <a href="#">Limit call rate by key</a> <a href="#">Validate JWT</a></div>
Policy section	<div style="border: 1px solid black; padding: 5px; display: inline-block;"><a href="#">Inbound</a> <a href="#">Outbound</a></div>

You need to authenticate the user to the corporate website as indicated by the architectural diagram.

Which two values should you use? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. ID token signature
- B. ID token claims
- C. HTTP response code
- D. Azure AD endpoint URI
- E. Azure AD tenant ID

You test the Logic app in a development environment. The following error message displays: '400 Bad Request'

Troubleshooting of the error shows an HttpTrigger action to call the RequestUserApproval function.

You need to correct the Azure Logic app error message.

Which configuration values should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### **Answer Area**

<b>Setting</b>	<b>Value</b>
authentication level	<input type="checkbox"/> anonymous <input type="checkbox"/> function <input type="checkbox"/> admin
managed identity	<input type="checkbox"/> system-assigned <input type="checkbox"/> user-assigned

You need to configure Azure Service Bus to Event Grid integration.

Which Azure Service Bus settings should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### **Answer Area**

<b>Setting</b>	<b>Value</b>
Tier	<input type="checkbox"/> Basic <input type="checkbox"/> Standard <input type="checkbox"/> Premium
RBAC role	<input type="checkbox"/> Owner <input type="checkbox"/> Contributor <input type="checkbox"/> Azure Service Bus Data Owner <input type="checkbox"/> Azure Service Bus Data Receiver

Function app -

You perform local testing for the RequestUserApproval function. The following error message

displays:

'Timeout value of 00:10:00 exceeded by function: RequestUserApproval'

The same error message displays when you test the function in an Azure development environment when you run the following Kusto query:

You need to investigate the Azure Function app error message in the development environment. What should you do?

- A. Connect Live Metrics Stream from Application Insights to the Azure Function app and filter the metrics.
- B. Create a new Azure Log Analytics workspace and instrument the Azure Function app with Application Insights.
- C. Update the Azure Function app with extension methods from Microsoft.Extensions.Logging to log events by using the log instance.
- D. Add a new diagnostic setting to the Azure Function app to send logs to Log Analytics.

You need to configure security and compliance for the corporate website files.

Which Azure Blob storage settings should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

Action	Setting
Restrict file access	<input type="checkbox"/> role-based access control (RBAC) <input type="checkbox"/> managed identity <input type="checkbox"/> shared access signature (SAS) token <input type="checkbox"/> connection string
Enable file auditing	<input type="checkbox"/> access tier <input type="checkbox"/> change feed <input type="checkbox"/> blob indexer <input type="checkbox"/> storage account type

### Logic app -

You test the Logic app in a development environment. The following error message displays: '400 Bad Request'

Troubleshooting of the error shows an HttpTrigger action to call the RequestUserApproval function.

You need to correct the RequestUserApproval Function app error.

What should you do?

- A. Update line RA13 to use the `async` keyword and return an `HttpRequest` object value.
- B. Configure the Function app to use an App Service hosting plan. Enable the Always On setting of the hosting plan.
- C. Update the function to be stateful by using Durable Functions to process the request payload.
- D. Update the `functionTimeout` property of the `host.json` project file to 15 minutes.

You need to configure the integration for Azure Service Bus and Azure Event Grid.

How should you complete the CLI statement? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

#### Answer Area

az	<input type="button" value="eventgrid"/> <input type="button" value="servicebus"/>	<input type="button" value="event-subscription"/> <input type="button" value="topic"/> <input type="button" value="queue"/>	create --source-resource-id \$Topicid --name \$name --
endpoint-type	<input type="button" value="webhook"/> <input type="button" value="eventhub"/> <input type="button" value="servicebusqueue"/>	--endpoint \$endpoint	

Answer:

You need to ensure that all messages from Azure Event Grid are processed. What should you use?

- A. Azure Event Grid topic
- B. Azure Service Bus topic
- C. Azure Service Bus queue
- D. Azure Storage queue
- E. Azure Logic App custom connector

You need to configure the Account Kind, Replication, and Access tier options for the corporate website's Azure Storage account.

How should you complete the configuration? To answer, select the appropriate options in the dialog box in the answer area.

NOTE: Each correct selection is worth one point.

## Create storage account

Basics Networking Advanced Tags Review + create

Azure Storage is a Microsoft-managed service providing cloud storage that is highly available, secure, durable, scalable, and redundant. Azure Storage includes Azure Blobs (objects), Azure Data Lake Storage Gen2, Azure Files, Azure Queues, and Azure Tables. The cost of your storage account depends on the usage and the options you choose below.

**Project details**

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription \* Visual Studio Enterprise

Resource group \* (New) cplcorporatesite [Create new](#)

**Instance details**

The default deployment model is Resource Manager, which supports the latest Azure features. You may choose to deploy using the classic deployment model instead. [Choose classic deployment model](#)

Storage account name ⓘ \* corporatewebsitecontent

Location \* (US) East US

Performance ⓘ  Standard  Premium

Account kind ⓘ

StorageV2 (general purpose v2)
Storage (general purpose v1)
BlobStorage

Replication ⓘ

Locally-redundant storage (LRS)
Zone-redundant storage (ZRS)
Geo-redundant storage (GRS)
Read-access geo-redundant storage (RA-GRS)
Geo-zone-redundant storage (GZRS)
Read-access geo-zone-redundant storage (RA-GZRS)

Access tier (default) ⓘ  Cool  Hot

You are a developer for Proseware, Inc. You are developing an application that applies a set of governance policies for Proseware's internal services, external services, and applications. The application will also provide a shared library for common functionality.

You need to implement the Log policy.

How should you complete the Azure Event Grid subscription? To answer, drag the appropriate JSON segments to the correct locations. Each JSON segment may be used once, more than once, or not at all. You may need to drag the split bar between panes to view content.

NOTE: Each correct selection is worth one point.

## Select and Place:

Code segment	Answer Area
All	{
WebHook	"name": "newlogs",
EventHub	"properties": {
subjectEndsWith	"topic": "/subscriptions/.../providers/Microsoft.EventGrid/topics/...",
Microsoft.Storage	"destination": {
subjectBeginsWith	"endpointType" : "code segment",
Microsoft.Storage.BlobCreated	"filter": {
	"code segment": "/blobServices/default/containers/logdrop/",
	"includedEventTypes": [ "code segment" ] },
	},
	"labels": [],
	"eventDeliverySchema": "EventGridSchema"

## Answer:

You develop and deploy a stateful ASP.NET Core 2.1 web application named Policy service to an Azure App Service Web App. The application reacts to events from Azure Event Grid and performs policy actions based on those events.

The application must include the Event Grid Event ID field in all Application Insights telemetry. Policy service must use Application Insights to automatically scale with the number of policy actions that it is performing.

You need to ensure that the solution can meet the scaling requirements for Policy Service. Which Azure Application Insights data model should you use?

- A. an Application Insights dependency
- B. an Application Insights event
- C. an Application Insights trace
- D. an Application Insights metric

A      B      C      D

You need to implement telemetry for non-user actions.

How should you complete the Filter class? To answer, drag the appropriate code segments to the correct locations. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

**Code segments**

/health  
/status  
RequestTelemetry  
PageViewTelemetry  
ITelemetryProcessor  
ITelemetryInitializer

**Answer Area**

```
public class Filter : code segment
{
    private readonly code segment _next;
    public (Filter code segment) next)
    {
        _next = next;
    }
    public void Process(ITelemetry item)
    {
        var x = item as code segment;
        if (x?.Url.AbsolutePath == " code segment ")
        {
            return;
        }
        _next.Process(item);
    }
}
```

Answer:



You need to ensure that PolicyLib requirements are met.

How should you complete the code segment? To answer, drag the appropriate code segments to the correct locations. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

**Code segments**

Process  
Initialize  
telemetry.Sequence  
ITelemetryProcessor  
ITelemetryInitializer  
telemetry.Context  
EventGridController.EventId.Value  
((EventTelemetry)telemetry).Properties["EventId"]

**Answer Area**

```
public class IncludeEventId : code segment
{
    public void code segment (ITelemetry telemetry)
    {
        code segment .Properties["EventId"] = code segment ;
    }
}
```



You need to add code at line EG15 in EventGridController.cs to ensure that the Log policy applies to all services.

```

EventGridController.cs
EG01 public class EventGridController : Controller
EG02 {
EG03     public static AsyncLocal<string> EventId = new AsyncLocal<string>();
EG04     public IActionResult Process([FromBody] string eventsJson)
EG05     {
EG06         var events = JArray.Parse(eventsJson);
EG07
EG08         foreach (var @event in events)
EG09         {
EG10             EventId.Value = @event["id"].ToString();
EG11             if (@event["topic"].ToString().Contains("providers/Microsoft.Storage"))
EG12             {
EG13                 SendToAnomalyDetectionService(@event["data"]["url"].ToString());
EG14             }
EG15
EG16             {
EG17                 EnsureLogging(@event["subject"].ToString());
EG18             }
EG19         }
EG20         return null;
EG21     }
EG22     private void EnsureLogging(string resource)
EG23     {
EG24         . .
EG25     }
EG26     private async Task SendToAnomalyDetectionService(string uri)
EG27     {
EG28         var content = GetLogData(uri);
EG29         var scoreRequest = new
EG30         {
EG31             Inputs = new Dictionary<string, List<Dictionary<string, string>>()
EG32             {
EG33                 {
EG34                     "input1",
EG35                     new List<Dictionary<string, string>>()
EG36                     {
EG37                         new Dictionary<string, string>()
EG38                         {
EG39                             {
EG40                                 "logcontent", content
EG41                             }
EG42                         }
EG43                     }
EG44                 },
EG45             },
EG46             GlobalParameters = new Dictionary<string, string>() { }
EG47         };
EG48         var result = await (new HttpClient()).PostAsJsonAsync("...", scoreRequest);
EG49         var rawModelResult = await result.Content.ReadAsStringAsync();
EG50         var modelResult = JObject.Parse(rawModelResult);
EG51         if (modelResult["notify"].HasValues)
EG52         {
EG53             . .
EG54         }
EG55     }
EG56     private (string name, string resourceGroup) ParseResourceId(string resourceId)
EG57     {
EG58         . .
EG59     }
EG60     private string GetLogData(string uri)
EG61     {
EG62         . .
EG63     }
EG64     static string BlobStoreAccountSAS(string containerName)
EG65     {
EG66         . .
EG67     }
EG68 }

```

How should you complete the code? To answer, drag the appropriate code segments to the correct locations. Each code segment may be used once, more than once, or not at all. You may

need to drag the split bar between panes or scroll to view content.

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

## Select and Place:

Code segments	Answer Area
topic	
status	
eventType	
Succeeded	
operationName	
resourceProvider	

```
if {
    @event[ "data" ][ " code segment " ].ToString() == " code segment "
    &&
    @event[ "data" ][ " code segment " ].ToString() == "Microsoft.Web/sites/write"
}
```

## Answer:

Code segments	Answer Area
	<pre>    "write"</pre>

LoginEvent.cs -

Relevant portions of the app files are shown below. Line numbers are included for reference only and include a two-character prefix that denotes the specific file to which they belong.

LoginEvent.cs

```
LE01 public class LoginEvent
LE02 {
LE03
LE04     public string subject { get; set; }
LE05     public DateTime eventTime { get; set; }
LE06     public Dictionary<string, string> data { get; set; }
LE07     public string Serialize()
LE08     {
LE09         return JsonConvert.SerializeObject(this);
LE10     }
LE11 }
```

You need to insert code at line LE03 of LoginEvent.cs to ensure that all authentication events are processed correctly.

How should you complete the code? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

public string  ( get; set; )

id  
 eventType  
 dataVersion  
 metadataVersion

public string  ( get; set; )

id  
 eventType  
 dataVersion  
 metadataVersion

public string  ( get; set; )

id  
 eventType  
 dataVersion  
 metadataVersion

Box 3: dataVersion -

You need to implement the Log policy.

How should you complete the EnsureLogging method in EventGridController.cs? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

```
var client = new WebSiteManagementClient(. . .);
var id = ParseResourceID(resource);
var appSettings = new StringDictionary(name: "properties",
    properties: new Dictionary<string, string> {
        {"DIAGNOSTICS_AZUREBLOBCONTAINERSASURL", BlobStoreAccountSAS(""),
            logs
            logdrop
        {"DIAGNOSTICS_AZUREBLOBRETENTIONINDAYS", "15
            30
        });
        client.WebApps. (UploadLoggingSettings
            UpdateApplicationSetting
            id.resourceGroup,
            id.name, appSettings);
```

Answer:

Notification latency -

Users report that anomaly detection emails can sometimes arrive several minutes after an anomaly is detected.

You need to resolve a notification latency issue.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Set Always On to true.
- B. Ensure that the Azure Function is using an App Service plan.
- C. Set Always On to false.
- D. Ensure that the Azure Function is set to use a consumption plan.

End of Case Study

You are developing a solution that uses the Azure Storage Client library for .NET. You have the following code: (Line numbers are included for reference only.)

```
01 CloudBlockBlob src = null;
02 try
03 {
04     src = container.ListBlobs().OfType<CloudBlockBlob>().FirstOrDefault();
05     var id = await src.AcquireLeaseAsync(null);
06     var dst = container.GetBlockBlobReference(src.Name);
07     string cpid = await dst.StartCopyAsync(src);
08     await dst.FetchAttributeAsync();
09     return id;
10 }
11 catch (Exception e)
12 {
13     throw;
14 }
15 finally
16 {
17     if (src != null)
18         await src.FetchAttributesAsync();
19     if (src.Properties.LeaseState != LeaseState.Available)
20         await src.BreakLeaseAsync(new TimeSpan(0));
21 }
```

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

NOTE: Each correct selection is worth one point.

Hot Area:

**Answer Area**

Statement	Yes	No
The code creates an infinite lease	<input type="radio"/>	<input type="radio"/>
The code at line 06 always creates a new blob	<input type="radio"/>	<input type="radio"/>
The finally block releases the lease	<input type="radio"/>	<input type="radio"/>

You are building a website that uses Azure Blob storage for data storage. You configure Azure Blob storage lifecycle to move all blobs to the archive tier after 30 days. Customers have requested a service-level agreement (SLA) for viewing data older than 30 days. You need to document the minimum SLA for data recovery. Which SLA should you use?

- A. at least two days
- B. between one and 15 hours
- C. at least one day
- D. between zero and 60 minutes

Answer: B

You are developing a ticket reservation system for an airline.

The storage solution for the application must meet the following requirements:

- Ensure at least 99.99% availability and provide low latency.
- Accept reservations even when localized network outages or other unforeseen failures occur.
- Process reservations in the exact sequence as reservations are submitted to minimize overbooking or selling the same seat to multiple travelers
- Allow simultaneous and out-of-order reservations with a maximum five-second tolerance window.

You provision a resource group named `airlineResourceGroup` in the Azure South-Central US region.

You need to provision a SQL API Cosmos DB account to support the app.

How should you complete the Azure CLI commands? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

```
resourceGroupName= 'airlineResourceGroup'
name= 'docdb-airline-reservations'
databaseName= 'docdb-tickets-database'
collectionName= 'docdb-tickets-collection'
consistencyLevel= 
  Strong
  Eventual
  ConsistentPrefix
  BoundedStaleness

az cosmosdb create \
--name $name \

  --enable-virtual-network true \
  --enable-automatic-failover true \
  --kind 'GlobalDocumentDB' \
  --kind 'MongoDB' \
--resource-group $resourceGroupName \
--max-interval 5 \

  --locations 'southcentralus'
  --locations 'eastus'
  --locations 'southcentralus=0 eastus=1 westus=2'
  --locations 'southcentralus=0'
--default-consistency-level = $consistencyLevel
```

You are preparing to deploy a Python website to an Azure Web App using a container. The solution will use multiple containers in the same container group. The Dockerfile that builds the container is as follows:

```
FROM python:3
ADD website.py
CMD [ "python", "./website.py"]
```

You build a container by using the following command. The Azure Container Registry instance named images is a private registry.

```
docker build -t images.azurecr.io/website:v1.0.0
```

The user name and password for the registry is admin.

The Web App must always run the same version of the website regardless of future builds.

You need to create an Azure Web App to run the website.

How should you complete the commands? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

```
az configure --defaults web=website
az configure --defaults group=website
az appservice plan create --name websitePlan
  -sku SHARED
  -tags container
  -sku B1 --hyper-v
  -sku B1 --is-linux

az webapp create --plan websitePlan
  --deployment-source-url images.azurecr.io/website:v1.0.0
  --deployment-source-url images.azurecr.io/website:latest
  --deployment-container-image-name images.azurecr.io/website:v1.0.0
  --deployment-container-image-name images.azurecr.io/website:latest

az webapp config
  set --python-version 2.7 --generic-configurations user=admin password=admin
  set --python-version 3.6 --generic-configurations user=admin password=admin
  container set --docker-registry-server-url https://images.azurecr.io -u admin -p admin
  container set --docker-registry-server-url https://images.azurecr.io/website -u admin -p admin
```

You are developing a back-end Azure App Service that scales based on the number of messages contained in a Service Bus queue. A rule already exists to scale up the App Service when the average queue length of unprocessed and valid queue messages is greater than 1000. You need to add a new rule that will continuously scale down the App Service as long as the scale up condition is not met. How should you configure the Scale rule? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

Scale rule ×

Metric source

Storage queue

Service Bus queue

Current resource

Storage queue (classic)

Resource type

Service Bus Namespaces

Resource

MessageQueue1103

\* Queues

itemqueue

Criteria

\* Metric name

Message Count

Active Message Count

1 minute time grain

\* Time grain statistic •

Total

Maximum

Average

Count

\* Operator

Less than

Greater than

Less than or equal to

Greater than or equal to

Equal to

Not equal to

Save

You have an application that uses Azure Blob storage.

You need to update the metadata of the blobs.

Which three methods should you use to develop the solution? To answer, move the appropriate methods from the list of methods to the answer area and arrange them in the correct order.

Select and Place:

**Methods**

Metadata.Add

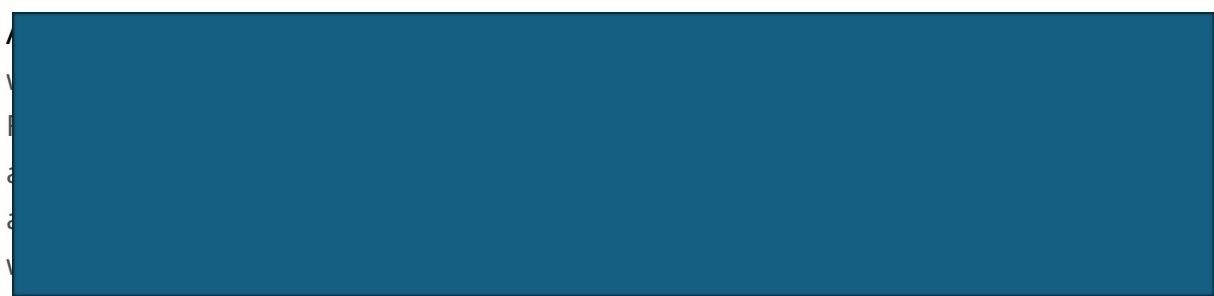
SetMetadataAsync

FetchAttributesAsync

UploadFileStream

SetPropertiesAsync

**Answer Area**



You are developing an Azure solution to collect point-of-sale (POS) device data from 2,000 stores located throughout the world. A single device can produce 2 megabytes (MB) of data every 24 hours. Each store location has one to five devices that send data.

You must store the device data in Azure Blob storage. Device data must be correlated based on a device identifier. Additional stores are expected to open in the future.

You need to implement a solution to receive the device data.

Solution: Provision an Azure Event Grid. Configure the machine identifier as the partition key and enable capture.

Does the solution meet the goal?

You develop Azure solutions.

A .NET application needs to receive a message each time an Azure virtual machine finishes processing data. The messages must NOT persist after being processed by the receiving application.

You need to implement the .NET object that will receive the messages.

Which object should you use?

- A. QueueClient
- B. SubscriptionClient
- C. TopicClient
- D. CloudQueueClient

You are maintaining an existing application that uses an Azure Blob GPv1 Premium storage account. Data older than three months is rarely used.

Data newer than three months must be available immediately. Data older than a year must be saved but does not need to be available immediately.

You need to configure the account to support a lifecycle management rule that moves blob data to archive storage for data not modified in the last year.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions	Answer Area
Upgrade the storage account to GPv2	
Create a new GPv2 Standard account and set its default access tier level to cool	
Change the storage account access tier from hot to cool	Copy the data to be archived to a Standard GPv2 storage account and then delete the data from the original storage account

Answer:

You develop Azure solutions.

You must connect to a No-SQL globally-distributed database by using the .NET API.

You need to create an object to configure and execute requests in the database.

Which code segment should you use?

- A. new Container(EndpointUri, PrimaryKey);
- B. new Database(EndpointUri, PrimaryKey);
- C. new CosmosClient(EndpointUri, PrimaryKey);

You have an existing Azure storage account that stores large volumes of data across multiple containers.

You need to copy all data from the existing storage account to a new storage account. The copy process must meet the following requirements:

- ⇒ Automate data movement.
- ⇒ Minimize user input required to perform the operation.
- ⇒ Ensure that the data movement process is recoverable.

What should you use?

- A. AzCopy
- B. Azure Storage Explorer
- C. Azure portal
- D. .NET Storage Client Library

You are developing a web service that will run on Azure virtual machines that use Azure Storage. You configure all virtual machines to use managed identities.

You have the following requirements:

- ⇒ Secret-based authentication mechanisms are not permitted for accessing an Azure Storage account.
- ⇒ Must use only Azure Instance Metadata Service endpoints.

You need to write code to retrieve an access token to access Azure Storage. To answer, drag the appropriate code segments to the correct locations. Each code segment may be used once or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

**Code segment 1**

`http://localhost:50342/oauth2/token`  
`http://169.254.169.254:50432/oauth2/token`  
`http://localhost/metadata/identity/oauth2/token`  
`http://169.254.169.254/metadata/identity/oauth2/token`

**Answer Area**

`var url = " [ ] " ;`  
`Code segment 1`  
  
`var queryString = "...";`  
`var client = new HttpClient();`  
`var response = await client.GetAsync(url + queryString);`  
`var payload = await response.Content.ReadAsStringAsync();`  
  
`return [ ] ;`  
`Code segment 2`

**Code segment 2**

`XDocument.Parse(payload);`  
`new MultipartContent(payload);`  
`new NetworkCredential("Azure", payload);`  
`JsonConvert.DeserializeObject<Dictionary<string, string>>(payload);`

Answer:

g  
eso  
ken

You are developing a new page for a website that uses Azure Cosmos DB for data storage. The feature uses documents that have the following format:

```
{  
    "name": "John",  
    "city" : "Seattle"  
}
```

You must display data for the new page in a specific order. You create the following query for the page:

```
SELECT*  
FROM People p  
ORDER BY p.name, p.city DESC
```

You need to configure a Cosmos DB policy to support the query.

How should you configure the policy? To answer, drag the appropriate JSON segments to the correct locations. Each JSON segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

JSON segments	Answer Area
orderBy	{ "automatic": true, "ngMode": "Consistent", "includedPaths": [ { "path": "/**" } ], "excludedPaths": [], "": [ [ { "path": "/name", "order": "descending" }, { "path": "/city", "order": " <span style="border: 1px solid #ccc; padding: 2px;"> </span> " } ] ] }
sortOrder	
ascending	
descending	
compositeIndexes	

You are building a traffic monitoring system that monitors traffic along six highways. The system produces time series analysis-based reports for each highway. Data from traffic sensors are stored in Azure Event Hub. Traffic data is consumed by four departments. Each department has an Azure Web App that displays the time series-based reports and contains a WebJob that processes the incoming data from Event Hub. All Web Apps run on App Service Plans with three instances. Data throughput must be maximized. Latency must be minimized. You need to implement the Azure Event Hub. Which settings should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

Setting	Value
Number of partitions	<input type="button" value="▼"/>
	<input type="button" value="3"/>
	<input type="button" value="4"/>
	<input type="button" value="6"/>
	<input type="button" value="12"/>
Partition Key	<input type="button" value="▼"/>
	<input type="button" value="Highway"/>
	<input type="button" value="Department"/>
	<input type="button" value="Timestamp"/>
	<input type="button" value="VM name"/>

You are developing a microservices solution. You plan to deploy the solution to a multinode Azure Kubernetes Service (AKS) cluster.

You need to deploy a solution that includes the following features:

- reverse proxy capabilities
- configurable traffic routing
- TLS termination with a custom certificate

Which components should you use? To answer, drag the appropriate components to the correct requirements. Each component may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

### Answer Area

Components	Action	Component
Helm		
Draft	Deploy solution.	
Brigade	View cluster and external IP addressing.	
KubeCtl		
Ingress Controller	Implement a single, public IP endpoint that is routed to multiple microservices.	
CoreDNS		
Virtual Kubelet		

Answer:

You are implementing an order processing system. A point of sale application publishes orders to topics in an Azure Service Bus queue. The Label property for the topic includes the following data:

Property	Description
ShipLocation	the country/region where the order will be shipped
CorrelationId	a priority value for the order
Quantity	a user-defined field that stores the quantity of items in an order
AuditedAt	a user-defined field that records the date an order is audited

The system has the following requirements for subscriptions:

Subscription type	Comments
FutureOrders	This subscription is reserved for future use and must not receive any orders
HighPriorityOrders	Handle all high priority orders and international orders
InternationalOrders	Handle orders where the country/region is not United States
HighQuantityOrders	Handle only orders with quantities greater than 100 units
AllOrders	This subscription is used for auditing purposes. This subscription must receive every single order. AllOrders has an Action defined that updates the AuditedAt property to include the date and time it was received by the subscription.

You need to implement filtering and maximize throughput while evaluating filters.

Which filter types should you implement? To answer, drag the appropriate filter types to the correct subscriptions. Each filter type may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

**Filter types**

SQLFilter

CorrelationFilter

No Filter

**Answer Area**

Subscription	Filter type
FutureOrders	
HighPriorityOrders	
InternationalOrders	
HighQuantityOrders	
AllOrders	

Answer:



Your company has several websites that use a company logo image. You use Azure Content Delivery Network (CDN) to store the static image. You need to determine the correct process of how the CDN and the Point of Presence (POP) server will distribute the image and list the items in the correct order. In which order do the actions occur? To answer, move all actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

**Actions**

**Answer Area**

If no edge servers in the POP have the image in cache, the POP requests the file from the origin server.



A user requests the image from the CDN URL. The DNS routes the request to the best performing POP location.



Subsequent requests for the file may be directed to the same POP using the CDN logo Image URL. The POP edge server returns the file from cache if the TTL has not expired.

The origin server returns the logo image to an edge server in the POP. An edge server in the POP caches the logo image and returns the image to the client.

**Answer:**

A large, solid blue rectangular area with a thin black border, occupying the majority of the page below the question and answer area.

You are developing an Azure Cosmos DB solution by using the Azure Cosmos DB SQL API. The data includes millions of documents. Each document may contain hundreds of properties. The properties of the documents do not contain distinct values for partitioning. Azure Cosmos DB must scale individual containers in the database to meet the performance needs of the application by spreading the workload evenly across all partitions over time.

You need to select a partition key.

Which two partition keys can you use? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. a single property value that does not appear frequently in the documents
- B. a value containing the collection name
- C. a single property value that appears frequently in the documents
- D. a concatenation of multiple property values with a random suffix appended
- E. a hash suffix appended to a property value



You create a new Azure Cosmos DB instance. You include a valid endpoint and valid authorization key to an appSettings.json file in the code project.

You are evaluating the following application code: (Line number are included for reference only.)

```
01 using System;
02 using System.Threading.Tasks;
03 using Microsoft.Azure.Cosmos;
04 using Microsoft.Extensions.Configuration;
05 using Newtonsoft.Json;
06 namespace SalesOrders
07 {
08     public class SalesOrder
09     {
10         ...
11     }
12     internal class ManageSalesOrders
13     {
14         private static async Task GenerateSalesOrders()
15         {
16             IConfigurationRoot configuration = new ConfigurationBuilder().AddJsonFile("appSettings.json").Build();
17             string endpoint = configuration["EndPointUrl"];
18             string authKey = configuration["AuthorizationKey"];
19             using CosmosClient client = new CosmosClient(endpoint, authKey);
20             Database database = null;
21             using (await client.GetDatabase("SalesOrders").DeleteStreamAsync()) { }
22             database = await client.CreateDatabaseIfNotExistsAsync("SalesOrders");
23             Container container1 = await database.CreateContainerAsync(id: "Container1", partitionKeyPath: "/AccountNumber");
24             Container container2 = await database.CreateContainerAsync(id: "Container2", partitionKeyPath: "/AccountNumber");
25             SalesOrder salesOrder1 = new SalesOrder() { AccountNumber = "123456" };
26             await container1.CreateItemAsync(salesOrder1, new PartitionKey(salesOrder1.AccountNumber));
27             SalesOrder salesOrder2 = new SalesOrder() { AccountNumber = "654321" };
28             await container1.CreateItemAsync(salesOrder2, new PartitionKey(salesOrder2.AccountNumber));
29             SalesOrder salesOrder3 = new SalesOrder() { AccountNumber = "109876" };
30             await container2.CreateItemAsync(salesOrder3, new PartitionKey(salesOrder3.AccountNumber));
31             _ = await database.CreateUserAsync("User1");
32             User user1 = database.GetUser("User1");
33             _ = await user1.ReadAsync();
34         }
35     }
36 }
```

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

NOTE: Each correct selection is worth one point.

Hot Area:

#### Answer Area

Statements	Yes	No
A database named SalesOrders is created. The database will include two containers.	<input type="radio"/>	<input type="radio"/>
Container1 will contain two items.	<input type="radio"/>	<input type="radio"/>
Container2 will contain one item.	<input type="radio"/>	<input type="radio"/>

You develop an Azure solution that uses Cosmos DB.

The current Cosmos DB container must be replicated and must use a partition key that is optimized for queries.

You need to implement a change feed processor solution.

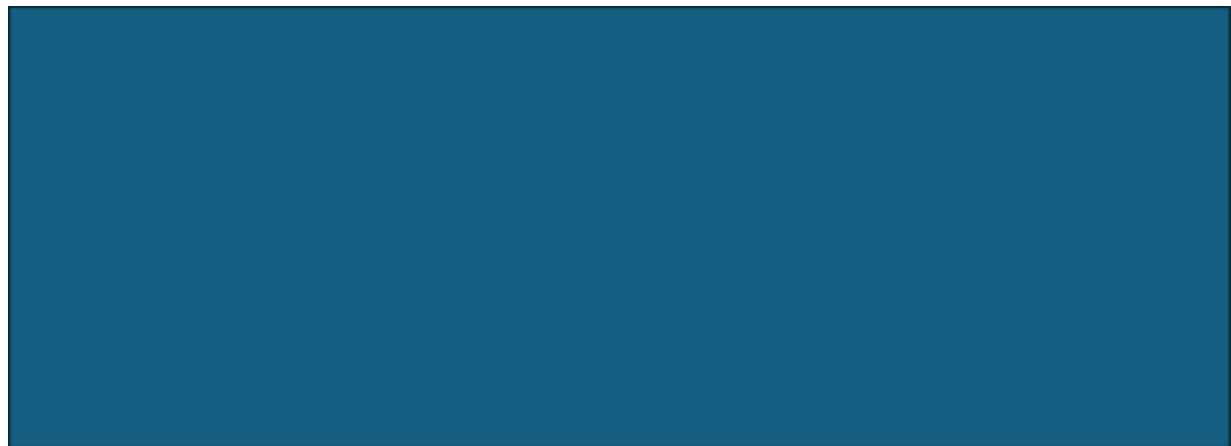
Which change feed processor components should you use? To answer, drag the appropriate components to the correct requirements. Each component may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view the content.

NOTE: Each correct selection is worth one point.

Select and Place:

Components	Answer Area	Requirement	Component
Host		Store the data from which the change feed is generated.	Component
Delegate		Coordinate processing of the change feed across multiple workers.	Component
Lease container		Use the change feed processor to listen for changes.	Component
Monitored container		Handle each batch of changes.	Component

Answer:



You are developing a web application that will use Azure Storage. Older data will be less frequently used than more recent data.

You need to configure data storage for the application. You have the following requirements:

- ⇒ Retain copies of data for five years.
- ⇒ Minimize costs associated with storing data that is over one year old.
- ⇒ Implement Zone Redundant Storage for application data.

What should you do? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

#### Answer Area

Requirement	Solution
Configure an Azure Storage account	<ul style="list-style-type: none"><li>Implement Blob Storage</li><li>Implement Azure Cosmos DB</li><li>Implement Storage (general purpose v1)</li><li>Implement StorageV2 (general purpose v2)</li></ul>
Configure data retention	<ul style="list-style-type: none"><li>Snapshot blobs and move them to the archive tier</li><li>Set a lifecycle management policy to move blobs to the cool tier</li><li>Use AzCopy to copy the data to an on-premises device for backup</li><li>Set a lifecycle management policy to move blobs to the archive tier</li></ul>

A company develops a series of mobile games. All games use a single leaderboard service.

You have the following requirements:

- Code must be scalable and allow for growth.
- Each record must consist of a playerId, gameId, score, and time played.
- When users reach a new high score, the system will save the new score using the SaveScore function below.
- Each game is assigned an Id based on the series title.

You plan to store customer information in Azure Cosmos DB. The following data already exists in the database:

PartitionKey	RowKey	Email
Harp	Walter	wharp@contoso.com
Smith	Steve	ssmith@contoso.com
Smith	Jeff	jsmith@contoso.com

You develop the following code to save scores in the data store. (Line numbers are included for reference only.)

```
01 public void SaveScore(string gameId, string playerId, int score, long timePlayed)
02 {
03     CloudStorageAccount storageAccount = CloudStorageAccount.Parse(connectionString);
04     CloudTableClient tableClient = storageAccount.CreateCloudTableClient();
05     CloudTable table = tableClient.GetTableReference("scoreTable");
06     table.CreateIfNotExists();
07     var scoreRecord = new PlayerScore(gameId, playerId, score, timePlayed);
08     TableOperation insertOperation = TableOperation.Insert(scoreRecord);
09     table.Execute(insertOperation);
10 }
```

You develop the following code to query the database. (Line numbers are included for reference only.)

```
01 CloudTableClient tableClient = account.CreateCloudTableClient();
02 CloudTable table = tableClient.GetTableReference("people");
03 TableQuery<CustomerEntity> query = new TableQuery<CustomerEntity>()
04     .Where(TableQuery.CombineFilters(
05         TableQuery.GenerateFilterCondition("PartitionKey", QueryComparisons.Equal, "Smith"),
06         TableOperators.And,
07         TableQuery.GenerateFilterCondition("Email", QueryComparisons.Equal, "ssmith@contoso.com")
08     ));
09 await table.ExecuteQuerySegmentedAsync<CustomerEntity>(query, null);
```

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

NOTE: Each correct selection is worth one point.

Hot Area:

#### Answer Area

Statements	Yes	No
SaveScore will work with Cosmos DB.	<input type="radio"/>	<input type="radio"/>
SaveScore will update and replace a record if one already exists with the same playerId and gameId.	<input type="radio"/>	<input type="radio"/>
Leader board data for the game will be automatically partitioned using gameId.	<input type="radio"/>	<input type="radio"/>
SaveScore will store the values for the gameId and playerId parameters in the database.	<input type="radio"/>	<input type="radio"/>

You develop and deploy a web application to Azure App Service. The application accesses data stored in an Azure Storage account. The account contains several containers with several blobs

with large amounts of data. You deploy all Azure resources to a single region. You need to move the Azure Storage account to the new region. You must copy all data to the new region.

What should you do first?

- A. Export the Azure Storage account Azure Resource Manager template
- B. Initiate a storage account failover
- C. Configure object replication for all blobs
- D. Use the AzCopy command line tool
- E. Create a new Azure Storage account in the current region
- F. Create a new subscription in the current region

You are developing an application to collect the following telemetry data for delivery drivers: first name, last name, package count, item id, and current location coordinates. The app will store the data in Azure Cosmos DB.

You need to configure Azure Cosmos DB to query the data.

Which values should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

### Configuration Parameter

### Value

Azure Cosmos DB API

	▼
Gremlin	
Table API	
Core (SQL)	

Azure Cosmos DB partition key

	▼
first name	
last name	
package count	
item id	

You are implementing an Azure solution that uses Azure Cosmos DB and the latest Azure Cosmos DB SDK. You add a change feed processor to a new container instance. You attempt to read a batch of 100 documents. The process fails when reading one of the documents. The solution must monitor the progress of the change feed processor instance on the new container as the change feed is read. You must prevent the change feed processor from retrying the entire batch when one document cannot be read.

You need to implement the change feed processor to read the documents.

Which features should you use? To answer, drag the appropriate features to the cored requirements. Each feature may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each cored selection is worth one point.

Select and Place:

Features	Answer Area	Requirement	Feature
Change feed estimator			
Dead-letter queue		Monitor the progress of the change feed processor	
Deployment unit		Prevent the change feed processor from retrying the entire batch when one document cannot be read	
Lease container			

You are developing an application that uses a premium block blob storage account. The application will process a large volume of transactions daily. You enable Blob storage versioning.

You are optimizing costs by automating Azure Blob Storage access tiers. You apply the following policy rules to the storage account. (Line numbers are included for reference only.)

```
01 {
02   "rules" : [
03     {
04       "name" : "versionRule",
05       "enabled" : true,
06       "type" : "Lifecycle",
07       "definition" : {
08         "actions" : {
09           "version" : {
10             "tierToCool" : {
11               "daysAfterCreationGreaterThanOrEqual" : 60
12             },
13             "delete" : {
14               "daysAfterCreationGreaterThanOrEqual" : 365
15             }
16           }
17         },
18         "filters" : {
19           "blobTypes" : [ "blockBlob" ], "prefixMatch" : [ "transactions" ]
20         }
21       }
22     }
23   ]
24 }
```

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

NOTE: Each correct selection is worth one point.

Hot Area:

#### Answer Area

Statements	Yes	No
Block blobs prefixed with <b>transactions</b> will transition blobs that have not been modified in over 60 days to cool storage, and delete blobs not modified in 365 days	<input type="radio"/>	<input type="radio"/>
Blobs are moved to cool storage if they have not been accessed for 60 days	<input type="radio"/>	<input type="radio"/>
The policy rule tiers previous versions within a container named <b>transactions</b> that are 60 days or older to the cool tier and deletes previous versions that are 365 days or older	<input type="radio"/>	<input type="radio"/>
Blobs will automatically be tiered from cool back to hot if accessed again after being tiered to cool	<input type="radio"/>	<input type="radio"/>

Answer: No, No, Yes, No

An organization deploys Azure Cosmos DB.

You need to ensure that the index is updated as items are created, updated, or deleted.

What should you do?

- A. Set the indexing mode to Lazy.
- B. Set the value of the automatic property of the indexing policy to False.
- C. Set the value of the EnableScanInQuery option to True.
- D. Set the indexing mode to Consistent.

You are developing a .Net web application that stores data in Azure Cosmos DB. The application must use the Core API and allow millions of reads and writes.

The Azure Cosmos DB account has been created with multiple write regions enabled. The application has been deployed to the East US2 and Central US regions.

You need to update the application to support multi-region writes.

What are two possible ways to achieve this goal? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Update the ConnectionPolicy class for the Cosmos client and populate the PreferredLocations property based on the geo-proximity of the application.
- B. Update Azure Cosmos DB to use the Strong consistency level. Add indexed properties to the container to indicate region.
- C. Update the ConnectionPolicy class for the Cosmos client and set the UseMultipleWriteLocations property to true.
- D. Create and deploy a custom conflict resolution policy.
- E. Update Azure Cosmos DB to use the Session consistency level. Send the SessionToken property value from the FeedResponse object of the write action to the end-user by using a cookie.

You are developing a solution to store documents in Azure Blob storage. Customers upload documents to multiple containers. Documents consist of PDF, CSV, Microsoft Office format and plain text files.

The solution must process millions of documents across hundreds of containers. The solution must meet the following requirements:

- Documents must be categorized by a customer identifier as they are uploaded to the storage account.
- Allow filtering by the customer identifier.
- Allow searching of information contained within a document
- Minimize costs.

You create and configure a standard general-purpose v2 storage account to support the solution.

You need to implement the solution.

What should you implement? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

### Requirement

Search and filter by customer identifier

### Solution

	▼
Azure Cognitive Search	
Azure Blob index tags	
Azure Blob inventory policy	
Azure Blob metadata	

Search information inside documents

	▼
Azure Cognitive Search	
Azure Blob index tags	
Azure Blob inventory policy	
Azure Blob metadata	

You are developing a web application by using the Azure SDK. The web application accesses data in a zone-redundant BlockBlobStorage storage account.

The application must determine whether the data has changed since the application last read the data. Update operations must use the latest data changes when writing data to the storage account.

You need to implement the update operations.

Which values should you use? To answer, select the appropriate option in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

### Code evaluation

### Value

HTTP Header value

	▼
ETag	
Last Modified	
VersionId	

Conditional header

	▼
If-Match	
If-Modified-Since	
If-None-Match	

An organization deploys a blob storage account. Users take multiple snapshots of the blob storage account over time.

You need to delete all snapshots of the blob storage account. You must not delete the blob storage account itself.

How should you complete the code segment? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

### Hot Area:

### Answer Area

Delete (Azure.Storage.Blobs.Models.DeleteSnapshotsOption)

```
snapshotsOption = Azure.Storage.Blobs.Models.
```

```
    DeleteIfExists  
    DeleteSnapshotsOption  
    WithSnapshot  
    WithSnapshotCore
```

IncludeSnapshots
None
OnlySnapshots

An organization deploys a blob storage account. Users take multiple snapshots of the blob storage account over time.

You need to delete all snapshots of the blob storage account. You must not delete the blob storage account itself.

How should you complete the code segment? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point

### NOTE: Each

## Answer Area

```
delete blob (
```

delete\_container  
delete\_snapshots  
snapshot\_blob  
snapshots\_present

=  v )

False  
Include  
Only

You are developing an application that monitors data added to an Azure Blob storage account.

You need to process each change made to the storage account.

How should you complete the code segment? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

## Answer Area

```
var changeFeedClient = new BlobServiceClient("...").GetChangeFeedClient();
var x = default(string);
while (true)
{
    var changeFeed = changeFeedClient. GetChanges()
GetChangesAsync()
GetChanges(x).AsPages()
GetChanges(x).GetEnumerator() ;

    foreach (var c in changeFeed)
    {
        x = c. ContinuationToken
GetRawResponse().ReasonPhrase
Values.Max(x => x.EventTime).ToString()
Values.Min(x => x.EventTime).ToString() ;

        ProcessChanges(c.Values);
    }
}
```

You develop an application that sells AI generated images based on user input. You recently started a marketing campaign that displays unique ads every second day.

Sales data is stored in Azure Cosmos DB with the date of each sale being stored in a property named 'whenFinished'.

The marketing department requires a view that shows the number of sales for each unique ad.

You need to implement the query for the view.

How should you complete the query? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

```
SELECT
    max(c.whenFinished)
    sum(c.whenFinished)
    count(c.whenFinished)
    DateTimeBin(c.whenFinished, 'day', 2)
    DateTimePart(c.whenFinished, 'day', 2)
    DateTimeBin(c.whenFinished, 'hour', 12)
    DateTimePart(c.whenFinished, 'hour', 12)
FROM c
group by
    DateTimeBin(c.whenFinished, 'day', 2)
    DateTimePart(c.whenFinished, 'day', 2)
    DateTimeBin(c.whenFinished, 'hour', 12)
    DateTimePart(c.whenFinished, 'hour', 12)
```



You implement an Azure solution to include Azure Cosmos DB, the latest Azure Cosmos DB SDK, and the Core (SQL) API. You also implement a change feed processor on a new container instance by using the Azure Functions trigger for Azure Cosmos DB.

A large batch of documents continues to fail when reading one of the documents in the batch. The same batch of documents is continuously retried by the triggered function and a new batch of documents must be read.

You need to implement the change feed processor to read the documents.

Which feature should you implement? To answer, select the appropriate features in the answer area.

NOTE: Each correct selection is worth one point.

#### Requirement

Read a new batch of documents while keeping track of the failing batch of documents.

Handle errors in the change feed processor.

#### Feature

```
Lease container
Dead-letter queue
Life-cycle notifications
Change feed estimator
```

```
Lease container
Dead-letter queue
Life-cycle notifications
Change feed estimator
```



You are developing an application to store business-critical data in Azure Blob storage.

The application must meet the following requirements:

- Data must not be modified or deleted for a user-specified interval.
- Data must be protected from overwrites and deletes.
- Data must be written once and allowed to be read many times.

You need to protect the data in the Azure Blob storage account.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Configure a time-based retention policy for the storage account.
- B. Create an account shared-access signature (SAS).
- C. Enable the blob change feed for the storage account.
- D. Enable version-level immutability support for the storage account.
- E. Enable point-in-time restore for containers in the storage account.
- F. Create a service shared-access signature (SAS).

**A** **B** **C** **D** **E** **F**

You are updating an application that stores data on Azure and uses Azure Cosmos DB for storage. The application stores data in multiple documents associated with a single username.

The application requires the ability to update multiple documents for a username in a single ACID operation.

You need to configure Azure Cosmos DB.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Create a collection sharded on username to store documents.
- B. Configure Azure Cosmos DB to use the Gremlin API.
- C. Create an unsharded collection to store documents.
- D. Configure Azure Cosmos DB to use the MongoDB API.

**A** **B** **C** **D**

You develop Azure solutions.

You must connect to a No-SQL globally-distributed database by using the .NET API.

You need to create an object to configure and execute requests in the database.

Which code segment should you use?

- A. 

```
database_name = 'MyDatabase'  
database = client.create_database_if_not_exists(id=database_name)
```
- B. 

```
client = CosmosClient(endpoint, key)
```
- C. 

```
container_name = 'MyContainer'  
container = database.create_container_if_not_exists(  
    id=container_name, partition_key=PartitionKey(path="/lastName"),  
    offer_throughput=400 )
```

You develop a web application that provides access to legal documents that are stored on Azure Blob Storage with version-level immutability policies. Documents are protected with both time-based policies and legal hold policies. All time-based retention policies have the AllowProtectedAppendWrites property enabled.

You have a requirement to prevent the user from attempting to perform operations that would fail only when a legal hold is in effect and when all other policies are expired.

You need to meet the requirement.

Which two operations should you prevent? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. adding data to documents
- B. deleting documents
- C. creating documents
- D. overwriting existing documents

You provisioned an Azure Cosmos DB for NoSQL account named account1 with the default consistency level.

You plan to configure the consistency level on a per request basis. The level needs to be set for consistent prefix for read and write operations to account1.

You need to identify the resulting consistency level for read and write operations.

Which levels should you configure? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

### Answer Area

Operation type	Resulting consistency level
Read operations	<input type="checkbox"/> strong <input type="checkbox"/> session <input checked="" type="checkbox"/> consistent prefix
Write operations	<input type="checkbox"/> strong <input type="checkbox"/> session <input checked="" type="checkbox"/> consistent prefix

You are developing an application to store millions of images in Azure blob storage. The images are uploaded to an Azure blob storage container named companyimages contained in an Azure blob storage account named companymedia. The stored images are uploaded with multiple blob index tags across multiple blobs in the container.

You must find all blobs whose tags match a search expression in the container. The search expression must evaluate an index tag named status with a value of final.

You need to construct the GET method request URI.

How should you complete the URI? To answer, drag the appropriate parameters to the correct request URI targets. Each parameter may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

Parameters	Answer Area
Status='Final'	<input type="text"/> https:// <input type="text"/> .blob.core.windows.net/ <input type="text"/> ?restype=container&comp=blobs&where= <input type="text"/>
Status<='Final'	
companymedia	
companyimages	

You develop two Python scripts to process data.

The Python scripts must be deployed to two, separate Linux containers running in an Azure Container Instance container group. The containers must access external data by using the Server Message Block (SMB) protocol. Containers in the container group must run only once.

You need to configure the Azure Container Instance.

Which configuration value should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

### Answer Area

Configuration Setting	Configuration Value
External data volume	<input type="checkbox"/> Secret <input type="checkbox"/> Empty directory <input type="checkbox"/> Cloned git repo <input type="checkbox"/> Azure file share
Container restart policy	<input type="checkbox"/> Never <input type="checkbox"/> Always <input type="checkbox"/> OnFailure

You are developing a static website hosted on Azure Blob Storage. You create a storage account and enable static website hosting.

The website must support the following requirements:

- Custom domain name
- Custom header values for all responses
- Custom SSL certificate

You need to implement the static website.

What should you configure? To answer, select the appropriate values in the answer area.

NOTE: Each correct selection is worth one point.

### Answer Area

Requirement	Configuration Value
Custom domain name	<input type="checkbox"/> Blob index tags <input type="checkbox"/> Azure Content Delivery Network (CDN) <input type="checkbox"/> Cross-Origin Resource Sharing (CORS) <input type="checkbox"/> Azure Storage Service Encryption (SSE)
Custom header values	<input type="checkbox"/> Blob index tags <input type="checkbox"/> Azure Content Delivery Network (CDN) <input type="checkbox"/> Cross-Origin Resource Sharing (CORS) <input type="checkbox"/> Azure Storage Service Encryption (SSE)
Custom SSL certificate	<input type="checkbox"/> Blob index tags <input type="checkbox"/> Azure Content Delivery Network (CDN) <input type="checkbox"/> Cross-Origin Resource Sharing (CORS) <input type="checkbox"/> Azure Storage Service Encryption (SSE)

You are developing an inventory tracking solution. The solution includes an Azure Function app containing multiple functions triggered by Azure Cosmos DB. You plan to deploy the solution to multiple Azure regions.

The solution must meet the following requirements:

- Item results from Azure Cosmos DS must return the most recent committed version of an item.
- Items written to Azure Cosmos DB must provide ordering guarantees.

You need to configure the consistency level for the Azure Cosmos DB deployments.

Which consistency level should you use?

- A. consistent prefix
- B. eventual
- C. bounded staleness
- D. strong
- E. session

You are developing an application that runs in several customer Azure Kubernetes Service clusters. Within each cluster, a pod runs that collects performance data to be analyzed later. A large amount of data is collected so saving latency must be minimized.

The performance data must be stored so that pod restarts do not impact the stored data. Write latency should be minimized.

You need to configure blob storage.

How should you complete the YAML configuration? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

#### Answer Area

```
apiVersion: storage.k8s.io/v1
kind: PodStorage
  StorageClass
  PersistentVolume
  PersistentVolumeClaim
metadata:
  name: data-store
  provisioner: kubernetes.io/
    azure-disk
    azure-file
    portworx-volume
    scaleio
parameters:
  skuName: Premium_LRS
  reclaimPolicy: local
    retain
    delete
```

You create and publish a new Azure App Service web app.

User authentication and authorization must use Azure Active Directory (Azure AD).

You need to configure authentication and authorization.

What should you do first?

- A. Add an identity provider.
- B. Map an existing custom DNS name.
- C. Create and configure a new app setting.
- D. Add a private certificate.
- E. Create and configure a managed identity.

You have an Azure Cosmos DB for NoSQL account.

You plan to develop two apps named App1 and App2 that will use the change feed functionality to track changes to containers. App1 will use the pull model and App2 will use the push model.

You need to choose the method to track the most recently processed change in App1 and App2.

Which component should you use? To answer, drag the appropriate components to the correct apps. Each component may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Components	Answer Area	
	App	Component
Lease container	App1	<input type="text"/>
Integrated cache	App1	<input type="text"/>
Continuation token	App2	<input type="text"/>

You have a Linux container-based console application that uploads image files from customer sites all over the world. A back-end system that runs on Azure virtual machines processes the images by using the Azure Blobs API.

You are not permitted to make changes to the application.

Some customer sites only have phone-based internet connections.

You need to configure the console application to access the images.

What should you use?

- A. Azure BlobFuse
- B. Azure Disks
- C. Azure Storage Network File System (NFS) 3.0 support
- D. Azure Files

You are developing several microservices named serviceA, serviceB, and serviceC. You deploy the microservices to a new Azure Container Apps environment.

You have the following requirements:

- The microservices must persist data to storage.
- serviceA must persist data only visible to the current container and the storage must be restricted to the amount of disk space available in the container.
- serviceB must persist data for the lifetime of the replica and allow multiple containers in the replica to mount the same storage location.
- serviceC must persist data beyond the lifetime of the replica while allowing multiple containers to access the storage and enable per object permissions.

You need to configure storage for each microservice.

Which storage type should you use? To answer, drag the appropriate storage types to the correct microservices. Each storage type may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

**Storage types**

Azure Blob Storage

Azure Files storage

Ephemeral volume

Container file system

**Answer Area**

**Microservice**

serviceA

serviceB

serviceC

**Storage type**

You have the following requirements:

- Secret-based authentication mechanisms are not permitted for accessing an Azure Storage account.
- Must use only Azure Instance Metadata Service endpoints.

You need to write code to retrieve an access token to access Azure Storage. To answer, drag the appropriate code segments to the correct locations. Each code segment may be used once or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

**Code segment 1**

```
http://localhost:50342/oauth2/token  
http://169.254.169.254:50432/oauth2/token  
http://localhost/metadata/identity/oauth2/token  
http://169.254.169.254/metadata/identity/oauth2/token
```

**Code segment 2**

```
import xml.etree.ElementTree as e  
e.parse(response.read())  
  
import csv  
csv.DictReader(response.read())  
  
import yaml  
return yaml.load(response.read())  
  
import json  
return json.loads(response.read())
```

**Answer Area**

```
import urllib.request  
url = ""  
queryString = ""  
response = urllib.request.urlopen(url + queryString)
```

Code segment 2

Answer:



You are developing an Azure Function app.

The Azure Function app must enable a WebHook to read an image from Azure Blob Storage and create a new Azure Cosmos DB document.

You need to implement the Azure Function app.

Which configuration should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

### Answer Area

Trigger	Input binding	Output binding
<input type="checkbox"/> HTTP	<input type="checkbox"/> HTTP	<input type="checkbox"/> HTTP
<input type="checkbox"/> Timer	<input type="checkbox"/> Timer	<input type="checkbox"/> Timer
<input type="checkbox"/> Blob Storage	<input type="checkbox"/> Blob Storage	<input type="checkbox"/> Blob Storage
<input type="checkbox"/> Azure Cosmos DB	<input type="checkbox"/> Azure Cosmos DB	<input type="checkbox"/> Azure Cosmos DB

You create an Azure Cosmos DB for NoSQL database.

You plan to use the Azure Cosmos DB .NET SDK v3 API for NoSQL to upload the following files:

File Name	File Size
File1	1MB
File2	2MB
File3	3MB
File4	4MB
File5	5MB

You receive the following error message when uploading the files: "413 Entity too large".

You need to determine which files you can upload to the Azure Cosmos DB for NoSQL database.

Which files can you upload?

- A. File1, File2, File3, File4, and File5
- B. File1 and File2 only
- C. File1, File2, and File3 only
- D. File1, File2, File3, and File4 only
- E. File1 only

You are developing a Java application that uses Cassandra to store key and value data. You plan to use a new Azure Cosmos DB resource and the Cassandra API in the application. You create an Azure Active Directory (Azure AD) group named Cosmos DB Creators to enable provisioning of Azure Cosmos accounts, databases, and containers. The Azure AD group must not be able to access the keys that are required to access the data. You need to restrict access to the Azure AD group. Which role-based access control should you use?

- A. DocumentDB Accounts Contributor
- B. Cosmos Backup Operator
- C. Cosmos DB Operator
- D. Cosmos DB Account Reader

A

You are developing a website that will run as an Azure Web App. Users will authenticate by using their Azure Active Directory (Azure AD) credentials.

You plan to assign users one of the following permission levels for the website: admin, normal, and reader. A user's Azure AD group membership must be used to determine the permission level.

You need to configure authorization.

Solution: Configure the Azure Web App for the website to allow only authenticated requests and require Azure AD log on.

Does the solution meet the goal?

You are developing a website that will run as an Azure Web App. Users will authenticate by using their Azure Active Directory (Azure AD) credentials.

You plan to assign users one of the following permission levels for the website: admin, normal, and reader. A user's Azure AD group membership must be used to determine the permission level.

You need to configure authorization.

Solution:

☞ Create a new Azure AD application. In the application's manifest, set value of the groupMembershipClaims option to All.

☞ In the website, use the value of the groups claim from the JWT for the user to determine permissions.

Does the solution meet the goal?

You are developing a website that will run as an Azure Web App. Users will authenticate by using their Azure Active Directory (Azure AD) credentials.

You plan to assign users one of the following permission levels for the website: admin, normal, and reader. A user's Azure AD group membership must be used to determine the permission level.

You need to configure authorization.

Solution:

☞ Create a new Azure AD application. In the application's manifest, define application roles that match the required permission levels for the application.

☞ Assign the appropriate Azure AD group to each role. In the website, use the value of the roles claim from the JWT for the user to determine permissions.

Does the solution meet the goal?

You are developing an application to securely transfer data between on-premises file systems and Azure Blob storage. The application stores keys, secrets, and certificates in Azure Key Vault. The application uses the Azure Key Vault APIs.

The application must allow recovery of an accidental deletion of the key vault or key vault objects. Key vault objects must be retained for 90 days after deletion. You need to protect the key vault and key vault objects.

Which Azure Key Vault feature should you use? To answer, drag the appropriate features to the correct actions. Each feature may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Features	Answer Area	Action	Feature
Access policy		Enable retention period and accidental deletion.	Feature
Purge protection		Enforce retention period and accidental deletion.	Feature

[Reveal Solution](#)

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You provide an Azure API Management managed web service to clients. The back-end web service implements HTTP Strict Transport Security (HSTS).

Every request to the backend service must include a valid HTTP authorization header.

You need to configure the Azure API Management instance with an authentication policy.

Which two policies can you use? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Basic Authentication
- B. Digest Authentication
- C. Certificate Authentication
- D. OAuth Client Credential Grant

You are developing an ASP.NET Core website that can be used to manage photographs which are stored in Azure Blob Storage containers.

Users of the website authenticate by using their Azure Active Directory (Azure AD) credentials.

You implement role-based access control (RBAC) role permissions on the containers that store photographs. You assign users to RBAC roles.

You need to configure the website's Azure AD Application so that user's permissions can be used with the Azure Blob containers.

How should you configure the application? To answer, drag the appropriate setting to the correct location. Each setting can be used once, more than once, or not at all.

You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Settings	Answer Area	API	Permission	Type
client_id		Azure Storage	Setting	Setting
profile		Microsoft Graph	User.Read	Setting

You are developing an ASP.NET Core app that includes feature flags which are managed by Azure App Configuration. You create an Azure App Configuration store named AppFeatureFlagStore that contains a feature flag named Export.

You need to update the app to meet the following requirements:

- ⇒ Use the Export feature in the app without requiring a restart of the app.
- ⇒ Validate users before users are allowed access to secure resources.
- ⇒ Permit users to access secure resources.

How should you complete the code segment? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

```
public void Configure(IApplicationBuilder app, IWebHostEnvironment env)
{
    if (env.IsDevelopment())
    {
        app.UseDeveloperExceptionPage();
    }
    else
    {
        app.UseExceptionHandler("/Error");
    }

    app.    () ;
    

|                   |
|-------------------|
| UseAuthentication |
| UseStaticFiles    |
| UseSession        |
| UseCookiePolicy   |


    app.    () ;
    

|                     |
|---------------------|
| UseAuthorization    |
| UseHttpsRedirection |
| UseSession          |
| UseCookiePolicy     |


    app.    () ;
    

|                          |
|--------------------------|
| UseAzureAppConfiguration |
| UseRequestLocalization   |
| UseCors                  |
| UseStaticFiles           |


    app.UseEndpoint(endpoints =>
    {
        endpoints.MapRazorPages();
    });
}
```

You have an application that includes an Azure Web app and several Azure Function apps. Application secrets including connection strings and certificates are stored in Azure Key Vault. Secrets must not be stored in the application or application runtime environment. Changes to Azure Active Directory (Azure AD) must be minimized. You need to design the approach to loading application secrets. What should you do?

- A. Create a single user-assigned Managed Identity with permission to access Key Vault and configure each App Service to use that Managed Identity.
- B. Create a single Azure AD Service Principal with permission to access Key Vault and use a client secret from within the App Services to access Key Vault.
- C. Create a system assigned Managed Identity in each App Service with permission to access Key Vault.

- D. Create an Azure AD Service Principal with Permissions to access Key Vault for each App Service and use a certificate from within the App Services to access Key Vault.

You are developing a medical records document management website. The website is used to store scanned copies of patient intake forms.

If the stored intake forms are downloaded from storage by a third party, the contents of the forms must not be compromised.

You need to store the intake forms according to the requirements.

Solution:

1. Create an Azure Key Vault key named skey.
2. Encrypt the intake forms using the public key portion of skey.
3. Store the encrypted data in Azure Blob storage.

Does the solution meet the goal?

You are developing a medical records document management website. The website is used to store scanned copies of patient intake forms.

If the stored intake forms are downloaded from storage by a third party, the contents of the forms must not be compromised.

You need to store the intake forms according to the requirements.

Solution:

1. Create an Azure Cosmos DB database with Storage Service Encryption enabled.
2. Store the intake forms in the Azure Cosmos DB database.

Does the solution meet the goal?

You plan to deploy a new application to a Linux virtual machine (VM) that is hosted in Azure.

The entire VM must be secured at rest by using industry-standard encryption technology to address organizational security and compliance requirements.

You need to configure Azure Disk Encryption for the VM.

How should you complete the Azure CLI commands? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

```
az provider register -n Microsoft.KeyVault
resourcegroup="myResourceGroup"
az group create --name $resourcegroup --location westus
keyvault_name=$vaultname$RANDOM
az [▼] create \
  vm
  keyvault
  keyvault key
  vm encryption

--name $keyvault_name \
--resource-group $resourcegroup \
--location eastus \
--enabled-for-disk-encryption True
az [▼] create \
  vm
  keyvault
  keyvault key
  vm encryption

--vault-name $keyvault_name \
--name Name1 \
--protection software
az [▼] create \
  vm
  keyvault
  keyvault key
  vm encryption

--resource-group $resourcegroup \
--name Name2 \
--image Canonical:UbuntuServer:16.04-LTS:latest \
--admin-username azureuser \
--generate-ssh-keys \
--data-disk-sizes-gb 5
az [▼] enable \
  vm
  keyvault
  keyvault key
  vm encryption

--resource-group $resourcegroup \
--name Name2 \
--disk-encryption-keyvault $keyvault_name \
--key-encryption-key Name1 \
--volume-type [▼]
  all
  data
  os
```

Answer:

Your company is developing an Azure API hosted in Azure. You need to implement authentication for the Azure API to access other Azure resources. You have the following requirements:

- ⇒ All API calls must be authenticated.
  - ⇒ Callers to the API must not send credentials to the API.
- Which authentication mechanism should you use?

- A. Basic
- B. Anonymous
- C. Managed identity
- D. Client certificate

You are developing an application. You have an Azure user account that has access to two subscriptions.

You need to retrieve a storage account key secret from Azure Key Vault.

In which order should you arrange the PowerShell commands to develop the solution? To answer, move all commands from the list of commands to the answer area and arrange them in the correct order.

Select and Place:

**Powershell commands**

**Answer Area**

```
$secretvalue = ConvertTo-SecureString  
$storAcctkey -AsPlainText  
-Force  
    Set-AzKeyVaultSecret -VaultName  
$vaultName -Name $secretName  
-SecretValue $secretvalue
```

```
Get-AzStorageAccountKey -  
ResourceGroupName $resGroup -Name  
$storAcct
```

```
Set-AzContext -SubscriptionId  
$subscriptionID
```



```
Get-AzKeyVaultSecret -VaultName  
$vaultName
```

```
Get-AzSubscription
```

Answer:

You develop Azure solutions.

You must grant a virtual machine (VM) access to specific resource groups in Azure Resource Manager.

You need to obtain an Azure Resource Manager access token.

Solution: Use an X.509 certificate to authenticate the VM with Azure Resource Manager.

## Does the solution meet the goal?

You must grant a virtual machine (VM) access to specific resource groups in Azure Resource Manager.

You need to obtain an Azure Resource Manager access token.

Solution: Use the Reader role-based access control (RBAC) role to authenticate the VM with Azure Resource Manager.

## Does the solution meet the goal?

You are building a website that is used to review restaurants. The website will use an Azure CDN to improve performance and add functionality to requests.

You build and deploy a mobile app for Apple iPhones. Whenever a user accesses the website from an iPhone, the user must be redirected to the app store.

You need to implement an Azure CDN rule that ensures that iPhone users are redirected to the app store.

How should you complete the Azure Resource Manager template? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

### Hot Area:

```
"conditions": [ {
    "name": "IsDevice",
    "parameters": {
        "@odata.type": "#Microsoft.Azure.Cdn.Models.
        "operator": "Equal",
        "matchValues": [ "iOS", "Mobile", "iPhone", "Desktop" ]
    }
}, {
    "name": "RequestHeader",
    "parameters": {
        "@odata.type": "#Microsoft.Azure.Cdn.Models.
        "operator": "Contains",
        "selector": "HTTP_USER_AGENT",
        "matchValues": [ "FROM", "PRAGMA", "X-POWERED-BY", "HTTP_USER_AGENT" ]
    }
} ]
```

DeliveryRuleIsDeviceConditionParameters
DeliveryRuleCookiesConditionParameters
DeliveryRulePostArgsConditionParameters
DeliveryRuleRequestHeaderConditionParameters

DeliveryRuleIsDeviceConditionParameters
DeliveryRuleCookiesConditionParameters
DeliveryRulePostArgsConditionParameters
DeliveryRuleRequestHeaderConditionParameters

### Answer:

Box 3: HTTP\_USER\_AGENT -

Box 4: DeliveryRuleRequestHeaderConditionParameters

Box 5: Iphone

You are developing a website that will run as an Azure Web App. Users will authenticate by using their Azure Active Directory (Azure AD) credentials.

You plan to assign users one of the following permission levels for the website: admin, normal, and reader. A user's Azure AD group membership must be used to determine the permission level.

You need to configure authorization.

Solution:

☞ Configure and use Integrated Windows Authentication in the website.

☞ In the website, query Microsoft Graph API to load the groups to which the user is a member.

Does the solution meet the goal?

You must grant a virtual machine (VM) access to specific resource groups in Azure Resource Manager.

You need to obtain an Azure Resource Manager access token.

Solution: Run the Invoke-RestMethod cmdlet to make a request to the local managed identity for Azure resources endpoint.

Does the solution meet the goal?

You are building a website to access project data related to teams within your organization. The website does not allow anonymous access. Authentication is performed using an Azure Active Directory (Azure AD) app named internal.

The website has the following authentication requirements:

☞ Azure AD users must be able to login to the website.

☞ Personalization of the website must be based on membership in Active Directory groups.

You need to configure the application's manifest to meet the authentication requirements.

How should you configure the manifest? To answer, select the appropriate configuration in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

#### Answer Area

```
{  
  ...  
  "appId": "d61126e3-089b-4adb-b721-d5023213df7d",  
  "displayName": "internal",  
  "optionalClaims": "All",  
  "groupMembershipClaims": "All",  
  "allowPublicClient": true,  
  "oauth2Permissions": "All",  
  "requiredResourceAccess": "All",  
  "oauth2AllowImplicitFlow": true  
}
```

You develop an app that allows users to upload photos and videos to Azure storage. The app uses a storage REST API call to upload the media to a blob storage account named Account1. You have blob storage containers named Container1 and Container2.

Uploading of videos occurs on an irregular basis.

You need to copy specific blobs from Container1 to Container2 when a new video is uploaded. What should you do?

- A. Copy blobs to Container2 by using the Put Blob operation of the Blob Service REST API
- B. Create an Event Grid topic that uses the Start-AzureStorageBlobCopy cmdlet
- C. Use AzCopy with the Snapshot switch to copy blobs to Container2
- D. Download the blob to a virtual machine and then upload the blob to Container2

You are developing an ASP.NET Core website that uses Azure FrontDoor. The website is used to build custom weather data sets for researchers. Data sets are downloaded by users as Comma Separated Value (CSV) files. The data is refreshed every 10 hours.

Specific files must be purged from the FrontDoor cache based upon Response Header values. You need to purge individual assets from the Front Door cache.

Which type of cache purge should you use?

- A. single path
- B. wildcard
- C. root domain

Your company is developing an Azure API.

You need to implement authentication for the Azure API. You have the following requirements:  
All API calls must be secure.

☞ Callers to the API must not send credentials to the API.

Which authentication mechanism should you use?

- A. Basic
- B. Anonymous
- C. Managed identity
- D. Client certificate

You are a developer for a SaaS company that offers many web services.

All web services for the company must meet the following requirements:

☞ Use API Management to access the services

☞ Use OpenID Connect for authentication

☞ Prevent anonymous usage

A recent security audit found that several web services can be called without any authentication.

Which API Management policy should you implement?

- A. jsonp
- B. authentication-certificate
- C. check-header
- D. validate-jwt

Contoso, Ltd. provides an API to customers by using Azure API Management (APIM). The API authorizes users with a JWT token.

You must implement response caching for the APIM gateway. The caching mechanism must detect the user ID of the client that accesses data for a given location and cache the response for that user ID.

You need to add the following policies to the policies file:

- ☞ a set-variable policy to store the detected user identity
- ☞ a cache-lookup-value policy
- ☞ a cache-store-value policy
- ☞ a find-and-replace policy to update the response body with the user profile information

To which policy section should you add the policies? To answer, drag the appropriate sections to the correct policies. Each section may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

### Answer Area

Policy section	Policy	Policy section
	Set-variable	<input type="text"/>
Inbound	Cache-lookup-value	<input type="text"/>
Outbound	Cache-store-value	<input type="text"/>
	Find-and-replace	<input type="text"/>

You are developing an Azure solution.

You need to develop code to access a secret stored in Azure Key Vault.

How should you complete the code segment? To answer, drag the appropriate code segments to the correct location. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Code segments	Answer Area
DefaultAzureCredential	<code>string var1 = Environment.GetEnvironmentVariable("KEY_VAULT_URI");</code>
ClientSecretCredential	<code>var var2 = new </code> <input type="text"/> <code> ( new Uri(var1), new </code> <input type="text"/> <code> () );</code>
CloudClients	
SecretClient	

You are developing an Azure App Service REST API.

The API must be called by an Azure App Service web app. The API must retrieve and update user profile information stored in Azure Active Directory (Azure AD).

You need to configure the API to make the updates.

Which two tools should you use? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Microsoft Graph API
- B. Microsoft Authentication Library (MSAL)
- C. Azure API Management
- D. Microsoft Azure Security Center
- E. Microsoft Azure Key Vault SDK

You develop a REST API. You implement a user delegation SAS token to communicate with Azure Blob storage.

The token is compromised.

You need to revoke the token.

What are two possible ways to achieve this goal? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Revoke the delegation key.
- B. Delete the stored access policy.
- C. Regenerate the account key.
- D. Remove the role assignment for the security principle.

You are developing an Azure-hosted application that must use an on-premises hardware security module (HSM) key.

The key must be transferred to your existing Azure Key Vault by using the Bring Your Own Key (BYOK) process.

You need to securely transfer the key to Azure Key Vault.

Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

**Actions**

Generate a key transfer blob file by using the HSM vendor-provided tool.

Generate a Key Exchange Key (KEK).

Create a custom policy definition in Azure Policy.

Run the `az keyvault key import` command.

Run the `az keyvault key restore` command.

Retrieve the Key Exchange Key (KEK) public key.

**Answer Area**

Answer:

Step 1: Generate a Key Exchange Key (KEK)

You develop and deploy an Azure Logic app that calls an Azure Function app. The Azure Function app includes an OpenAPI (Swagger) definition and uses an Azure Blob storage account. All resources are secured by using Azure Active Directory (Azure AD).

The Azure Logic app must securely access the Azure Blob storage account. Azure AD resources must remain if the Azure Logic app is deleted.

You need to secure the Azure Logic app.

What should you do?

- A. Create a user-assigned managed identity and assign role-based access controls.
- B. Create an Azure AD custom role and assign the role to the Azure Blob storage account.
- C. Create an Azure Key Vault and issue a client certificate.
- D. Create a system-assigned managed identity and issue a client certificate.
- E. Create an Azure AD custom role and assign role-based access controls.

You are developing an application that uses a premium block blob storage account. You are optimizing costs by automating Azure Blob Storage access tiers. You apply the following policy rules to the storage account. You must determine the implications of applying the rules to the data. (Line numbers are included for reference only.)

```
01 {
02   "rules": [
03     {
04       "name": "agingDataRule",
05       "enabled": true,
06       "type": "Lifecycle",
07       "definition": [
08         "filters": [
09           "blobTypes": [ "blockBlob" ],
10           "prefixMatch": [ "container1/salesorders", "container2/inventory" ]
11         ],
12         "actions": [
13           "baseBlob": [
14             "tierToCool": { "daysAfterModificationGreater Than": 60 },
15             "tierToArchive": { "daysAfterModificationGreater Than": 120 }
16           ]
17         ]
18       }
19     },
20     {
21       "enabled": true,
22       "name": "lastAccessedDataRule",
23       "type": "Lifecycle",
24       "definition": [
25         "actions": [
26           "baseBlob": [
27             "enableAutoTierToHotFromCool": true,
28             "tierToCool": [
29               "daysAfterLastAccessTimeGreater Than": 30
30             ]
31           ]
32         ],
33         "filters": [
34           "blobTypes": [ "blockBlob" ]
35         ]
36       }
37     },
38     {
39       "rules": [
40         {
41           "name": "expirationDataRule",
42           "enabled": true,
43           "type": "Lifecycle",
44           "definition": [
45             "filters": [
46               "blobTypes": [ "blockBlob" ]
47             ],
48             "actions": [
49               "baseBlob": [
50                 "delete": { "daysAfterModificationGreater Than": 730 }
51               ]
52             ]
53           }
54         }
55       ]
56     }
57   }
58 }
```

	Yes	No
Block blobs prefixed with container1/salesorders or container2/inventory which have not been modified in over 60 days are moved to cool storage. Blobs that have not been modified in 120 days are moved to the archive tier.	<input type="radio"/>	<input type="radio"/>
Blobs are moved to cool storage if they have not been accessed for 30 days.	<input type="radio"/>	<input type="radio"/>
Blobs will automatically be tiered from cool back to hot if accessed again after being tiered to cool.	<input type="radio"/>	<input type="radio"/>
All block blobs older than 730 days will be deleted.	<input type="radio"/>	<input type="radio"/>

You are developing a solution that will use a multi-partitioned Azure Cosmos DB database. You plan to use the latest Azure Cosmos DB SDK for development.

The solution must meet the following requirements:

- ☞ Send insert and update operations to an Azure Blob storage account.
- ☞ Process changes to all partitions immediately.
- ☞ Allow parallelization of change processing.

You need to process the Azure Cosmos DB operations.

What are two possible ways to achieve this goal? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Create an Azure App Service API and implement the change feed estimator of the SDK. Scale the API by using multiple Azure App Service instances.
- B. Create a background job in an Azure Kubernetes Service and implement the change feed feature of the SDK.
- C. Create an Azure Function to use a trigger for Azure Cosmos DB. Configure the trigger to connect to the container.
- D. Create an Azure Function that uses a FeedIterator object that processes the change feed by using the pull model on the container. Use a FeedRange object to parallelize the processing of the change feed across multiple functions.

You have an Azure Web app that uses Cosmos DB as a data store. You create a CosmosDB container by running the following PowerShell script:

```
$resourceGroupName = "testResourceGroup"  
$accountName = "testCosmosAccount"  
$databaseName = "testDatabase"  
$containerName = "testContainer"  
$partitionKeyPath = "/EmployeeId"  
$autoscaleMaxThroughput = 5000
```

```
New-AzCosmosDBSqlContainer -  
-ResourceGroupName $resourceGroupName  
-AccountName $accountName  
-DatabaseName $databaseName  
-Name $containerName  
-PartitionKeyKind Hash  
-PartitionKeyPath $partitionKeyPath  
-AutoscaleMaxThroughput $autoscaleMaxThroughput
```

You create the following queries that target the container:

```
SELECT * FROM c WHERE c.EmployeeId > '12345'  
SELECT * FROM c WHERE c.UserID = '12345'
```

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

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

Yes	No
-----	----

The minimum throughput for the container is 400 R/Us.

<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------

The first query statement is an in-partition query.

<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------

The second query statement is a cross-partition query.

<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------

A

You are developing a web application that makes calls to the Microsoft Graph API. You register the application in the Azure portal and upload a valid X509 certificate. You create an appsettings.json file containing the certificate name, client identifier for the application, and the tenant identifier of the Azure Active Directory (Azure AD). You create a method named ReadCertificate to return the X509 certificate by name.

You need to implement code that acquires a token by using the certificate.

How should you complete the code segment? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

```
AuthenticationConfig config = AuthenticationConfig.ReadFromJsonFile("appsettings.json");  
X509Certificate2 certificate = ReadCertificate(config.CertificateName);  
var app = ConfidentialClientApplicationBuilder  
    .Create(config.ClientId)  
    .WithCertificate(certificate)  
    .WithAuthority(new Uri(config.Authority))  
    .Build();  
string[] scopes = new string[] { $"{config.ApiUrl}.default" };  
AuthenticationResult result = await app.AcquireTokenForClient(  
    scopes  
    app  
    config  
    ).ExecuteAsync();
```

You develop a containerized application. You plan to deploy the application to a new Azure Container instance by using a third-party continuous integration and continuous delivery (CI/CD) utility.

The deployment must be unattended and include all application assets. The third-party utility must only be able to push and pull images from the registry. The authentication must be managed by Azure Active Directory (Azure AD). The solution must use the principle of least privilege.

You need to ensure that the third-party utility can access the registry.

Which authentication options should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

Authentication	Option
Registry authentication method	<div style="border: 1px solid black; padding: 5px; display: inline-block;"><input type="checkbox"/> Service principal <input type="checkbox"/> Individual identity <input type="checkbox"/> Repository-scoped access token <input type="checkbox"/> Managed identity for Azure resources</div>
RBAC role	<div style="border: 1px solid black; padding: 5px; display: inline-block;"><input type="checkbox"/> AcrPull <input type="checkbox"/> Owner <input type="checkbox"/> AcrPush <input type="checkbox"/> Contributor</div>

You deploy an Azure App Service web app. You create an app registration for the app in Azure Active Directory (Azure AD) and Twitter.

The app must authenticate users and must use SSL for all communications. The app must use Twitter as the identity provider.

You need to validate the Azure AD request in the app code.

What should you validate?

- A. ID token header
- B. ID token signature
- C. HTTP response code
- D. Tenant ID

A development team is creating a new REST API. The API will store data in Azure Blob storage. You plan to deploy the API to Azure App Service.

Developers must access the Azure Blob storage account to develop the API for the next two months. The Azure Blob storage account must not be accessible by the developers after the two-month time period.

You need to grant developers access to the Azure Blob storage account.

What should you do?

- A. Generate a shared access signature (SAS) for the Azure Blob storage account and provide the SAS to all developers.
- B. Create and apply a new lifecycle management policy to include a last accessed date value. Apply the policy to the Azure Blob storage account.

- C. Provide all developers with the access key for the Azure Blob storage account. Update the API to include the Coordinated Universal Time (UTC) timestamp for the request header.
- D. Grant all developers access to the Azure Blob storage account by assigning role-based access control (RBAC) roles.

You develop a web application.

You need to register the application with an active Azure Active Directory (Azure AD) tenant.

Which three actions should you perform in sequence? To answer, move all actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions	Answer Area
Select <b>Manifest</b> from the middle-tier service registration.	◀
In Enterprise Applications, select <b>New application</b> .	↑
Add a Cryptographic key.	↓
Create a new application and provide the name, account type, and redirect URI.	▶
Select the Azure AD instance.	↑
Use an access token to access the secure resource.	↓
In App Registrations, select <b>New registration</b> .	◀

You have a new Azure subscription. You are developing an internal website for employees to view sensitive data. The website uses Azure Active Directory (Azure AD) for authentication.

You need to implement multifactor authentication for the website.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Configure the website to use Azure AD B2C.
- B. In Azure AD, create a new conditional access policy.
- C. Upgrade to Azure AD Premium.
- D. In Azure AD, enable application proxy.
- E. In Azure AD conditional access, enable the baseline policy.

Answers: B, C

An organization plans to deploy Azure storage services.

You need to configure shared access signature (SAS) for granting access to Azure Storage.

Which SAS types should you use? To answer, drag the appropriate SAS types to the correct requirements. Each SAS type may be used once, more than once, or not at all.

You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

SAS types	Answer Area	SAS type
Requirement		
Account-level		
Service-level		
User delegation		
Delegate access to resources in one or more of the storage services		
Delegate access to a resource in a single storage service		
Secure a resource by using Azure AD credentials		

Answer:



HOTSPOT -

You are developing an ASP.NET Core app that includes feature flags which are managed by Azure App Configuration. You create an Azure App Configuration store named AppFeatureflagStore as shown in the exhibit:

Key	Label	State	Description	Last modified	...
Export	Export	Off	On	Ability to export data.	6/11/2020, 9:13:26 ...

You must be able to use the feature in the app by using the following markup:

```
<feature name="Export">
  <li class="nav-item">
    <a class="nav-link text-dark" asp-area="" asp-controller="Home" asp-action="Export">Export Data</a>
  </li>
</feature>
```

You need to update the app to use the feature flag.

Which values should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Code section	Value
Controller attribute	<div style="border: 1px solid black; padding: 5px; min-height: 150px;"><ul style="list-style-type: none"><li>FeatureGate</li><li>Route</li><li>ServiceFilter</li><li>TypeFilter</li></ul></div>
Startup method	<div style="border: 1px solid black; padding: 5px; min-height: 150px;"><ul style="list-style-type: none"><li>AddAzureAppConfiguration</li><li>AddControllersWithViews</li><li>AddUserSecrets</li></ul></div>
AppConfig endpoint setting	<div style="border: 1px solid black; padding: 5px; min-height: 150px;"><ul style="list-style-type: none"><li>https://appfeatureflagstore.azureconfig.io</li><li>https://appfeatureflagstore.vault.azure.net</li><li>https://export.azureconfig.io</li><li>https://export.vault.azure.net</li></ul></div>

You have a single page application (SPA) web application that manages information based on data returned by Microsoft Graph from another company's Azure Active Directory (Azure AD) instance.

Users must be able to authenticate and access Microsoft Graph by using their own company's Azure AD instance.

You need to configure the application manifest for the app registration.

How should you complete the manifest? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

```
{  
  "oauth2AllowImplicitFlow": 

|       |
|-------|
| ▼     |
| add   |
| false |
| spa   |
| true  |

,  
  "addIns": 

|                         |
|-------------------------|
| ▼                       |
| orgRestrictions         |
| availableToOtherTenants |
| requiredResourceAccess  |

,  
  "resourceAppId": "00000003-0000-0000-c000-000000000000",  
  "resourceAccess": [  
    {"  
      "id": "24a6cdd6-fab1-4aaf-91b8-3cc8225e90d0",  
      "type": "Scope"  
    }]  
,  
  "signInAudience": 

|                                    |
|------------------------------------|
| ▼                                  |
| All                                |
| AzureADMyOrg                       |
| AzureADMultipleOrgs                |
| AzureADandPersonalMicrosoftAccount |


```

You manage a data processing application that receives requests from an Azure Storage queue.

You need to manage access to the queue. You have the following requirements:

- ☞ Provide other applications access to the Azure queue.
  - ☞ Ensure that you can revoke access to the queue without having to regenerate the storage account keys.
  - ☞ Specify access at the queue level and not at the storage account level.
- Which type of shared access signature (SAS) should you use?

- A. Service SAS with a stored access policy
- B. Account SAS
- C. User Delegation SAS
- D. Service SAS with ad hoc SAS

You are developing an application to store and retrieve data in Azure Blob storage. The application will be hosted in an on-premises virtual machine (VM). The VM is connected to Azure by using a Site-to-Site VPN gateway connection. The application is secured by using Azure Active Directory (Azure AD) credentials. The application must be granted access to the Azure Blob storage account with a start time, expiry time, and read permissions. The Azure Blob storage account access must use the Azure AD credentials of the application to secure data access. Data access must be able to be revoked if the client application security is breached.

You need to secure the application access to Azure Blob storage.

Which security features should you use? To answer select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Component	Security Feature
-----------	------------------

Application (Client)	<div style="border: 1px solid black; padding: 5px; display: inline-block;"><span style="font-size: 2em;">▼</span></div>
----------------------	---

- |   |
|---|
| <div style="border: 1px solid black; padding: 5px; display: inline-block;"><span style="font-size: 2em;">▼</span></div> |
| Storage Account Access Key  |
| System-assigned Managed Identity  |
| Shared access signature (SAS) token   |

Azure Storage (Server)	<div style="border: 1px solid black; padding: 5px; display: inline-block;"><span style="font-size: 2em;">▼</span></div>
------------------------	---

- |   |
|---|
| <div style="border: 1px solid black; padding: 5px; display: inline-block;"><span style="font-size: 2em;">▼</span></div> |
| Stored Access Policy  |
| User-assigned Managed Identity  |
| Cross-Origin Resource Sharing (CORS)  |

A

You are building a web application that uses the Microsoft identity platform for user authentication.

You are implementing user identification for the web application.

You need to retrieve a claim to uniquely identify a user.

Which claim type should you use?

- A. aud
- B. nonce
- C. oid
- D. idp

You are developing an Azure Function that calls external APIs by providing an access token for the API. The access token is stored in a secret named token in an Azure Key Vault named mykeyvault.

You need to ensure the Azure Function can access to the token. Which value should you store in the Azure Function App configuration?

- A. KeyVault:mykeyvault;Secret:token
- B. App:Settings:Secret:mykeyvault:token

- C. AZUREKVCNNSTR\_ <https://mykeyveult.vault.ezure.net/secrets/token/>
- D. @Microsoft.KeyVault(SecretUri=<https://mykeyvault.vault.azure.net/secrets/token/>)

A. C. D.

A company maintains multiple web and mobile applications. Each application uses custom in-house identity providers as well as social identity providers.

You need to implement single sign-on (SSO) for all the applications.

What should you do?

- A. Use Azure Active Directory B2C (Azure AD B2C) with custom policies.
- B. Use Azure Active Directory B2B (Azure AD B2B) and enable external collaboration.
- C. Use Azure Active Directory B2C (Azure AD B2C) with user flows.
- D. Use Azure Active Directory B2B (Azure AD B2B).

You develop a Python application for image rendering that uses GPU resources to optimize rendering processes. You deploy the application to an Azure Container Instances (ACI) Linux container.

The application requires a secret value to be passed when the container is started. The value must only be accessed from within the container.

You need to pass the secret value.

What are two possible ways to achieve this goal? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Create an environment variable Set the secureValue property to the secret value.
- B. Add the secret value to the container image. Use a managed identity.
- C. Add the secret value to the application code Set the container startup command.
- D. Add the secret value to an Azure Blob storage account. Generate a SAS token.
- E. Mount a secret volume containing the secret value in a secrets file.

You are developing a user portal for a company.

You need to create a report for the portal that lists information about employees who are subject matter experts for a specific topic. You must ensure that administrators have full control and consent over the data.

Which technology should you use?

- A. Microsoft Graph data connect
- B. Microsoft Graph API
- C. Microsoft Graph connectors

HOTSPOT -

You are a developer building a web site using a web app. The web site stores configuration data in Azure App Configuration.

Access to Azure App Configuration has been configured to use the identity of the web app for authentication. Security requirements specify that no other authentication systems must be used.

You need to load configuration data from Azure App Configuration.

How should you complete the code? To answer, select the appropriate options in the answer area.

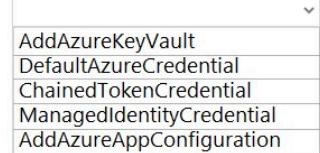
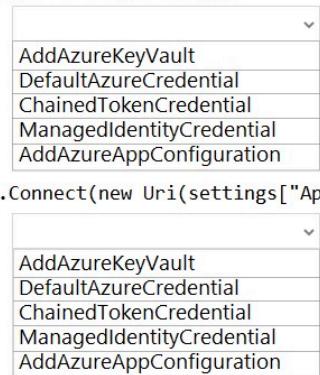
NOTE: Each correct selection is worth one point.

Hot Area:

**Answer Area**

```
Host .CreateDefaultBuilder(args)
    .ConfigureWebHostDefaults(wb =>
{
    wb.ConfigureAppConfiguration((hc, config) =>
    {
        var settings = config.Build();
        config.          (options =>
        {
            AddAzureKeyVault
            DefaultAzureCredential
            ChainedTokenCredential
            ManagedIdentityCredential
            AddAzureAppConfiguration
        });

        options.Connect(new Uri(settings["AppConfig:Endpoint"]),
            new          ());
    });
});
```



HOTSPOT -

You are building an application that stores sensitive customer data in Azure Blob storage. The data must be encrypted with a key that is unique for each customer.

If the encryption key has been corrupted it must not be used for encryption.

You need to ensure that the blob is encrypted.

How should you complete the code segment? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

**Answer Area**

```
Uri blobUri = ... ; TokenCredential c = ...
byte[] key = ...; string verify = ...
var x = new 



if (



) {
    var o = new BlobClientOptions()
    {
        
        
        
        
    };
    var blobClient = new BlobClient(blobUri, c, o);
}
```

You are developing a web application that uses the Microsoft Identity platform for user and resource authentication. The web application called several REST APIs.

You are implementing various authentication and authorization flows for the web application.

You need to validate the claims in the authentication token.

Which token type should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

### Answer Area

Requirement	Token type
Identify users for the application by using a JWT token that contains claims.	<input type="checkbox"/> Access <input type="checkbox"/> ID <input type="checkbox"/> Refresh <input type="checkbox"/> SAML
Identify the permissions granted to APIs by using a JWT token that contains claims.	<input type="checkbox"/> Access <input type="checkbox"/> ID <input type="checkbox"/> Refresh <input type="checkbox"/> SAML
Provide the web application with long-term access to resources on behalf of users without requiring interaction with those users.	<input type="checkbox"/> Access <input type="checkbox"/> ID <input type="checkbox"/> Refresh <input type="checkbox"/> SAML
Provide XML representations of claims that can be consumed by applications that use WS-Federation.	<input type="checkbox"/> Access <input type="checkbox"/> ID <input type="checkbox"/> Refresh <input type="checkbox"/> SAML

Answer:

4)

You are developing a content management application for technical manuals. The application is deployed as an Azure Static Web app.

Authenticated users can view pages under/manuals but only contributors can access the page /manuals/new.html.

You need to configure the routing for the web app.

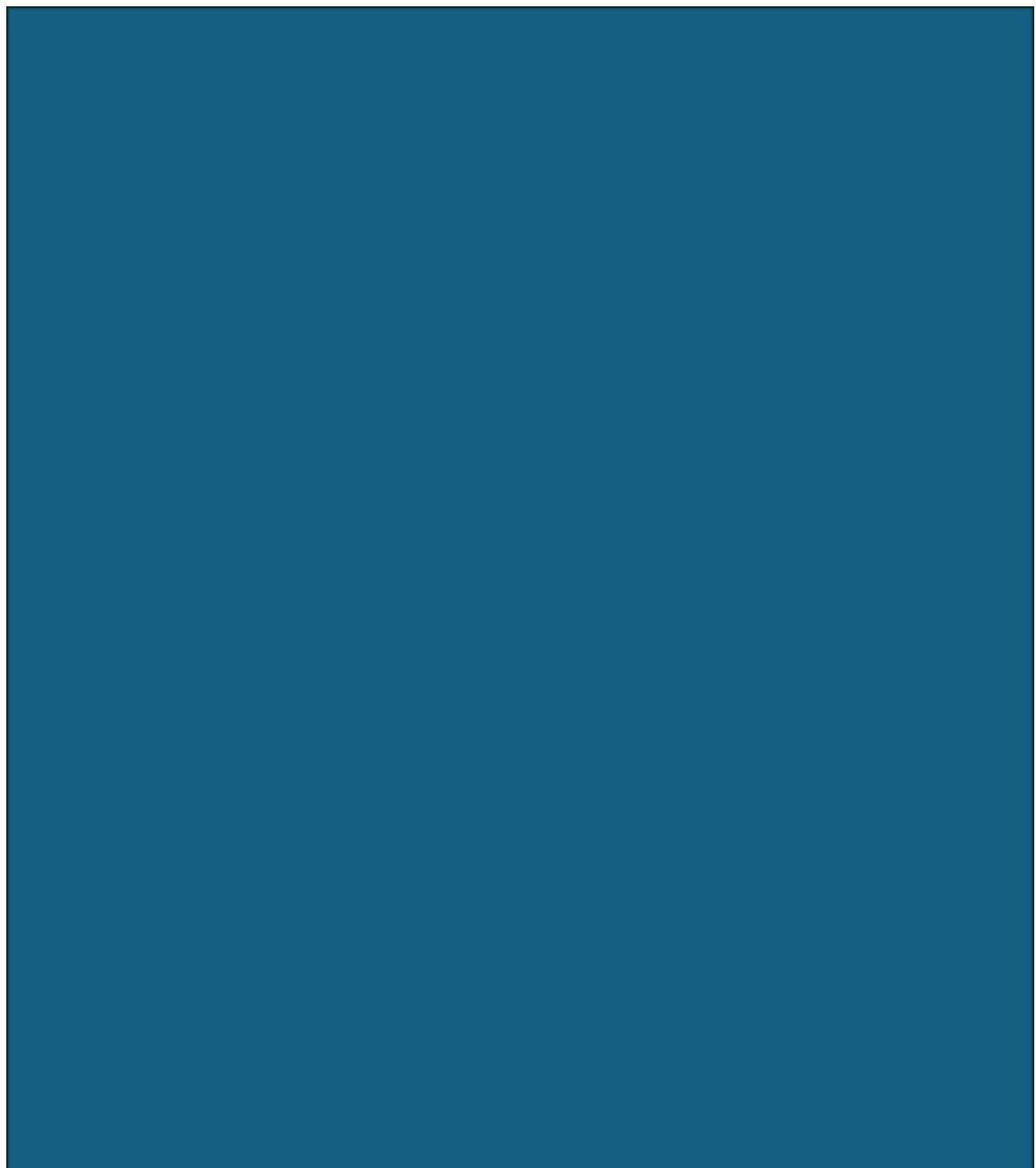
How should you complete the configuration? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

### Answer Area

```
"routes": [
  {
    "route": "/manuals*",
    "allowedRoles": [
      "contributors",
      "authenticated"
    ],
    "route": "/manuals/new.html",
    "allowedRoles": [
      "contributors",
      "authenticated"
    ],
    "route": "/manuals/new.html",
    "allowedRoles": [
      "contributors",
      "authenticated"
    ]
  }
]
```

Answer:



You are developing a web application that uses the Microsoft identity platform for user and resource authentication. The web application calls several REST APIs.

A REST API call must read the user's calendar. The web application requires permission to send an email as the user.

You need to authorize the web application and the API.

Which parameter should you use?

- A. tenant
- B. code\_challenge
- C. state
- D. client\_id
- E. scope

You develop and deploy a web app to Azure App service. The web app allows users to authenticate by using social identity providers through the Azure B2C service. All user profile information is stored in Azure B2C.

You must update the web app to display common user properties from Azure B2C to include the following information:

- Email address
- Job title
- First name
- Last name
- Office location

You need to implement the user properties in the web app.

Which code library and API should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Requirement	Value
API to access user properties	<input type="checkbox"/> Microsoft Graph <input type="checkbox"/> Azure AD Graph <input type="checkbox"/> Azure Key Vault <input type="checkbox"/> Azure AD entitlement management
Code library to interface to Azure AD B2C	<input type="checkbox"/> Microsoft Authentication Library (MSAL) <input type="checkbox"/> Microsoft Azure Key Vault SDK <input type="checkbox"/> Azure Identity library

A

You develop and deploy the following staticwebapp.config.json file to the app\_location value specified in the workflow file of an Azure Static Web app:

```
{
  "routes": [
    {
      "route": "/api/*",
      "methods": ["GET"],
      "allowedRoles": ["registeredusers"]
    },
    {
      "route": "/api/*",
      "methods": ["PUT", "POST", "PATCH", "DELETE"],
      "allowedRoles": ["administrator"]
    },
    {
      "route": "/login",
      "rewrite": "./.auth/login/github"
    },
    {
      "route": "./.auth/login/twitter",
      "statusCode": 404
    },
    {
      "route": "/logout",
      "redirect": "./.auth/logout"
    }
  ],
  "navigationFallback": {
    "rewrite": "index.html",
    "exclude": ["/images/*.{png,jpg,gif}", "/css/**"]
  },
  "responseOverrides": {
    "400": {
      "rewrite": "/invalid-invitation-error.html"
    },
    "401": {
      "redirect": "./.auth/login/aad",
      "statusCode": 302
    },
    "403": {
      "rewrite": "/forbidden.html"
    },
    "404": {
      "rewrite": "/404.html"
    }
  },
  "mimeType": {
    ".json": "text/json"
  }
}
```

## Answer Area

### Statements

	Yes	No
Unauthenticated users are challenged to authenticate with GitHub.	<input type="radio"/>	<input type="radio"/>
A non-existent file in the <code>/images/</code> folder will generate a 404 response code.	<input type="radio"/>	<input type="radio"/>
HTTP GET method requests from authenticated users in the role named <b>registeredusers</b> are sent to the API folder.	<input type="radio"/>	<input type="radio"/>
Authenticated users that are not in the role named <b>registeredusers</b> and unauthenticated users are served a 401 HTTP error when accessing the API folder.	<input type="radio"/>	<input type="radio"/>

Key Vault named Vault1. You import several API keys, passwords, certificates, and cryptographic keys into Vault1.

You need to grant App1 access to Vault1 and automatically rotate credentials. Credentials must not be stored in code.

What should you do?

- A. Enable App Service authentication for App1. Assign a custom RBAC role to Vault1.
- B. Add a TLS/SSL binding to App1.
- C. Upload a self-signed client certificate to Vault1. Update App1 to use the client certificate.
- D. Assign a managed identity to App1.

You are developing a Java application to be deployed in Azure. The application stores sensitive data in Azure Cosmos DB.

You need to configure Always Encrypted to encrypt the sensitive data inside the application.

What should you do first?

- A. Create a new container to include an encryption policy with the JSON properties to be encrypted.
- B. Create a customer-managed key (CMK) and store the key in a new Azure Key Vault instance.
- C. Create a data encryption key (DEK) by using the Azure Cosmos DB SDK and store the key in Azure Cosmos DB.
- D. Create an Azure AD managed identity and assign the identity to a new Azure Key Vault instance.

You develop a web app that interacts with Azure Active Directory (Azure AD) groups by using Microsoft Graph.

You build a web page that shows all Azure AD groups that are not of the type 'Unified'.

You need to build the Microsoft Graph query for the page.

How should you complete the query? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

#### Answer Area

<code>https://graph.microsoft.com/v1.0/groups?</code>	<code>filter</code>	<code>groupTypes/any(s:s ne 'Unified')</code>
	<code>search</code>	<code>not groupTypes/contains('Unified')</code>
	<code>contain</code>	<code>not groupTypes/any(s:s eq 'Unified')</code>
		<code>groupTypes/contains('Unified') eq false</code>
<code>&amp;\$</code>	<code>\$top=true</code>	
	<code>\$count=true</code>	
	<code>\$filter=nested</code>	
	<code>\$consistencylevel=eventual</code>	

Answer:

You are developing an Azure solution.

You need to develop code to access a secret stored in Azure Key Vault.

How should you complete the code segment? To answer, drag the appropriate code segments to the correct location. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

**Code segments**

DefaultAzureCredential  
ClientSecretCredential  
CloudClients  
SecretClient

**Answer area**

```
def get_secret():

    var1 = os.environ.get("KEY_VAULT_URI")

    var2 = [REDACTED] ( var1 , [REDACTED] )

    var3 = var2.get_secret("secret" )

    return "secret value {}" .format(var3.value)
```

Access to Azure App Configuration has been configured to use the identity of the web app for authentication. Security requirements specify that no other authentication systems must be used.

You need to load configuration data from Azure App Configuration.

How should you complete the code? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

```
from azure.identity import
```

DefaultAzureCredential  
ChainedTokenCredential  
ManagedIdentityCredential  
AddAzureAppConfiguration

```
from azure.app_configuration import
```

DefaultAzureCredential  
ChainedTokenCredential  
ManagedIdentityCredential  
AddAzureAppConfiguration

```
credential = [REDACTED] ()
```

DefaultAzureCredential  
ChainedTokenCredential  
ManagedIdentityCredential  
AddAzureAppConfiguration

```
client = [REDACTED] (base_url="...", credential=credential)
```

DefaultAzureCredential  
ChainedTokenCredential  
ManagedIdentityCredential  
AddAzureAppConfiguration

AddAzureAppConfiguration, ManagedIdentityCredential, AddAzureAppConfiguration

You are developing several microservices to deploy to a new Azure Kubernetes Service cluster. The microservices manage data stored in Azure Cosmos DB and Azure Blob storage. The data is secured by using customer-managed keys stored in Azure Key Vault.

You must automate key rotation for all Azure Key Vault keys and allow for manual key rotation. Keys must rotate every three months. Notifications of expiring keys must be sent before key expiry.

You need to configure key rotation and enable key expiry notifications.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Create and configure a new Azure Event Grid instance.
- B. Configure Azure Key Vault alerts.
- C. Create and assign an Azure Key Vault access policy.
- D. Create and configure a key rotation policy during key creation.

You are developing a web application that uses the Microsoft identity platform to authenticate users and resources. The web application calls several REST APIs.

The APIs require an access token from the Microsoft identity platform.

You need to request a token.

Which three properties should you use? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Redirect URI/URL
- B. Application ID
- C. Application name
- D. Application secret
- E. Supported account type

You are developing an application that uses Azure Storage to store customer data. The data must only be decrypted by the customer and the customer must be provided a script to rotate keys.

You need to provide a script to rotate keys to the customer.

How should you complete the command? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

### Answer Area

```
$h = $(az keyvault show --hsm-name ... --query "properties.hsmUri"  
$x = az keyvault list-versions --name ""  
key  
secret  
recover  
certificate  
--vault-name "" --query "[0].kid"  
az storage account update  
--name ... \  
--resource-group ... \  
--encryption-key-name ... \  
--encryption-key-version $x \  
--encryption-key-source Microsoft.Secret  
Microsoft.Storage  
Microsoft.Keyvault  
Microsoft.Certificate  
--encryption-key-vault $h
```

You are developing several Azure API Management (APIM) hosted APIs.

You must transform the APIs to hide private backend information and obscure the technology stack used to implement the backend processing.

You need to protect all APIs.

What should you do?

- A. Configure and apply a new inbound policy scoped to a product.
- B. Configure and apply a new outbound policy scoped to the operation.
- C. Configure and apply a new outbound policy scoped to global.
- D. Configure and apply a new backend policy scoped to global.

You are developing an Azure Function App named App1. You also plan to use cross-origin requests (CORS).

You have the following requirements:

- App1 functions must securely access an Azure Blob Storage account.
- Access to the Azure Blob Storage account must not require the provisioning or rotation of secrets.
- JavaScript code running in a browser on an external host must not be allowed to interact with the function.

You need to implement App1.

Which configuration should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

### Answer Area

Requirement	Configuration value
Azure Blob Storage access	<input type="checkbox"/> Client secret credentials <input type="checkbox"/> User-assigned managed identity <input type="checkbox"/> System-assigned managed identity
Disallow access from other domains	<input type="checkbox"/> Configure CORS allowed origins to * <input type="checkbox"/> Configure CORS allowed origins to none <input type="checkbox"/> Configure CORS allowed origins to disable

You develop a containerized application. The application must be deployed to an existing Azure Kubernetes Service (AKS) cluster from an Azure Container Registry (ACR) instance. You use the Azure command-line interface (Azure CLI) to deploy the application image to AKS.

Images must be pulled from the registry. You must be able to view all registries within the current Azure subscription. Authentication must be managed by Microsoft Entra ID and removed when the registry is deleted. The solution must use the principle of least privilege.

You need to configure authentication to the registry.

Which authentication configuration should you use? To answer, select the appropriate configuration values in the answer area.

NOTE: Each correct selection is worth one point.

#### Answer Area

##### Authentication

Registry authentication method

##### Configuration Value

Service principal  
Repository-scoped access token  
User-assigned managed identity  
System-assigned managed identity

Registry Azure role-based access control (Azure RBAC) role

Reader  
AcrPush  
AcrPull  
Contributor

A

You are developing an application that uses keys stored in Azure Key Vault.

You need to enforce a specific cryptographic algorithm and key size for keys stored in the vault.

What should you use?

- A. Secret versioning
- B. Azure Policy
- C. Key Vault Firewall
- D. Access policies

You develop a web app that uses the tier D1 app service plan by using the Web Apps feature of Microsoft Azure App Service.

Spikes in traffic have caused increases in page load times.

You need to ensure that the web app automatically scales when CPU load is about 85 percent and minimize costs.

Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

NOTE: More than one order of answer choices is correct. You will receive credit for any of the correct orders you select.

Select and Place:

Actions	Answer Area
Configure the web app to the Premium App Service tier.	
Configure the web app to the Standard App Service tier.	
Enable autoscaling on the web app.	
Add a Scale rule.	
Switch to an Azure App Services consumption plan.	
Configure a Scale condition.	

Answer: Configure the web app to the Standard App Service Tier. Enable autoscaling on the web app. Add a Scale rule. Configure a Scale condition.

You are developing and deploying several ASP.NET web applications to Azure App Service. You plan to save session state information and HTML output.

You must use a storage mechanism with the following requirements:

- ☞ Share session state across all ASP.NET web applications.
- ☞ Support controlled, concurrent access to the same session state data for multiple readers and a single writer.
- ☞ Save full HTTP responses for concurrent requests.

You need to store the information.

Proposed Solution: Enable Application Request Routing (ARR).

Does the solution meet the goal?

- A. Yes
- B. No

You are developing and deploying several ASP.NET web applications to Azure App Service. You plan to save session state information and HTML output.

You must use a storage mechanism with the following requirements:

- ☞ Share session state across all ASP.NET web applications.
- ☞ Support controlled, concurrent access to the same session state data for multiple readers and a single writer.
- ☞ Save full HTTP responses for concurrent requests.

You need to store the information.

Proposed Solution: Deploy and configure an Azure Database for PostgreSQL. Update the web applications.

Does the solution meet the goal?

- A. Yes
- B. No

**Answer: No**

HOTSPOT -

A company is developing a gaming platform. Users can join teams to play online and see leaderboards that include player statistics. The solution includes an entity named Team.

You plan to implement an Azure Redis Cache instance to improve the efficiency of data operations for entities that rarely change.

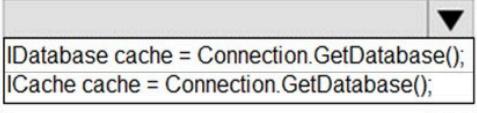
You need to invalidate the cache when team data is changed.

How should you complete the code? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

```
void ClearCachedTeams()  
{  
      
    IDatabase cache = Connection.GetDatabase();  
    ICache cache = Connection.GetDatabase();  
  
      
    cache.KeyDelete("Team");  
    cache.StringSet("Team", "");  
    cache.ValueDelete("Team");  
    cache.StringGet("Team", "");  
  
    ViewBag.msg += "Team data removed from cache.";  
}
```

A

A company has multiple warehouses. Each warehouse contains IoT temperature devices which deliver temperature data to an Azure Service Bus queue. You need to send email alerts to facility supervisors immediately if the temperature at a warehouse goes above or below specified threshold temperatures. Which five actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

**Actions**

Add a logic app trigger that fires when one or more messages arrive in the queue.

Add a Recurrence trigger that schedules the app to run every 15 minutes.

Add an action that sends an email to specified personnel if the temperature is outside of those thresholds.

Add a trigger that reads IoT temperature data from a Service Bus queue.

Add a logic app action that fires when one or more messages arrive in the queue.

Add a condition that compares the temperature against the upper and lower thresholds.

Create a blank Logic app.

Add an action that reads IoT temperature data from the Service Bus queue.

**Answer Area**

Answer:



You develop an ASP.NET Core MVC application. You configure the application to track webpages and custom events.

You need to identify trends in application usage.

Which Azure Application Insights Usage Analysis features should you use? To answer, drag the appropriate features to the correct requirements. Each feature may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

**Features**

Users

Funnels

Impact

Retention

User Flows

**Answer Area**

**Requirement**

Which pages visited by users most often correlate to a product purchase?

Feature

How does load time of the product display page affect a user's decision to purchase a product?

Feature

Which events most influence a user's decision to continue to use the application?

Feature

Are there places in the application that users often perform repetitive actions?

Feature

You develop a gateway solution for a public facing news API. The news API back end is implemented as a RESTful service and uses an OpenAPI specification.

You need to ensure that you can access the news API by using an Azure API Management service instance.

Which Azure PowerShell command should you run?

- A. Import-AzureRmApiManagementApi -Context \$ApiMgmtContext -SpecificationFormat "Swagger" -SpecificationPath \$SwaggerPath -Path \$Path
- B. New-AzureRmApiManagementBackend -Context \$ApiMgmtContext -Url \$Url -Protocol http
- C. New-AzureRmApiManagement -ResourceGroupName \$ResourceGroup -Name \$Name -Location \$Location -Organization \$Org -AdminEmail \$AdminEmail
- D. New-AzureRmApiManagementBackendProxy -Url \$ApiUrl

You are creating a hazard notification system that has a single signaling server which triggers audio and visual alarms to start and stop.

You implement Azure Service Bus to publish alarms. Each alarm controller uses Azure Service Bus to receive alarm signals as part of a transaction. Alarm events must be recorded for audit purposes. Each transaction record must include information about the alarm type that was activated.

You need to implement a reply trail auditing solution.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Assign the value of the hazard message SessionID property to the ReplyToSessionId property.
- B. Assign the value of the hazard message MessageId property to the DeliveryCount property.
- C. Assign the value of the hazard message SessionID property to the SequenceNumber property.
- D. Assign the value of the hazard message MessageId property to the CorrelationId property.
- E. Assign the value of the hazard message SequenceNumber property to the DeliveryCount property.
- F. Assign the value of the hazard message MessageId property to the SequenceNumber property.

You are developing an Azure function that connects to an Azure SQL Database instance. The function is triggered by an Azure Storage queue.

You receive reports of numerous `System.InvalidOperationExceptions` with the following message:

‘Timeout expired. The timeout period elapsed prior to obtaining a connection from the pool. This may have occurred because all pooled connections were in use and max pool size was reached.’

You need to prevent the exception.

What should you do?

- A. In the `host.json` file, decrease the value of the `batchSize` option
- B. Convert the trigger to Azure Event Hub
- C. Convert the Azure Function to the Premium plan
- D. In the `function.json` file, change the value of the `type` option to `queueScaling`

You are developing and deploying several ASP.NET web applications to Azure App Service. You plan to save session state information and HTML output.

You must use a storage mechanism with the following requirements:

- ⇒ Share session state across all ASP.NET web applications.
- ⇒ Support controlled, concurrent access to the same session state data for multiple readers and a single writer.
- ⇒ Save full HTTP responses for concurrent requests.

You need to store the information.

Proposed Solution: Deploy and configure Azure Cache for Redis. Update the web applications.

Does the solution meet the goal?

- A. Yes
- B. No

You are debugging an application that is running on Azure Kubernetes cluster named cluster1. The cluster uses Azure Monitor for containers to monitor the cluster.

The application has sticky sessions enabled on the ingress controller.

Some customers report a large number of errors in the application over the last 24 hours.

You need to determine on which virtual machines (VMs) the errors are occurring.

How should you complete the Azure Monitor query? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

```
let startTimestamp =  ;  
ago(1d)  
since(1d)  
toTimespan(1d)  
date(now() - 1d)  
  
let ContainerIDs = KubePodInventory  
| where ClusterName == "Cluster1"  
|  ;  
top ContainerID  
union ContainerID  
sample ContainerID  
distinct ContainerID  
  
ContainerLog  
|  ;  
fork containerIDs  
where ContainerID in (ContainerIDs)  
restrict ContainerID in (ContainerIDs)  
join ContainerID == ContainerIDs.ContainerID  
  
| where TimeGenerated > startTimestamp  
| where LogEntrySource == "stderr"  
|  ;  
project by Computer  
summarize by Computer  
partition count() by Computer  
summarize count() by Computer
```

Answer:



You plan to deploy a web app to App Service on Linux. You create an App Service plan. You create and push a custom Docker image that contains the web app to Azure Container Registry.

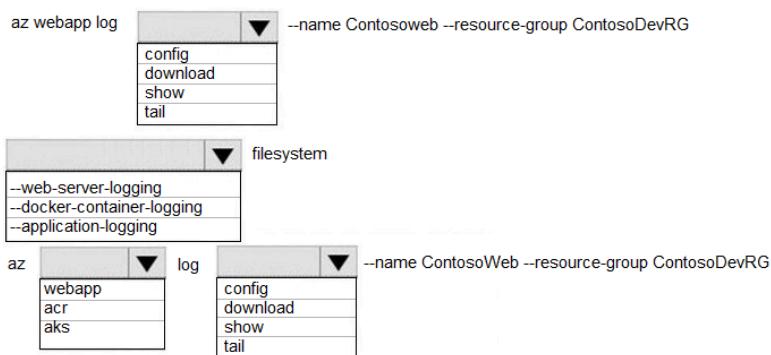
You need to access the console logs generated from inside the container in real-time.

How should you complete the Azure CLI command? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area



Answer:

You develop and deploy an ASP.NET web app to Azure App Service. You use Application Insights telemetry to monitor the app.

You must test the app to ensure that the app is available and responsive from various points around the world and at regular intervals. If the app is not responding, you must send an alert to support staff.

You need to configure a test for the web app.

Which two test types can you use? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. integration
- B. multi-step web
- C. URL ping
- D. unit
- E. load

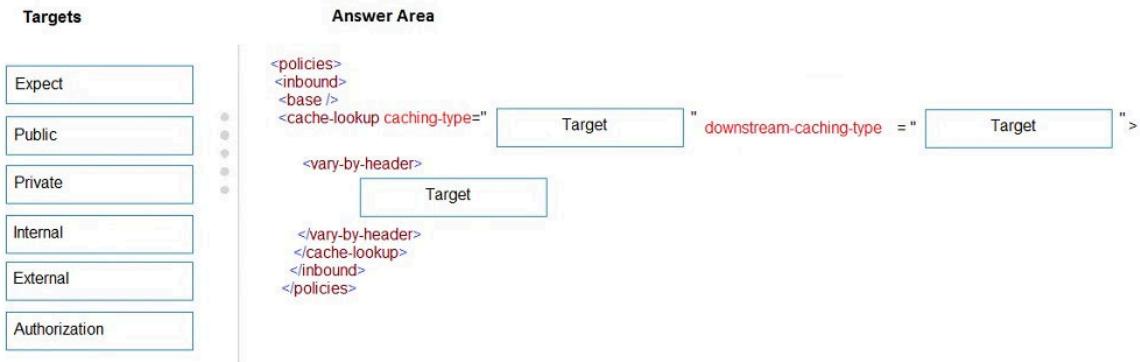
A web service provides customer summary information for e-commerce partners. The web service is implemented as an Azure Function app with an HTTP trigger. Access to the API is provided by an Azure API Management instance. The API Management instance is configured in consumption plan mode. All API calls are authenticated by using OAuth.

API calls must be cached. Customers must not be able to view cached data for other customers.

You need to configure API Management policies for caching.

How should you complete the policy statement?

Select and Place:



You are developing applications for a company. You plan to host the applications on Azure App Services.

The company has the following requirements:

- ☞ Every five minutes verify that the websites are responsive.
- ☞ Verify that the websites respond within a specified time threshold. Dependent requests such as images and JavaScript files must load properly.
- ☞ Generate alerts if a website is experiencing issues.
- ☞ If a website fails to load, the system must attempt to reload the site three more times.

You need to implement this process with the least amount of effort.

What should you do?

- A. Create a Selenium web test and configure it to run from your workstation as a scheduled task.
- B. Set up a URL ping test to query the home page.
- C. Create an Azure function to query the home page.
- D. Create a multi-step web test to query the home page.
- E. Create a Custom Track Availability Test to query the home page.

You develop and add several functions to an Azure Function app that uses the latest runtime host. The functions contain several REST API endpoints secured by using SSL. The Azure

Function app runs in a Consumption plan.

You must send an alert when any of the function endpoints are unavailable or responding too slowly.

You need to monitor the availability and responsiveness of the functions.

What should you do?

- A. Create a URL ping test.
- B. Create a timer triggered function that calls `TrackAvailability()` and send the results to Application Insights.
- C. Create a timer triggered function that calls `GetMetric("Request Size")` and send the results to Application Insights.
- D. Add a new diagnostic setting to the Azure Function app. Enable the `FunctionAppLogs` and `Send to Log Analytics` options.

You are developing an application to retrieve user profile information. The application will use the Microsoft Graph SDK.

The app must retrieve user profile information by using a Microsoft Graph API call.

You need to call the Microsoft Graph API from the application.

In which order should you perform the actions? To answer, move all actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions	Answer Area
Create an authentication provider.	
Create a new instance of the <code>GraphServiceClient</code> .	
Invoke the request to the Microsoft Graph API.	
Register the application with the Microsoft identity platform.	
Build a client by using the client app ID.	

Answer:



You develop and deploy an Azure Logic App that calls an Azure Function app. The Azure Function App includes an OpenAPI (Swagger) definition and uses an Azure Blob storage account. All resources are secured by using Azure Active Directory (Azure AD).  
The Logic App must use Azure Monitor logs to record and store information about runtime data and events. The logs must be stored in the Azure Blob storage account. You need to set up Azure Monitor logs and collect diagnostics data for the Azure Logic App.  
Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions	Answer Area
Create action groups and alert rules.	
Create a Log Analytics workspace.	
Install the Logic Apps Management solution.	
Add a diagnostic setting to the Azure Function App.	
Create an Azure storage account.	
Add a diagnostic setting to the Azure Logic App.	

◀

▶

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Answer:

You develop an application. You plan to host the application on a set of virtual machines (VMs) in Azure. You need to configure Azure Monitor to collect logs from the application.  
Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions	Answer Area
Create a Log Analytics workspace.	
Install agents on the VM and VM scale set to be monitored.	
Send console logs.	
Add a VMInsights solution.	
Create an Application Insights resource.	

Answer:

Step 1: Create a Log Analytics workspace

You develop and deploy an Azure App Service web app. The app is deployed to multiple regions and uses Azure Traffic Manager. Application Insights is enabled for the app. You need to analyze app uptime for each month.

Which two solutions will achieve the goal? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Azure Monitor logs
- B. Application Insights alerts
- C. Azure Monitor metrics
- D. Application Insights web tests

You develop and deploy an Azure App Service web app. The web app accesses data in an Azure SQL database.

You must update the web app to store frequently used data in a new Azure Cache for Redis Premium instance.

You need to implement the Azure Cache for Redis features.

Which feature should you implement? To answer, drag the appropriate feature to the correct requirements. Each feature may be used once, more than once, or not at all.

You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

**Answer Area**

Features	Requirement	Feature
horizontal partitioning	Create a data structure for storing collections of related items	Feature
channel	Create a data structure for the most recently accessed cache items	Feature
list		Feature
set	Send messages through a high-performance publisher/subscriber mechanism	Feature

You are developing an ASP.NET Core Web API web service. The web service uses Azure Application Insights for all telemetry and dependency tracking. The web service reads and writes data to a database other than Microsoft SQL Server.

You need to ensure that dependency tracking works for calls to the third-party database.

Which two dependency telemetry properties should you use? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Telemetry.Context.Cloud.RoleInstance
- B. Telemetry.Id
- C. Telemetry.Name
- D. Telemetry.Context.Operation.Id
- E. Telemetry.Context.Session.Id

You are using Azure Front Door Service.

You are expecting inbound files to be compressed by using Brotli compression. You discover that inbound XML files are not compressed. The files are 9 megabytes (MB) in size.

You need to determine the root cause for the issue.

To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Statement	Yes	No
-----------	-----	----

The file MIME type is supported by the service.

Edge nodes must be purged of all cache assets.

The compression type is supported.

You are developing an Azure App Service hosted ASP.NET Core web app to deliver video-on-demand streaming media. You enable an Azure Content Delivery Network (CDN) Standard for the web endpoint. Customer videos are downloaded from the web app by using the following example URL: <http://www.contoso.com/content.mp4?quality=1>.

All media content must expire from the cache after one hour. Customer videos with varying quality must be delivered to the closest regional point of presence (POP) node.

You need to configure Azure CDN caching rules.

Which options should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Setting	Action
---------	--------

Caching behavior	<input type="button" value="▼"/> Bypass cache Override Set if missing
------------------	--

Cache expiration duration	<input type="button" value="▼"/> 1 second 1 minute 1 hour 1 day
---------------------------	---

Query string caching behavior	<input type="button" value="▼"/> Ignore query strings Bypass caching for query strings Cache every unique URL
-------------------------------	--

Answer:

You are developing an ASP.NET Core time sheet application that runs as an Azure Web App. Users of the application enter their time sheet information on the first day of every month.

The application uses a third-party web service to validate data.

The application encounters periodic server errors due to errors that result from calling a third-party web server. Each request to the third-party server has the same chance of failure.

You need to configure an Azure Monitor alert to detect server errors unrelated to the third-party service. You must minimize false-positive alerts.

How should you complete the Azure Resource Manager template? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

```
"type": "Microsoft.Insights/metricAlerts",
"properties": {
  "criteria": {
    "odata.type": "...",
    "allOf": [
      {
        "criterionType": "DynamicThresholdCriterion",
        "SingleResourceMultipleMetricCriteria"
      },
      {
        "metricName": "Http4xx",
        "Http5xx"
      },
      {
        "alertSensitivity": "Low"
      }
    ]
  }
}
```

Answer:

You are developing a web application that uses Azure Cache for Redis. You anticipate that the cache will frequently fill and that you will need to evict keys.

You must configure Azure Cache for Redis based on the following predicted usage pattern: A small subset of elements will be accessed much more often than the rest.

You need to configure the Azure Cache for Redis to optimize performance for the predicted usage pattern.

Which two eviction policies will achieve the goal?

NOTE: Each correct selection is worth one point.

- A. noevasion
- B. allkeys-lru
- C. volatile-lru
- D. allkeys-random
- E. volatile-ttl
- F. volatile-random

A. B. C.

An organization has web apps hosted in Azure.

The organization wants to track events and telemetry data in the web apps by using Application Insights.

You need to configure the web apps for Application Insights.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions	Answer Area
Configure the Azure App Service SDK for the app	
Configure the Application Insights SDK in the app	>
Copy the connection string	<
Create an Azure Machine Learning workspace	
Create an Application Insights resource	

Answer:

1. Configure the Application Insights SDK in the app  
2. Create an Application Insights resource

An organization hosts web apps in Azure. The organization uses Azure Monitor.

You discover that configuration changes were made to some of the web apps.

You need to identify the configuration changes.

Which Azure Monitor log should you review?

- A. AppServiceAppLogs
- B. AppServiceEnvironmentPlatformlogs
- C. AppServiceConsoleLogs
- D. AppServiceAuditLogs

A. AppServiceAppLogs

You develop and deploy an Azure App Service web app to a production environment. You enable the Always On setting and the Application Insights site extensions.

You deploy a code update and receive multiple failed requests and exceptions in the web app.

You need to validate the performance and failure counts of the web app in near real time.

Which Application Insights tool should you use?

- A. Profiler
- B. Smart Detection
- C. Live Metrics Stream
- D. Application Map
- E. Snapshot Debugger

A. Smart Detection

You deploy an ASP.NET web app to Azure App Service.  
You must monitor the web app by using Application Insights.  
You need to configure Application Insights to meet the requirements.  
Which feature should you use? To answer, select the appropriate options in the answer area.  
NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

#### Requirement

Automatically warn you of potential performance problems and failure anomalies in the web app.

#### Feature

Smart Detection  
Snapshot Debugger  
Profiler  
Multi-step test

Automatically collect the state of the source code and variables when an exception is thrown in the web app.

Smart Detection  
Snapshot Debugger  
Profiler  
Multi-step test

Capture performance traces of the web app without negatively affecting users of the web app.

Smart Detection  
Snapshot Debugger  
Profiler  
Multi-step test

Answer:

You are building a web application that performs image analysis on user photos and returns metadata containing objects identified. The image analysis is very costly in terms of time and compute resources. You are planning to use Azure Redis Cache so duplicate uploads do not need to be reprocessed.

In case of an Azure data center outage, metadata loss must be kept to a minimum.

You need to configure the Azure Redis cache instance.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Configure Azure Redis with AOF persistence.
- B. Configure Azure Redis with RDB persistence.
- C. Configure second storage account for persistence.
- D. Set backup frequency to the minimum value.

You are developing an Azure-based web application. The application goes offline periodically to perform offline data processing. While the application is offline, numerous Azure Monitor alerts fire which result in the on-call developer being paged.

The application must always log when the application is offline for any reason.

You need to ensure that the on-call developer is not paged during offline processing.

What should you do?

- A. Add Azure Monitor alert processing rules to suppress notifications.
- B. Disable Azure Monitor Service Health Alerts during offline processing.
- C. Create an Azure Monitor Metric Alert.
- D. Build an Azure Monitor action group that suppresses the alerts.

You are developing an online game that includes a feature that allows players to interact with other players on the same team within a certain distance. The calculation to determine the players in range occurs when players move and are cached in an Azure Cache for Redis instance.

The system should prioritize players based on how recently they have moved and should not prioritize players who have logged out of the game.

You need to select an eviction policy.

Which eviction policy should you use?

- A. allkeys-lru
- B. volatile-lru
- C. allkeys-lfu
- D. volatile-ttl

A. allkeys-lru  
B. volatile-lru  
C. allkeys-lfu  
D. volatile-ttl

You develop an Azure App Service web app and deploy to a production environment. You enable Application Insights for the web app.

The web app is throwing multiple exceptions in the environment.

You need to examine the state of the source code and variables when the exceptions are thrown.

Which Application Insights feature should you configure?

- A. Smart detection
- B. Profiler
- C. Snapshot Debugger
- D. Standard test

You develop and deploy a Java application to Azure. The application has been instrumented by using the Application Insights SDK.

The telemetry data must be enriched and processed before it is sent to the Application Insights service.

You need to modify the telemetry data.

Which Application Insights SDK features should you use? To answer, drag the appropriate features to the correct requirements. Each feature may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Features	Answer Area	
	Requirement	Feature
<input type="checkbox"/> Sampling	Reduce the volume of telemetry without affecting statistics.	<input type="text"/>
<input type="checkbox"/> Telemetry initializer	Enrich telemetry with additional properties or override an existing one.	<input type="text"/>
<input type="checkbox"/> Telemetry processor		<input type="text"/>
<input type="checkbox"/> Telemetry channel	Completely replace or discard a telemetry item.	<input type="text"/>

You develop new functionality in a web application for a company that provides access to seismic data from around the world. The seismic data is stored in Redis Streams within an Azure Cache for Redis instance.

The new functionality includes a real-time display of seismic events as they occur.

You need to implement the Azure Cache for Redis command to receive seismic data.

How should you complete the command? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

### Answer Area

XLEN  
XREAD  
XRANGE

BLOCK 0  
COUNT 0  
BLOCK -1  
COUNT -1

STREAMS seismicData

\$  
( &  
(0-0 +  
(0-0 -

A

You develop an ASP.NET Core app that uses Azure App Configuration. You also create an App Configuration containing 100 settings.

The app must meet the following requirements:

- Ensure the consistency of all configuration data when changes to individual settings occur.
- Handle configuration data changes dynamically without causing the application to restart.

- Reduce the overall number of requests made to App Configuration APIs.

You must implement dynamic configuration updates in the app.

What are two ways to achieve this goal? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Create and register a sentinel key in the App Configuration store. Set the refreshAll parameter of the Register method to true.
- B. Increase the App Configuration cache expiration from the default value.
- C. Decrease the App Configuration cache expiration from the default value.
- D. Create and configure Azure Key Vault. Implement the Azure Key Vault configuration provider.
- E. Register all keys in the App Configuration store. Set the refreshAll parameter of the Register method to false.
- F. Create and implement environment variables for each App Configuration store setting.

You develop and deploy an Azure App Service web app that connects to Azure Cache for Redis as a content cache. All resources have been deployed to the East US 2 region.

The security team requires the following audit information from Azure Cache for Redis:

- The number of Redis client connections from an associated IP address.
- Redis operations completed on the content cache.
- The location (region) in which the Azure Cache for Redis instance was accessed.

The audit information must be captured and analyzed by a security team application deployed to the Central US region.

You need to log information on all client connections to the cache.

Which configuration values should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

### **Answer Area**

<b>Requirement</b>	<b>Configuration value</b>
Store log information.	<input type="checkbox"/> Log Analytics workspace <input type="checkbox"/> Blob Storage account <input type="checkbox"/> Data Lake Storage Gen2 Storage account <input type="checkbox"/> Event hub
Enable client connection logging.	<input type="checkbox"/> Diagnostic setting <input type="checkbox"/> Managed identity <input type="checkbox"/> App registration <input type="checkbox"/> Environment variable

You develop and deploy a web app to Azure App Service. The Azure App Service uses a Basic plan in a single region.

Users report that the web app is responding slow. You must capture the complete call stack to help identify performance issues in the code. Call stack data must be correlated across app instances. You must minimize cost and impact to users on the web app.

You need to capture the telemetry.

Which three actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Restart all apps in the App Service plan.
- B. Enable Application Insights site extensions.
- C. Upgrade the Azure App Service plan to Premium.
- D. Enable Profiler.
- E. Enable the Always On setting for the app service.
- F. Enable Snapshot debugger.
- G. Enable remote debugging.

A. B. C. D. E. F. G.

You are building an application to track cell towers that are available to phones in near real time. A phone will send information to the application by using the Azure Web PubSub service. The data will be processed by using an Azure Functions app. Traffic will be transmitted by using a content delivery network (CDN).

The Azure function must be protected against misconfigured or unauthorized invocations.

You need to ensure that the CDN allows for the Azure function protection.

Which HTTP header should be on the allowed list?

- A. Authorization
- B. WebHook-Request-Callback
- C. Resource
- D. WebHook-Request-Origin

A. B. C. D.

You are developing an Azure App Service web app.

The web app must securely store session information in Azure Redis Cache.

You need to connect the web app to Azure Redis Cache.

Which three Azure Redis Cache properties should you use? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Access key
- B. SSL port
- C. Subscription name
- D. Location
- E. Host name
- F. Subscription id

You are developing several microservices to run on Azure Container Apps.

You need to monitor and diagnose the microservices.

Which features should you use? To answer, select the appropriate feature in the answer area.

NOTE: Each correct selection is worth one point.

### Answer Area

#### Requirement

View console logs from a container in near real-time.

#### Feature

Log streaming  
Container console  
Azure Monitor metrics  
Azure Monitor Log Analytics

Debug the microservice from inside the container.

Container console  
Azure Monitor metrics  
Azure Container Registry  
Azure Monitor Log Analytics

You have an Azure API Management (APIM) Standard tier instance named APIM1 that uses a managed gateway.

You plan to use APIM1 to publish an API named API1 that uses a backend database that supports only a limited volume of requests per minute. You also need a policy for API1 that will minimize the possibility that the number of requests to the backend database from an individual IP address you specify exceeds the supported limit.

You need to identify a policy for API1 that will meet the requirements.

Which policy should you use?

- A. ip-filter
- B. quota-by-key
- C. rate-limit-by-key
- D. rate-limit

You develop a web application that sells access to last-minute openings for child camps that run on the weekends. The application uses Azure Application Insights for all alerting and monitoring.

The application must alert operators when a technical issue is preventing sales to camps.

You need to build an alert to detect technical issues.

Which alert type should you use?

- A. Metric alert using multiple time series
- B. Metric alert using dynamic thresholds
- C. Log alert using multiple time series
- D. Log alert using dynamic thresholds

You are developing an Azure solution to collect point-of-sale (POS) device data from 2,000 stores located throughout the world. A single device can produce 2 megabytes (MB) of data every 24 hours. Each store location has one to five devices that send data.

You must store the device data in Azure Blob storage. Device data must be correlated based on a device identifier. Additional stores are expected to open in the future.

You need to implement a solution to receive the device data.

Solution: Provision an Azure Service Bus. Configure a topic to receive the device data by using a correlation filter.

Does the solution meet the goal?

- A. Yes
- B. No

Answer: No

You are developing an Azure solution to collect point-of-sale (POS) device data from 2,000 stores located throughout the world. A single device can produce 2 megabytes (MB) of data every 24 hours. Each store location has one to five devices that send data.

You must store the device data in Azure Blob storage. Device data must be correlated based on a device identifier. Additional stores are expected to open in the future.

You need to implement a solution to receive the device data.

Solution: Provision an Azure Event Grid. Configure event filtering to evaluate the device identifier.

Does the solution meet the goal?

- A. Yes
- B. No

You manage several existing Logic Apps.

You need to change definitions, add new logic, and optimize these apps on a regular basis.

What should you use? To answer, drag the appropriate tools to the correct functionalities. Each tool may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

## Answer Area

Tools	Functionality	Tool
Logic Apps Designer	Edit B2B workflows	
Code View Editor	Edit definitions in JSON	
Enterprise Integration Pack	Visually add functionality	

Answer:

A company is developing a solution that allows smart refrigerators to send temperature information to a central location.

The solution must receive and store messages until they can be processed. You create an Azure Service Bus instance by providing a name, pricing tier, subscription, resource group, and location.

You need to complete the configuration.

Which Azure CLI or PowerShell command should you run?

A.

```
az servicebus queue create
--resource-group fridge-rg
--namespace-name fridge-ns
--name fridge-q
```

B.

```
New-AzureRmResourceGroup  
-Name fridge-rg  
-Location fridge-loc
```

C.

```
az servicebus namespace create  
--resource-group fridge-rg  
--name fridge-ns  
--location fridge-loc
```

D.

```
connectionString-$)az serviceBus namespace authorization-rule keys list  
--resource-group fridge-rg  
--fridge-ns fridge-ns  
--query primaryConnectionString -output tsv)
```

You are developing an application that uses Azure Storage Queues.

You have the following code:

```
CloudStorageAccount storageAccount = CloudStorageAccount.Parse  
(CloudConfigurationManager.GetSetting("StorageConnectionString"));  
CloudQueueClient queueClient = storageAccount.CreateCloudQueueClient();  
  
CloudQueue queue = queueClient.GetQueueReference("appqueue");  
await queue.CreateIfNotExistsAsync();  
  
CloudQueueMessage peekedMessage = await queue.PeekMessageAsync();  
if (peekedMessage != null)  
{  
    Console.WriteLine("The peeked message is: {0}", peekedMessageAsString);  
}  
CloudQueueMessage message = await queue.GetMessageAsync() ;
```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.  
NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Statement	Yes	No
The code configures the lock duration for the queue.	<input type="radio"/>	<input checked="" type="radio"/>
The last message read remains in the queue after the code runs.	<input checked="" type="radio"/>	<input type="radio"/>
The storage queue remains in the storage account after the code runs.	<input type="radio"/>	<input checked="" type="radio"/>

Answer:

A company is developing a solution that allows smart refrigerators to send temperature information to a central location.

The solution must receive and store messages until they can be processed. You create an Azure Service Bus instance by providing a name, pricing tier, subscription, resource group, and location.

You need to complete the configuration.

Which Azure CLI or PowerShell command should you run?

A.

```
az group create
  --name fridge-rg
  --location fridge-loc
```

B.

```
New-AzureRmServiceBusNamespace
  -ResourceGroupName fridge-rg
  -NamespaceName fridge-ns
  -Location fridge-loc
```

C.

```
New-AzureRmServiceBusQueue
-ResourceGroupName fridge-rg
-NamespaceName fridge-ns
-Name fridge-q
-EnablePartitioning $False
```

D.

```
az servicebus namespace create
--resource-group fridge-rg
--name fridge-rg
--location fridge-loc
```

You are developing an Azure Service application that processes queue data when it receives a message from a mobile application. Messages may not be sent to the service consistently. You have the following requirements:

- ☞ Queue size must not grow larger than 80 gigabytes (GB).
- ☞ Use first-in-first-out (FIFO) ordering of messages.
- ☞ Minimize Azure costs.

You need to implement the messaging solution.

Solution: Use the .Net API to add a message to an Azure Storage Queue from the mobile application. Create an Azure Function App that uses an Azure Storage Queue trigger.

Does the solution meet the goal?

- A. Yes
- B. No

You develop software solutions for a mobile delivery service. You are developing a mobile app that users can use to order from a restaurant in their area. The app uses the following workflow:

1. A driver selects the restaurants for which they will deliver orders.
2. Orders are sent to all available drivers in an area.
3. Only orders for the selected restaurants will appear for the driver.
4. The first driver to accept an order removes it from the list of available orders.

You need to implement an Azure Service Bus solution.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

**Actions**

- Create a single Service Bus topic.
- Create a Service Bus Namespace for each restaurant for which a driver can receive messages.
- Create a single Service Bus subscription.
- Create a Service Bus subscription for each restaurant for which a driver can receive orders.
- Create a single Service Bus Namespace.
- Create a Service Bus topic for each restaurant for which a driver can receive messages.

**Answer Area**

Answer:

You develop a news and blog content app for Windows devices.

A notification must arrive on a user's device when there is a new article available for them to view.

You need to implement push notifications.

How should you complete the code segment? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

**Answer Area**

```
string notificationHubName = "contoso_hub";
string notificationHubConnection = "connection_string";
hub =
NotificationHubClient
NotificationHubClientSettings
NotificationHubJob
NotificationDetails

.
.
.

NotificationHubClient
NotificationHubClientSettings
NotificationHubJob
NotificationDetails

GetInstallation
CreateClientFromConnectionString
CreateOrUpdateInstallation
PatchInstallation

(notificationHubConnection, notificationHubName);
string windowsToastPayload =
@"<toast><visual><binding template=""ToastText01""><text id=""1"">" +
@"New item to view" + @</text></binding></visual></toast>";
try
{
var result =
await hub.
SendWindowsNativeNotificationAsync
SubmitNotificationHubJobAsync
ScheduleNotificationAsync
SendAppleNativeNotificationAsync
...
}
catch (System.Exception ex)
{
...
}
...
...
```

Answer:



You need to ensure that the solution meets the following requirements:

- ⇒ Provide transactional support.
- ⇒ Provide duplicate detection.
- ⇒ Store the messages for an unlimited period of time.

Which two technologies will meet the requirements? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Azure Service Bus Topic
- B. Azure Service Bus Queue
- C. Azure Storage Queue
- D. Azure Event Hub

You develop a gateway solution for a public facing news API.

The news API back end is implemented as a RESTful service and hosted in an Azure App Service instance.

You need to configure back-end authentication for the API Management service instance. Which target and gateway credential type should you use? To answer, drag the appropriate values to the correct parameters. Each value may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Values	Answer Area	
Azure Resource	Configuration parameter	Value
HTTP(s) endpoint	Target	
Basic	Gateway credentials	
Client cert		

You are creating an app that uses Event Grid to connect with other services. Your app's event data will be sent to a serverless function that checks compliance.

This function is maintained by your company.

You write a new event subscription at the scope of your resource. The event must be invalidated after a specific period of time.

You need to configure Event Grid.

What should you do? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Option	Value
WebHook event delivery	<div style="border: 1px solid black; padding: 5px; display: inline-block;"><p>SAS tokens</p><p>Key authentication</p><p>Management Access Control</p></div>
Topic publishing	<div style="border: 1px solid black; padding: 5px; display: inline-block;"><p>ValidationCode handshake</p><p>ValidationURL handshake</p><p>JWT token</p></div>

SAS

You are working for Contoso, Ltd.

You define an API Policy object by using the following XML markup:

```
<set-variable name="bodySize" value="@{context.Request.Headers["Content-Length"] [0]}"/>
<choose>
  <when condition="@(int.Parse(context.Variables.GetValueOrDefault<string> ("bodySize"))<512000)">
  </when>
  <otherwise>
    <rewrite-uri template="/put"/>
    <set-backend-service base-url="http://contoso.com/api/9.1/">
  </otherwise>
</choose>
```

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

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Statement	Yes	No
The XML segment belongs in the <inbound> section of the policy.	<input type="radio"/>	<input type="radio"/>
If the body size is >256k, an error will occur.	<input type="radio"/>	<input type="radio"/>
If the request is <a href="http://contoso.com/api/9.2/">http://contoso.com/api/9.2/</a> , the policy will retain the higher version.	<input checked="" type="radio"/>	<input type="radio"/>

You are developing a solution that will use Azure messaging services.

You need to ensure that the solution uses a publish-subscribe model and eliminates the need for constant polling.

What are two possible ways to achieve the goal? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Service Bus
- B. Event Hub
- C. Event Grid
- D. Queue

A company is implementing a publish-subscribe (Pub/Sub) messaging component by using Azure Service Bus. You are developing the first subscription application.

In the Azure portal you see that messages are being sent to the subscription for each topic. You create and initialize a subscription client object by supplying the correct details, but the subscription application is still not consuming the messages.

You need to ensure that the subscription client processes all messages.

Which code segment should you use?

- A. await subscriptionClient.AddRuleAsync(new RuleDescription(RuleDescription.DefaultRuleName, new TrueFilter()));
- B. subscriptionClient = new SubscriptionClient(ServiceBusConnectionString, TopicName, SubscriptionName);

- C. await subscriptionClient.CloseAsync();
- D. subscriptionClient.RegisterMessageHandler(ProcessMessagesAsync, messageHandlerOptions);

You are developing an Azure Service application that processes queue data when it receives a message from a mobile application. Messages may not be sent to the service consistently. You have the following requirements:

- ⇒ Queue size must not grow larger than 80 gigabytes (GB).
- ⇒ Use first-in-first-out (FIFO) ordering of messages.
- ⇒ Minimize Azure costs.

You need to implement the messaging solution.

Solution: Use the .Net API to add a message to an Azure Storage Queue from the mobile application. Create an Azure VM that is triggered from Azure Storage Queue events.

Does the solution meet the goal?

- A. Yes
- B. No

Answer: No

You are developing an Azure Service application that processes queue data when it receives a message from a mobile application. Messages may not be sent to the service consistently.

You have the following requirements:

- ⇒ Queue size must not grow larger than 80 gigabytes (GB).
- ⇒ Use first-in-first-out (FIFO) ordering of messages.
- ⇒ Minimize Azure costs.

You need to implement the messaging solution.

Solution: Use the .Net API to add a message to an Azure Service Bus Queue from the mobile application. Create an Azure Windows VM that is triggered from Azure Service Bus Queue.

Does the solution meet the goal?

- A. Yes
- B. No

Answer: No

You are developing a REST web service. Customers will access the service by using an Azure API Management instance.

The web service does not correctly handle conflicts. Instead of returning an HTTP status code of 409, the service returns a status code of 500. The body of the status message contains only the word conflict.

You need to ensure that conflicts produce the correct response.

How should you complete the policy? To answer, drag the appropriate code segments to the correct locations. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Policy segments	Answer Area
server	< Policy segment >
context	<base />
on-error	<choose>
set-status	<when condition = " @ Policy segment .Response.StatusCode == 500 && Policy segment .LastError.Message.Contains " conflict = " ") " >
when-error	<return-response>
override-status	< Policy segment >
	</return-response>
	</when>
	<otherwise />
	</choose>
	< Policy segment >

Answer:

Box 4: set-status -

Box 5: on-error -

You are a developer for a Software as a Service (SaaS) company. You develop solutions that provide the ability to send notifications by using Azure Notification Hubs.

You need to create sample code that customers can use as a reference for how to send raw notifications to Windows Push Notification Services (WNS) devices.

The sample code must not use external packages.

How should you complete the code segment? To answer, drag the appropriate code segments to the correct locations. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

## Select and Place:

Code segments	Answer Area
raw	<pre>var endpoint = "..."; var payload = "..."; var request = new HttpRequestMessage(HttpMethod.Post, endpoint); request.Headers.Add("X-WNS-Type", "wns/raw"); request.Headers.Add("ServiceBusNotification-Format", "Code segment"); request.Content = new StringContent(payload, Encoding.UTF8, "Code segment"); var client = new HttpClient(); await client.SendAsync(request);</pre>
windows	
windowsphone	
application/xml	
application/json	
application/octet-stream	

## Answer:

You are developing an Azure solution to collect point-of-sale (POS) device data from 2,000 stores located throughout the world. A single device can produce 2 megabytes (MB) of data every 24 hours. Each store location has one to five devices that send data.

You must store the device data in Azure Blob storage. Device data must be correlated based on a device identifier. Additional stores are expected to open in the future.

You need to implement a solution to receive the device data.

**Solution:** Provision an Azure Event Hub. Configure the machine identifier as the partition key and enable capture.

Does the solution meet the goal?

- A. Yes
- B. No

You are developing an Azure solution to collect inventory data from thousands of stores located around the world. Each store location will send the inventory data hourly to an Azure Blob storage account for processing.

The solution must meet the following requirements:

- ⇒ Begin processing when data is saved to Azure Blob storage.
- ⇒ Filter data based on store location information.
- ⇒ Trigger an Azure Logic App to process the data for output to Azure Cosmos DB.
- ⇒ Enable high availability and geographic distribution.
- ⇒ Allow 24-hours for retries.
- ⇒ Implement an exponential back off data processing.

You need to configure the solution.

What should you implement? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Select and Place:

Technologies	Answer Area	Object	Technology
Azure Event Hub		Event Source	Technology
Azure Event Grid		Event Receiver	Technology
Azure Service Bus		Event Handler	Technology
Azure Blob Storage			
Azure App Service			
Azure Logic App			

A

You are creating an app that will use CosmosDB for data storage. The app will process batches of relational data.

You need to select an API for the app.

Which API should you use?

- A. MongoDB API
- B. Table API
- C. SQL API
- D. Cassandra API

You are developing a .NET application that communicates with Azure Storage.

A message must be stored when the application initializes.

You need to implement the message.

How should you complete the code segment? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

**Answer Area**

```
CloudStorageAccount storageAccount = CloudStorageAccount.Parse
(CloudConfigurationManager.GetSetting ("StorageConnectionString"));

pVar1 = storageAccount. ▼ () ;
CloudQueueClient
CloudTableClient
CloudQueue
CloudTable

pVar2 = pVar1. ▼ ("contoso-storage");
CloudQueueClient
CloudTableClient
CloudQueue
CloudTable

try
{
    await pVar2.CreateIfNotExistsAsync();
}
catch (StorageException x)
{
    throw;
}
CloudQueueMessage cloudQueueMessage = new CloudQueueMessage("App Launch: <iUserID>");
await pVar2.AddMessageAsync(cloudQueueMessage);
```

Answer:

**Answer Area**

A software as a service (SaaS) company provides document management services. The company has a service that consists of several Azure web apps. All Azure web apps run in an Azure App Service Plan named PrimaryASP.

You are developing a new web service by using a web app named ExcelParser. The web app contains a third-party library for processing Microsoft Excel files.

The license for the third-party library stipulates that you can only run a single instance of the library.

You need to configure the service.

How should you complete the script? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

```
Set-AzAppServicePlan `  
    -ResourceGroupName $rg `  
    -Name "PrimaryASP" `
```

NumberOfSites 1	▼
PerSiteScaling \$true	▼
TargetWorkerCount = 1	▼
MaxNumberOfWorkers = 1	▼
SiteConfig.NumberOfWorkers = 1	▼

```
$app = Get-AzWebApp `  
    -ResourceGroupName $rg `  
    -Name "ExcelParser"
```

\$app.	▼
NumberOfSites 1	▼
PerSiteScaling \$true	▼
TargetWorkerCount = 1	▼
MaxNumberOfWorkers = 1	▼
SiteConfig.NumberOfWorkers = 1	▼

```
Set-AzWebApp $app
```

You have an application that provides weather forecasting data to external partners. You use Azure API Management to publish APIs.

You must change the behavior of the API to meet the following requirements:

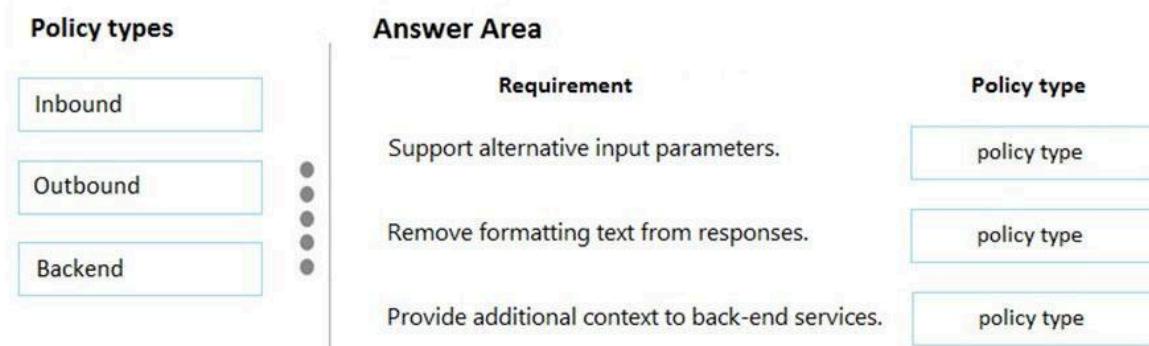
- ⇒ Support alternative input parameters
- ⇒ Remove formatting text from responses

☞ Provide additional context to back-end services

Which types of policies should you implement? To answer, drag the policy types to the correct requirements. Each policy type may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:



You are developing an e-commerce solution that uses a microservice architecture.

You need to design a communication backplane for communicating transactional messages between various parts of the solution. Messages must be communicated in first-in-first-out (FIFO) order.

What should you use?

- A. Azure Storage Queue
- B. Azure Event Hub
- C. Azure Service Bus
- D. Azure Event Grid

Answer: C

A company backs up all manufacturing data to Azure Blob Storage. Admins move blobs from hot storage to archive tier storage every month.

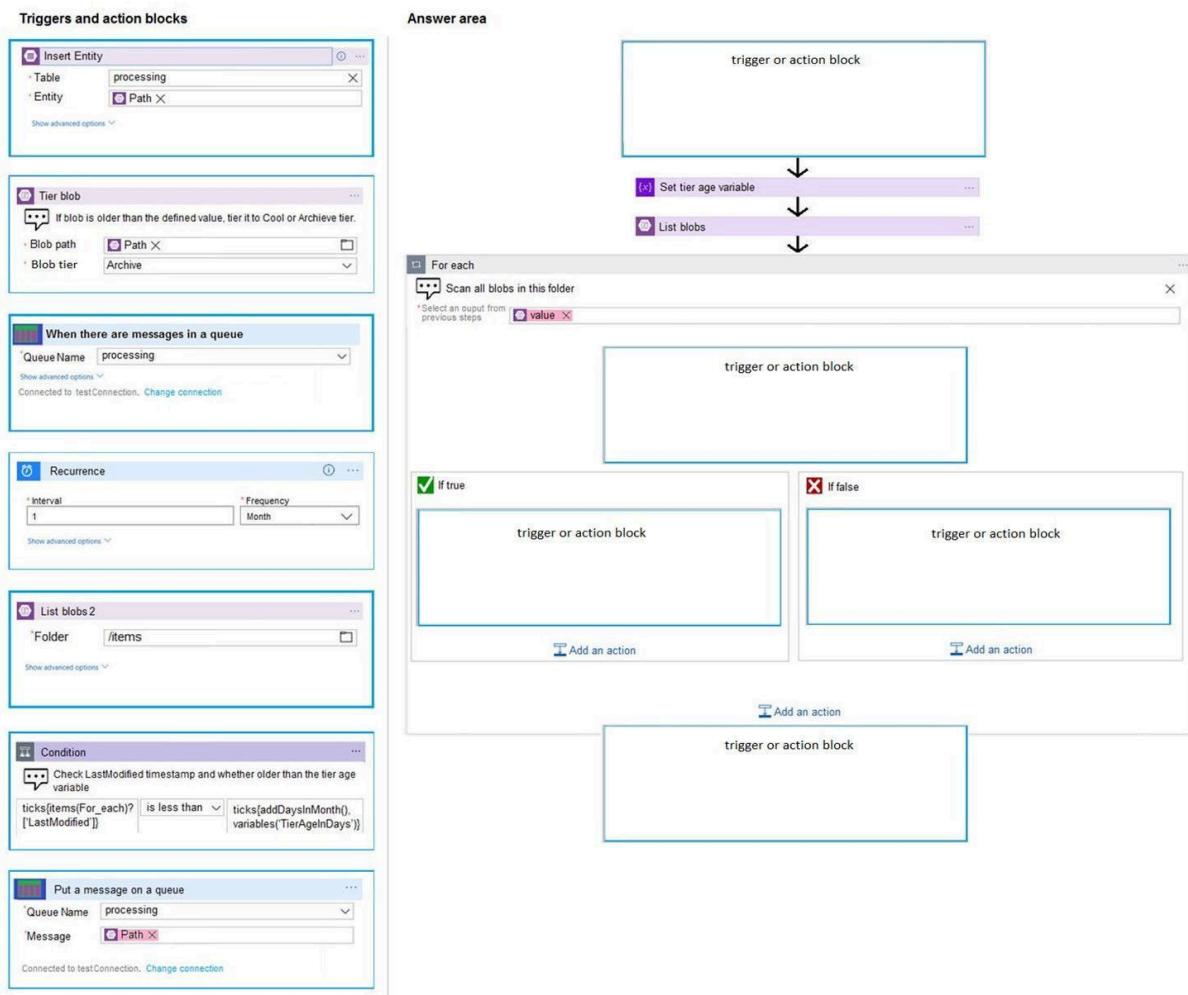
You must automatically move blobs to Archive tier after they have not been modified within 180 days. The path for any item that is not archived must be placed in an existing queue. This operation must be performed automatically once a month. You set the value of `TierAgeInDays`

to -180.

How should you configure the Logic App? To answer, drag the appropriate triggers or action blocks to the correct trigger or action slots. Each trigger or action block may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:



Answer:

You are developing an Azure Service application that processes queue data when it receives a message from a mobile application. Messages may not be sent to the service consistently. You have the following requirements:

- Queue size must not grow larger than 80 gigabytes (GB).
- Use first-in-first-out (FIFO) ordering of messages.

⇒ Minimize Azure costs.

You need to implement the messaging solution.

Solution: Use the .Net API to add a message to an Azure Service Bus Queue from the mobile application. Create an Azure Function App that uses an Azure Service Bus Queue trigger.

Does the solution meet the goal?

- A. Yes
- B. No

You are developing an Azure solution to collect point-of-sale (POS) device data from 2,000 stores located throughout the world. A single device can produce 2 megabytes (MB) of data every 24 hours. Each store location has one to five devices that send data.

You must store the device data in Azure Blob storage. Device data must be correlated based on a device identifier. Additional stores are expected to open in the future.

You need to implement a solution to receive the device data.

Solution: Provision an Azure Notification Hub. Register all devices with the hub.

Does the solution meet the goal?

- A. Yes
- B. No

You are building a loyalty program for a major snack producer. When customers buy a snack at any of 100 participating retailers the event is recorded in Azure Event Hub. Each retailer is given a unique identifier that is used as the primary identifier for the loyalty program.

Retailers must be able to be added or removed at any time. Retailers must only be able to record sales for themselves.

You need to ensure that retailers can record sales.

What should you do?

- A. Use publisher policies for retailers.
- B. Create a partition for each retailer.
- C. Define a namespace for each retailer.

You develop and deploy a web app to Azure App Service in a production environment. You scale out the web app to four instances and configure a staging slot to support changes.

You must monitor the web app in the environment to include the following requirements:

⇒ Increase web app availability by re-routing requests away from instances with error status

codes and automatically replace instances if they remain in an error state after one hour.

☞ Send web server logs, application logs, standard output, and standard error messaging to an Azure Storage blob account.

You need to configure Azure App Service.

Which values should you use? To answer, drag the appropriate configuration value to the correct requirements. Each configuration value may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Configuration values	Answer Area	Configuration value
	Requirement	Configuration value
Health check	Increase availability	Configuration value
Diagnostic setting	Send logs	Configuration value
Deployment slot		
Autoscale rule		
Zone redundancy		

You develop a solution that uses Azure Virtual Machines (VMs).

The VMs contain code that must access resources in an Azure resource group. You grant the VM access to the resource group in Resource Manager.

You need to obtain an access token that uses the VM's system-assigned managed identity. Which two actions should you perform? Each correct answer presents part of the solution.

- A. From the code on the VM, call Azure Resource Manager using an access token.
- B. Use PowerShell on a remote machine to make a request to the local managed identity for Azure resources endpoint.
- C. Use PowerShell on the VM to make a request to the local managed identity for Azure resources endpoint.
- D. From the code on the VM, call Azure Resource Manager using a SAS token.
- E. From the code on the VM, generate a user delegation SAS token.

You are developing a road tollway tracking application that sends tracking events by using Azure Event Hubs using premium tier.

Each road must have a throttling policy uniquely assigned.

You need to configure the event hub to allow for per-road throttling.

What should you do?

- A. Use a unique consumer group for each road.
- B. Ensure each road stores events in a different partition.
- C. Ensure each road has a unique connection string.
- D. Use a unique application group for each road.

You develop and deploy an ASP.NET Core application that connects to an Azure Database for MySQL instance.

Connections to the database appear to drop intermittently and the application code does not handle the connection failure.

You need to handle the transient connection errors in code by implementing retries.

What are three possible ways to achieve this goal? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Close the database connection and immediately report an error.
- B. Disable connection pooling and configure a second Azure Database for MySQL instance.
- C. Wait five seconds before repeating the connection attempt to the database.
- D. Set a maximum number of connection attempts to 10 and report an error on subsequent connections.
- E. Increase connection repeat attempts exponentially up to 120 seconds.

You are building a B2B web application that uses Azure B2B collaboration for authentication. Paying customers authenticate to Azure B2B using federation.

The application allows users to sign up for trial accounts using any email address.

When a user converts to a paying customer, the data associated with the trial should be kept, but the user must authenticate using federation.

You need to update the user in Azure Active Directory (Azure AD) when they convert to a paying customer.

Which Graph API parameter is used to change authentication from one-time passcodes to federation?

- A. resetRedemption
- B. Status
- C. userFlowType
- D. invitedUser

You develop an image upload service that is exposed using Azure API Management. Images are analyzed after upload for automatic tagging.

Images over 500 KB are processed by a different backend that offers a lower tier of service that costs less money. The lower tier of service is denoted by a header named x-large-request. Images over 500 KB must never be processed by backends for smaller images and must always be charged the lower price.

You need to implement API Management policies to ensure that images are processed correctly.

How should you complete the API Management inbound policy? To answer, select the appropriate options in the answer area.

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

### Answer Area

Answer:

```
<when condition="@{int.Parse(context.variables.GetValueOrDefault<string>('imagesize'))<12000}>
```

You develop several Azure Functions app functions to process JSON documents from a third-party system. The third-party system publishes events to Azure Event Grid to include hundreds of event types, such as billing, inventory, and shipping updates.

Events must be sent to a single endpoint for the Azure Functions app to process. The events must be filtered by event type before processing. You must have authorization and authentication control to partition your tenants to receive the event data.

You need to configure Azure Event Grid.

Which configuration should you use? To answer, select the appropriate values in the answer area.

NOTE: Each correct selection is worth one point.

### Answer Area

#### Requirement

Third-party system endpoint to send events

#### Configuration Value

system topic
custom topic
event domain
event subscription

Azure Functions app endpoint to handle filtered events

system topic
custom topic
event domain
event subscription

Answer:

A company is developing a solution that allows smart refrigerators to send temperature information to a central location.

The solution must receive and store messages until they can be processed. You create an Azure Service Bus instance by providing a name, pricing tier, subscription, resource group, and location.

You need to complete the configuration.

Which Azure CLI or PowerShell command should you run?

- A.  

```
az group create
  --name fridge-rg
  --location fridge-loc
```
- B.  

```
New-AzureRmServiceBusQueue
  -ResourceGroupName fridge-rg
  -NamespaceName fridge-ns
  -Name fridge-q
  -EnablePartitioning $False
```
- C.  

```
connectionString=$(az servicebus namespace authorization-rule keys list
  --resource-group fridge-rg
  --namespace-name fridge-ns
  --name RootManageSharedAccessKey
  --query primaryConnectionString --output tsv)
```
- D.  

```
az servicebus namespace create
  --resource-group fridge-rg
  --name fridge-ns
  --location fridge-loc
```

Answer: B

A company is developing a solution that allows smart refrigerators to send temperature information to a central location.

The solution must receive and store messages until they can be processed. You create an Azure Service Bus instance by providing a name, pricing tier, subscription, resource group, and location.

You need to complete the configuration.

Which Azure CLI or PowerShell command should you run?

- ```
New-AzureRmServiceBusNamespace
    -ResourceGroupName fridge-rg
    -NamespaceName fridge-ns
● A. -Location fridge-loc
```
- ```
New-AzureRmResourceGroup
    -Name fridge-rg
● B. -Location fridge-loc
```
- ```
New-AzureRmServiceBusQueue
    -ResourceGroupName fridge-rg
    -NamespaceName fridge-ns
    -Name fridge-q
● C. -EnablePartitioning $False
```

- D.

```
connectionString=$(az servicebus namespace authorization-rule keys list
  --resource-group fridge-rg
  --namespace-name fridge-ns
  --name RootManageSharedAccessKey
  --query primaryConnectionString --output tsv)
```

A company is developing a solution that allows smart refrigerators to send temperature information to a central location.

The solution must receive and store messages until they can be processed. You create an Azure Service Bus instance by providing a name, pricing tier, subscription, resource group, and location.

You need to complete the configuration.

Which Azure CLI or PowerShell command should you run?

- ```
az group create
  --name fridge-rg
  ● A.  --location fridge-loc
```
- 
- ```
New-AzureRmServiceBusNamespace
  -ResourceGroupName fridge-rg
  -NamespaceName fridge-ns
  ● B.  -Location fridge-loc
```

```
New-AzureRmServiceBusQueue
  -ResourceGroupName fridge-rg
  -NamespaceName fridge-ns
  -Name fridge-q
● C. -EnablePartitioning $False

New-AzureRmResourceGroup
  -Name fridge-rg
● D. -Location fridge-loc
```

You develop and deploy several APIs to Azure API Management.

You create the following policy fragment named APICounts:

```
<fragment>
  <emit-metric value="1" namespace="custom-metrics">
    <dimension name="User ID" />
    <dimension name="Operation ID" />
    <dimension name="API ID" />
    <dimension name="Client IP" value="@({context.RequestIpAddress})" />
  </emit-metric>
</fragment>
```

The policy fragment must be reused across various scopes and APIs. The policy fragment must be applied to all APIs and run when a calling system invokes any API.

You need to implement the policy fragment.

**XML elements**

name
inbound
outbound
set-variable
fragment-id
include-fragment

**Answer Area**

```
<policies>
  < XML >
    < XML > XML = "APICounts" />
    <base />
    </ XML >
    ...
</policies>
```

Answer:

A large rectangular area with a solid red background, representing a redacted section of the page.

You are developing a solution that uses several Azure Service Bus queues. You create an Azure Event Grid subscription for the Azure Service Bus namespace. You use Azure Functions as subscribers to process the messages.

You need to emit events to Azure Event Grid from the queues. You must use the principal of least privilege and minimize costs.

Which Azure Service Bus values should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

## Answer Area

Configuration	Value
Tier	<input type="button" value="▼"/> Basic Standard Premium
Access control (IAM) level	<input type="button" value="▼"/> Contributor Data Receiver Data Sender Data Owner

Answer:



You are developing several Azure API Management (APIM) hosted APIs.

The APIs have the following requirements:

- Require a subscription key to access all APIs.
- Include terms of use that subscribers must accept to use the APIs.
- Administrators must review and accept or reject subscription attempts.
- Limit the count of multiple simultaneous subscriptions.

You need to implement the APIs.

What should you do?

- A. Configure and apply header-based versioning.
- B. Create and publish a product.
- C. Configure and apply query string-based versioning.
- D. Add a new revision to all APIs. Make the revisions current and add a change log entry.

You are developing a solution by using the Azure Event Hubs SDK. You create a standard Azure Event Hub with 16 partitions. You implement eight event processor clients.

You must balance the load dynamically when an event processor client fails. When an event processor client fails, another event processor must continue processing from the exact point at which the failure occurred. All events must be aggregate and upload to an Azure Blob storage account.

You need to implement event processing recovery for the solution.

Which SDK features should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

## Answer Area

Requirement	Feature
Ensure that event process clients mark the position within an event sequence.	<input type="checkbox"/> Offset <input type="checkbox"/> Checkpoint <input type="checkbox"/> Namespace <input type="checkbox"/> Capture
Mark the event processor client position within a partition event sequence.	<input type="checkbox"/> Offset <input type="checkbox"/> Checkpoint <input type="checkbox"/> Namespace <input type="checkbox"/> Capture

You are developing a new API to be hosted by Azure API Management (APIM). The backend service that implements the API has not been completed. You are creating a test API and operation.

You must enable developers to continue with the implementation and testing of the APIM instance integrations while you complete the backend API development.

You need to configure a test API response.

How should you complete the configuration? To answer, select the appropriate options in the answer area.

## Answer Area

APIM Configuration Setting	APIM Configuration Value
----------------------------	--------------------------

Policy	<div style="border: 1px solid #ccc; padding: 5px; min-height: 150px; vertical-align: top;"><p>proxy</p><p>set-status</p><p>mock-response</p><p>forward-request</p></div>
Policy section	<div style="border: 1px solid #ccc; padding: 5px; min-height: 150px; vertical-align: top;"><p>inbound</p><p>backend</p><p>on-error</p><p>outbound</p></div>
HTTP response code	<div style="border: 1px solid #ccc; padding: 5px; min-height: 150px; vertical-align: top;"><p>200</p><p>400</p><p>500</p><p>501</p></div>

You are developing several Azure API Management (APIM) hosted APIs.

You must inspect request processing of the APIs in APIM. Requests to APIM by using a REST client must also be included. The request inspection must include the following information:

- requests APIM sent to the API backend and the response it received
- policies applied to the response before sending back to the caller
- errors that occurred during the processing of the request and the policies applied to the errors
- original request APIM received from the caller and the policies applied to the request

You need to inspect the APIs.

Which three actions should you do? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Enable the Allow tracing setting for the subscription used to inspect the API.
- B. Add the Ocp-Apim-Trace header value to the API call with a value set to true.
- C. Add the Ocp-Apim-Subscription-Key header value to the key for a subscription that allows access to the API.
- D. Create and configure a custom policy. Apply the policy to the inbound policy section with a global scope.
- E. Create and configure a custom policy. Apply the policy to the outbound policy section with an API scope.

A company is developing a solution that allows smart refrigerators to send temperature information to a central location.

The solution must receive and store messages until they can be processed. You create an Azure Service Bus instance by providing a name, pricing tier, subscription, resource group, and location.

You need to complete the configuration.

Which Azure CLI or PowerShell command should you run?

- A. 

```
Get-AzureRmServiceBusKey
    -ResourceGroupName fridge-rg
    -Namespace fridge-ns
    -Name RootManageSharedAccessKey
```
  
- B. 

```
New-AzureRmResourceGroup
    -Name fridge-rg
    -Location fridge-loc
```
  
- C. 

```
New-AzureRmServiceBusNamespace
    -ResourceGroupName fridge-rg
    -NamespaceName fridge-ns
    -Location fridge-loc
```
  
- D. 

```
New-AzureRmServiceBusQueue
    -ResourceGroupName fridge-rg
    -NamespaceName fridge-ns
    -Name fridge-q
    -EnablePartitioning $False
```

You plan to implement an Azure Functions app.

The Azure Functions app has the following requirements:

- Must be triggered by a message placed in an Azure Storage queue.
- Must use the queue name set by an app setting named `input_queue`.
- Must create an Azure Blob Storage named the same as the content of the message.

You need to identify how to reference the queue and blob name in the `function.json` file of the Azure Functions app.

How should you reference the names? To answer, select the appropriate values in the answer area.

NOTE: Each correct selection is worth one point.

### Answer Area

Reference type	Value
Queue name	<input type="text"/> input_queue {input_queue} %input_queue%
Blob name	<input type="text"/> {queueTrigger} {input_queue}/{id} %input_queue%/{filename}

You have an Azure API Management instance named API1 that uses a managed gateway.

You plan to implement a policy that will apply at a product scope and will set the header of inbound requests to include information about the region hosting the gateway of API1. The policy definition contains the following content:

```
<policies>
  <inbound>
    TARGET1
    <set-header name="x-request-context-data" exists-action="override">
      <value>@(TARGET2.Deployment.Region)</value>
    </set-header>
  </inbound>
</policies>
```

You have the following requirements for the policy definition:

- Ensure that the header contains the information about the region hosting the gateway of API1.
- Ensure the policy applies only after any global level policies are processed first.

You need to complete the policy definition.

Which values should you choose? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

### Answer Area

Target	Value
TARGET1	<div style="border: 1px solid black; padding: 5px;"><code>&lt;base/&gt; &lt;value&gt;root&lt;/value&gt; &lt;wait for="all"&gt;&lt;/wait&gt;</code></div>
TARGET2	<div style="border: 1px solid black; padding: 5px;"><code>context config policy</code></div>

You are developing several Azure API Management (APIM) hosted APIs.

You must make several minor and non-breaking changes to one of the APIs. The API changes include the following requirements:

- Must not disrupt callers of the API.
- Enable roll back if you find issues.
- Documented to enable developers to understand what is new.
- Tested before publishing.

You need to update the API.

What should you do?

- A. Configure and apply header-based versioning.
- B. Create and publish a product.
- C. Configure and apply a custom policy.
- D. Add a new revision to the API.
- E. Configure and apply query string-based versioning.

You are developing an application to store millions of images in Azure blob storage.

The application has the following requirements:

- Store the Exif (exchangeable image file format) data from the image as blob metadata when the application uploads the image.
- Retrieve the Exif data from the image while minimizing bandwidth and processing time.
- Utilizes the REST API.

You need to use the image Exif data as blob metadata in the application.

Which HTTP verbs should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

## Answer Area

### Application Metadata Action    HTTP Verb

Store Exif data.

▼

GET
PUT
POST
HEAD

Retrieve Exif data.

▼

PUT
POST
HEAD
CONNECT

You are developing several microservices to run on Azure Container Apps for a company. External TCP ingress traffic from the internet has been enabled for the microservices.

The company requires that the microservices must scale based on an Azure Event Hub trigger.

You need to scale the microservices by using a custom scaling rule.

Which two Kubernetes Event-driven Autoscaling (KEDA) trigger fields should you use? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. metadata
- B. type
- C. authenticationRef
- D. name
- E. metricType

A company is developing a solution that allows smart refrigerators to send temperature information to a central location.

The solution must receive and store messages until they can be processed. You create an Azure Service Bus instance by providing a name, pricing tier, subscription, resource group, and location.

You need to complete the configuration.

Which Azure CLI or PowerShell command should you run?

- ```
    New-AzureRmResourceGroup
        -Name fridge-rg
    • A. -Location fridge-loc

    az servicebus queue create
        --resource-group fridge-rg
        --namespace-name fridge-ns
    • B. --name fridge-q

    • C.
        connectionString=$(az servicebus namespace authorization-rule keys list
            --resource-group fridge-rg
            --namespace-name fridge-ns
            --name RootManageSharedAccessKey
            --query primaryConnectionString --output tsv)

    New-AzureRmServiceBusNamespace
        -ResourceGroupName fridge-rg
        -NamespaceName fridge-ns
    • D. -Location fridge-loc
```

ANSWER

A company is developing a solution that allows smart refrigerators to send temperature information to a central location.

The solution must receive and store messages until they can be processed. You create an Azure Service Bus instance by providing a name, pricing tier, subscription, resource group, and location.

You need to complete the configuration.

Which Azure CLI or PowerShell command should you run?

- A. 

```
az servicebus queue create
--resource-group fridge-rg
--namespace-name fridge-ns
--name fridge-q
```
- B. 

```
New-AzureRmServiceBusNamespace
-ResourceGroupName fridge-rg
-NamespaceName fridge-ns
-Location fridge-loc
```
- C. 

```
az servicebus namespace create
--resource-group fridge-rg
--name fridge-ns
--location fridge-loc
```
- D. 

```
az group create
--name fridge-rg
--location fridge-loc
```

A company is developing a solution that allows smart refrigerators to send temperature information to a central location.

The solution must receive and store messages until they can be processed. You create an Azure Service Bus instance by providing a name, pricing tier, subscription, resource group, and location.

You need to complete the configuration.

Which Azure CLI or PowerShell command should you run?

- A.

```
az group create
--name fridge-rg
--location fridge-loc

az servicebus queue create
--resource-group fridge-rg
--namespace-name fridge-ns
--name fridge-q
```
- B. `--name fridge-q`
- C.

```
connectionString=$(az servicebus namespace authorization-rule keys list
--resource-group fridge-rg
--namespace-name fridge-ns
--name RootManageSharedAccessKey
--query primaryConnectionString --output tsv)
```
- D.

```
az servicebus namespace create
--resource-group fridge-rg
--name fridge-ns
--location fridge-loc
```

You are implementing an application by using Azure Event Grid to push near-real-time information to customers.

You have the following requirements:

- You must send events to thousands of customers that include hundreds of various event types.
- The events must be filtered by event type before processing.
- Authentication and authorization must be handled by using Microsoft Entra ID.
- The events must be published to a single endpoint.

You need to implement Azure Event Grid.

Solution: Publish events to an event domain. Create a custom topic for each customer.

Does the solution meet the goal?

- A. Yes
- B. No

You are implementing an application by using Azure Event Grid to push near-real-time information to customers.

You have the following requirements:

- You must send events to thousands of customers that include hundreds of various event types.
- The events must be filtered by event type before processing.
- Authentication and authorization must be handled by using Microsoft Entra ID.
- The events must be published to a single endpoint.

You need to implement Azure Event Grid.

Solution: Publish events to a custom topic. Create an event subscription for each customer.

Does the solution meet the goal?

- A. Yes
- B. No

You are implementing an application by using Azure Event Grid to push near-real-time information to customers.

You have the following requirements:

- You must send events to thousands of customers that include hundreds of various event types.
- The events must be filtered by event type before processing.
- Authentication and authorization must be handled by using Microsoft Entra ID.
- The events must be published to a single endpoint.

You need to implement Azure Event Grid.

Solution: Enable ingress, create a TCP scale rule, and apply the rule to the container app.

Does the solution meet the goal?

- A. Yes
- B. No

You are implementing an application by using Azure Event Grid to push near-real-time information to customers.

You have the following requirements:

- You must send events to thousands of customers that include hundreds of various event types.
- The events must be filtered by event type before processing.
- Authentication and authorization must be handled by using Microsoft Entra ID.
- The events must be published to a single endpoint.

You need to implement Azure Event Grid.

Solution: Publish events to a partner topic. Create an event subscription for each customer.

Does the solution meet the goal?

- A. Yes
- B. No

You are implementing an application by using Azure Event Grid to push near-real-time information to customers.

You have the following requirements:

- You must send events to thousands of customers that include hundreds of various event types.
- The events must be filtered by event type before processing.
- Authentication and authorization must be handled by using Microsoft Entra ID.
- The events must be published to a single endpoint.

You need to implement Azure Event Grid.

Solution: Publish events to a system topic. Create an event subscription for each customer.

Does the solution meet the goal?

- A. Yes
- B. No