

 Custom View Settings

Topic 1 - Question Set 1

Question #1

Topic 1

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.

Correct Answer: C

When you redeploy a VM, it moves the VM to a new node within the Azure infrastructure and then powers it back on, retaining all your configuration options and associated resources.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/redeploy-to-new-node>

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

Correct Answer:

Options

An Azure Storage account

Azure Active Directory (AD)
Identity Protection

An Azure policy

A backup policy

Answer

An Azure Key Vault

An access policy

Currently there are no comments in this discussion, be the first to comment!

Question #3

Topic 1

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

Correct Answer: A

kubectl apply -f myapp.yaml applies a configuration change to a resource from a file or stdin.

Reference:

<https://kubernetes.io/docs/reference/kubectl/overview/>

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

Question #4

Topic 1

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

Correct Answer: B

  **jay158** Highly Voted 9 months, 3 weeks ago

Correct Answer NO

docker run -it microsoft/azure-cli:0.10.17 is no k8s command
upvoted 7 times

  **Mev4953** Most Recent 3 months, 2 weeks ago

Any reference?
upvoted 1 times

  **lugospod** 3 months, 2 weeks ago

K8 Out of scope for 2021!
upvoted 3 times

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

Correct Answer: B

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-compare-logic-apps-ms-flow-webjobs>

✉ **DefaultName2** Highly Voted 5 months, 1 week ago

"You use the WebJobs SDK to design a triggered App Service background task"

B - WebJob

Usually you'll host the WebJobs SDK in Azure WebJobs, but you can also run your jobs in a Worker Role. The Azure WebJobs feature of Azure Web Apps provides an easy way for you to run programs such as services or background tasks in a Web App...

<https://github.com/Azure/azure-webjobs-sdk>

upvoted 8 times

✉ **noip** Highly Voted 8 months, 3 weeks ago

the Correct Answer, D: Function

upvoted 7 times

✉ **edengoforit** 3 months ago

Without any rationale?

upvoted 1 times

✉ **leonidn** Most Recent 3 months ago

Selected Answer: B

WebJob is not a service, but other options are not correct. The service is mentioned in the question: "WebJobs SDK to design a triggered App Service background task". Due to we use App Service and WebJobs is the only feature of this service in the options list, then I select B.
upvoted 2 times

✉ **Felipe_apr** 6 months, 2 weeks ago

Correct

"WebJobs and the WebJobs SDK work best together"

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-compare-logic-apps-ms-flow-webjobs#compare-azure-functions-and-azure-logic-apps>

upvoted 4 times

✉ **ucsdmiami2020** 4 months, 2 weeks ago

To further support the answer B-WebJobs, refer to <https://docs.microsoft.com/en-us/azure/app-service/webjobs-create>

"You can use the Azure WebJobs SDK with WebJobs to simplify many programming tasks."

"Azure Functions provides another way to run programs and scripts. For a comparison between WebJobs and Functions, see <https://docs.microsoft.com/en-us/azure/azure-functions/functions-compare-logic-apps-ms-flow-webjobs>

upvoted 2 times

✉ **ucsdmiami2020** 4 months, 2 weeks ago

Soooo apparently, "WebJobs and the WebJobs SDK work best together, BUT you can use WebJobs without the WebJobs SDK and vice versa. Plus, Azure Functions is built on the WebJobs SDK, so it shares many of the same event triggers and connections to other Azure Services."

All that said/quoted, per microsoft, "Here are two scenarios for which WebJobs may be the best choice: You have an App Service app for which you want to run code snippets, and you want to manage them together in the same Azure DevOps environment."

upvoted 1 times

✉ **monikamateeva** 6 months, 3 weeks ago

WebJobs is SDK, it is not a service, right? I think we use Azure Function here.

upvoted 1 times

✉  **lxzhu2013** 7 months ago

wondering if Microsoft proofread the questions.

upvoted 2 times

✉  **amals** 7 months, 2 weeks ago

Seems like webjob is correct option here <https://github.com/Azure/azure-webjobs-sdk/wiki#about>

upvoted 1 times

✉  **stil_walking** 8 months ago

Correct, obviously, because "you use the WebJobs SDK"

upvoted 2 times

✉  **Sswapnil** 8 months ago

anyone got this in exam? is it functions or webjobs?

upvoted 1 times

✉  **ning** 8 months, 1 week ago

I am thinking azure function ...

upvoted 2 times

✉  **mcOre** 8 months, 2 weeks ago

What does this mean? "You are preparing to configure the service processes a queue data item." Are you configuring a service that should process the messages? Instead of WebJobs? Or are you preparing a service that will process the messages, which is explicitly defined in the question to be a WebJob?

upvoted 3 times

✉  **rustycables** 8 months, 1 week ago

The question is so poorly worded, who the hell knows.

upvoted 3 times

✉  **[Removed]** 8 months, 2 weeks ago

Webjobs is better!

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-compare-logic-apps-ms-flow-webjobs#comparison-table>

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-compare-logic-apps-ms-flow-webjobs#summary>

upvoted 1 times

✉  **ZodiaC** 9 months ago

TRUE 100%

upvoted 3 times

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

Correct Answer: D

The number of fault domains for managed availability sets varies by region - either two or three per region.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/manage-availability>

✉  **jay158** Highly Voted 9 months, 3 weeks ago

Answer D Max Value. [values could be 1,2,3]

<https://docs.microsoft.com/en-us/azure/virtual-machine-scale-sets/virtual-machine-scale-sets-manage-fault-domains>
upvoted 12 times

✉  **argoth** 9 months, 1 week ago

Correct. Values can be 1,2 or 3
upvoted 3 times

✉  **Bere** Most Recent 5 months, 2 weeks ago

As described here:

<https://docs.microsoft.com/en-us/azure/virtual-machine-scale-sets/virtual-machine-scale-sets-manage-fault-domains>
You can set the parameter --platform-fault-domain-count to 1, 2, or 3 (default of 3 if not specified).

And as described here:

<https://docs.microsoft.com/en-us/azure/virtual-machines/availability-set-overview>

Each virtual machine in your availability set is assigned an update domain and a fault domain by the underlying Azure platform. Each availability set can be configured with up to three fault domains and twenty update domains.

So answer is D Max Value

upvoted 3 times

✉  **mimi21212152** 5 months, 2 weeks ago

az104 question, max value is correct.

upvoted 1 times

✉  **ranjitklive** 8 months, 3 weeks ago

Each virtual machine in your availability set is assigned an update domain and a fault domain by the underlying Azure platform. Each availability set can be configured with up to three fault domains and twenty update domains. Update domains indicate groups of virtual machines and underlying physical hardware that can be rebooted at the same time.

upvoted 3 times

✉  **Kalaisuran** 9 months, 3 weeks ago

<https://www.thatlazyadmin.com/2017/10/09/azure-fault-update-domains/>
upvoted 2 times

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

Correct Answer: D

Each virtual machine in your availability set is assigned an update domain and a fault domain by the underlying Azure platform. For a given availability set, five non-user-configurable update domains are assigned by default (Resource Manager deployments can then be increased to provide up to 20 update domains) to indicate groups of virtual machines and underlying physical hardware that can be rebooted at the same time.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/manage-availability>

 **jay158** Highly Voted 9 months, 3 weeks ago

Answer is B 20

Each availability set can be configured with up to three fault domains and twenty update domains.

<https://docs.microsoft.com/en-us/azure/virtual-machines/availability-set-overview>

upvoted 23 times

 **ndh103** Highly Voted 9 months, 3 weeks ago

Should be 20

upvoted 8 times

 **SivajiTheBoss** Most Recent 1 month, 1 week ago

Selected Answer: B

Answer: B 20

upvoted 1 times

 **cyberjetx** 1 month, 1 week ago

I thought that this was 20 as well. When taking the test should we mark 40 if we want it to count as correct? (Even though the real answer is 20)
upvoted 1 times

 **EricPerezVillar** 1 month, 3 weeks ago

Selected Answer: B

Answer is B 20. Limit to 20.

upvoted 3 times

 **leonidn** 3 months ago

Selected Answer: B

Twenty is maximum

upvoted 2 times

 **Mev4953** 3 months, 2 weeks ago

Selected Answer: B

As default:

3 fault domain

20 update domain

upvoted 3 times

 **Mev4953** 3 months ago

Each availability set can be configured with up to three fault domains and twenty update domains

<https://docs.microsoft.com/en-us/azure/virtual-machines/availability-set-overview>

upvoted 2 times

✉️  **monikamateeva** 6 months, 3 weeks ago

20 seems correct. <https://docs.microsoft.com/en-us/azure/virtual-machines/put-calls-create-or-update>
upvoted 1 times

✉️  **[Removed]** 8 months, 2 weeks ago

Correct Answer says 20, B is right! D is a refuse
upvoted 2 times

✉️  **nombuso** 8 months, 3 weeks ago

But the answer before was the max value so 40 isn't in that aspect?
upvoted 1 times

✉️  **hstml** 7 months, 1 week ago

In that question before they mentioned platformFaultDomainCount and now it is platformUpdateDomainCount.
upvoted 4 times

✉️  **ranjitzklive** 8 months, 3 weeks ago

Each virtual machine in your availability set is assigned an update domain and a fault domain by the underlying Azure platform. Each availability set can be configured with up to three fault domains and twenty update domains. Update domains indicate groups of virtual machines and underlying physical hardware that can be rebooted at the same time.

upvoted 3 times

✉️  **aradice** 9 months, 3 weeks ago

20 => <https://docs.microsoft.com/en-us/azure/virtual-machines/availability-set-overview>
upvoted 5 times

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

Options

Correct Answer:

Azure Cosmos DB
connector

SendGrid action

Azure Event Hubs
binding

Answer

Consumption plan

SendGrid binding

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

You 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

Correct Answer: B

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/mongodb-migrate> <https://docs.mongodb.com/manual/reference/program/mongorestore/>

✉  **ndh103** Highly Voted 9 months, 3 weeks ago

I cannot see the 'underlined text' in the question.

upvoted 14 times

✉  **pedz99** 9 months, 2 weeks ago

my gut tells me that it's Data Management Gateway since it's the only one that looks out of place

upvoted 5 times

✉  **jay158** Highly Voted 9 months, 3 weeks ago

Answer: B --mongorestore

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

upvoted 13 times

✉  **ZodiaC** 9 months ago

1000000000000000% TRUE!

upvoted 2 times

✉  **jay158** 9 months, 1 week ago

Azure Database Migration Service [is for online Migration] but it is not a choice

<https://docs.microsoft.com/en-us/azure/dms/tutorial-mongodb-cosmos-db-online>

upvoted 3 times

✉  **AzureLearning** 3 months ago

The Data management gateway is a client agent that you must install in your on-premises environment to copy data between cloud and on-premises data stores.

<https://docs.microsoft.com/en-us/azure/data-factory/v1/data-factory-data-management-gateway>

upvoted 1 times

✉  **wsellmair** Most Recent 2 months, 3 weeks ago

Selected Answer: A

DMG see "Supported data stores and formats":

<https://docs.microsoft.com/en-us/azure/data-factory/v1/data-factory-data-movement-activities#supported-data-stores-and-formats>

upvoted 2 times

✉  **edengoforit** 3 months ago

mongodump/mongorestore is the best pair of migration tools for migrating your entire MongoDB database. The compact BSON format will make more efficient use of network resources as the data is inserted into Azure Cosmos DB.

mongodump exports your existing data as a BSON file.

mongorestore imports your BSON file dump into Azure Cosmos DB.

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

upvoted 2 times

✉  **AzureLearning** 3 months ago

The answer is correct.

The Data management gateway is a client agent that you must install in your on-premises environment to copy data between cloud and on-premises data stores.

<https://docs.microsoft.com/en-us/azure/data-factory/v1/data-factory-data-management-gateway>
upvoted 1 times

✉  **shawnz** 3 months, 1 week ago

Ans is correct. DMG can do the job.
if use mongorestore should also include mongodump
upvoted 1 times

✉  **Mev4953** 3 months, 2 weeks ago

<https://docs.microsoft.com/en-us/azure/cosmos-db/mongodb/tutorial-mongotools-cosmos-db>
upvoted 1 times

✉  **babaryanryhim** 6 months, 1 week ago

The answer is correct refer to :<https://docs.microsoft.com/en-us/azure/cosmos-db/mongodb/tutorial-mongotools-cosmos-db>
upvoted 2 times

✉  **ning** 8 months, 1 week ago

No change needed
Azure DMS should be able to complete the job ...
upvoted 2 times

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.

Correct Answer: C

A managed identity from Azure Active Directory allows your app to easily access other AAD-protected resources such as Azure Key Vault.

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/overview-managed-identity> <https://docs.microsoft.com/en-us/samples/azure-samples/app-service-msi-keyvault-dotnet/keyvault-msi-appservice-sample/>

✉️  **ZodiaC** Highly Voted 9 months ago

100% Correct

upvoted 7 times

✉️  **Molte** 3 months, 3 weeks ago

Why C and not D?

upvoted 1 times

✉️  **ucsdmiami2020** 4 months, 2 weeks ago

Agreed C. Quoting the provided Microsoft docs URL references,

" Managed identities for Azure resources allow for giving Azure services an automatically managed identity in Azure Active Directory (Azure AD).

upvoted 3 times

✉️  **PhilLI** Most Recent 3 months, 2 weeks ago

Selected Answer: C

"Azure AD service principals" are created for Apps registered in Azure AD.

Whereas WebApps, VMs, hubs etc all can get a Managed Identity.

upvoted 2 times

✉️  **xahah22222** 5 months, 4 weeks ago

I dont know. C&D seem to be the same thing. I would take the create principle option as I am not even sure if you can enable or disable MSI on a top level.

upvoted 1 times

✉️  **Sukon_Desknot** 8 months ago

This is a bit tricky checkout

<https://docs.microsoft.com/en-us/azure/active-directory/develop/app-objects-and-service-principals#service-principal-object>

upvoted 4 times

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

Correct Answer: A

For Native Applications you need to provide a Redirect URI, which Azure AD will use to return token responses.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/develop/v1-protocols-oauth-code>

✉  **jvyas** Highly Voted 6 months, 1 week ago

You don't need client id to register an application in Azure AD. You just need redirect URI. Upon registration, the portal will give client id and tenar id. Both of them must be included in the app configuration json file, so given answer is correct as far as app registration is concerned.

<https://docs.microsoft.com/en-us/learn/modules/secure-app-with-oidc-and-azure-ad/4-exercise-create-aad-register-app>
upvoted 13 times

✉  **Omar102** Highly Voted 7 months ago

Client ID is also a required.

upvoted 5 times

✉  **DV007** 3 months ago

The question is about which data is required *from the developer*. The Client ID (and client secret) are provided TO the developer by you as admin. The thing the admin needs to know from the developer is the redirect URL, because that is what the developer knows for his application
upvoted 4 times

✉  **ucsdmiami2020** 4 months, 2 weeks ago

I agreed the answer is Client ID per the Microsoft docs reference URL <https://docs.microsoft.com/en-us/learn/modules/secure-app-with-oidc-and-azure-ad/4-exercise-create-aad-register-app>

"Redirect URI (optional) - We'll return the authentication response to this URI after successfully authenticating the user. Providing this now is optional and it can be changed later, but a value is required for most authentication scenarios."

On the other hand,

"Hoover over the Application (client) ID value and copy to a secure location. Save the values for later. You'll need these to complete the configuration file"

upvoted 1 times

✉  **Prashant_Salokhe** Most Recent 1 month, 1 week ago

This type of questions are misleading. No underline text.

upvoted 1 times

✉  **Mev4953** 3 months, 2 weeks ago

Which text is underlined text?

upvoted 2 times

✉  **huislaw** 3 months, 1 week ago

I don't see it too

upvoted 1 times

✉  **Laueri** 3 months ago

I believe in this case it's "redirect URI" that should be underlined.

upvoted 3 times

✉  **Patchfox** 4 months ago

I walked through the registration process of the enterprise app but the redirect URL is optional to continue . I'm sure that you need it obviously later. But the trick is here, all other answers not needed too, so you have to go with one and the best way is "No change required"

upvoted 4 times

✉ **Patchfox** 4 months ago

I want to add here the info from the official documentation, I read. The different authentication types are really confusing. So the documentation say, redirect_uri is required for native and mobile applications. So I ahve to say, the answer here is correct. No change required.

upvoted 3 times

✉ **MiraA** 6 months, 2 weeks ago

Register an application with the Microsoft identity platform - add a redirect URI:

<https://docs.microsoft.com/en-us/azure/active-directory/develop/quickstart-register-app#add-a-redirect-uri>

upvoted 2 times

✉ **MiraA** 6 months, 2 weeks ago

"redirect_uri" ... The redirect_uri of your app, where authentication responses can be sent and received by your app. It must exactly match one of the redirect_uris you registered in the portal, except it must be url encoded. For native & mobile apps, you should use one of the recommended values - <https://login.microsoftonline.com/common/oauth2/nativeclient> (for apps using embedded browsers) or <http://localhost> (for apps that use system browsers).

<https://docs.microsoft.com/en-us/azure/active-directory/develop/v2-oauth2-auth-code-flow>

upvoted 1 times

✉ **noip** 8 months, 3 weeks ago

i did not get this type of questions :/

upvoted 4 times

✉ **weasel97** 8 months ago

If the solution meets the requirements, you choose "No change is needed". If another thing (B,C or D) must be done, choose that option.

upvoted 1 times

✉ **MrXBasit** 9 months ago

Correct

upvoted 1 times

✉ **ZodiaC** 9 months ago

Eehm not really, can you explain?

upvoted 5 times

✉ **jvyas** 6 months, 1 week ago

Could you also point the correct answer in your opinion? Thanks

upvoted 1 times

Question #12

Topic 1

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

Correct Answer: BD

Reference:

<https://docs.microsoft.com/en-us/powershell/module/azurerm.keyvault/new-azurermkeyvault> <https://docs.microsoft.com/en-us/azure/key-vault/key-vault-ovw-soft-delete>

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

Require MFA for Azure port...

Name
MFA required for Azure portal access

Assignments

- Users and groups >
0 users selected
- Cloud apps >
0 apps selected
- Conditions >
0 conditions selected

Access controls

- Grant >
0 controls selected
- Session >
0 controls selected

Answer Area

Require MFA for Azure port...

Info

* Name
MFA required for Azure portal access

Assignments

Users and groups >
0 users selected

Cloud apps >
0 apps selected

Conditions >
0 conditions selected

Access controls

Grant >
0 controls selected

Session >
0 controls selected

Correct Answer:

Box 1:

The conditional access policy must be applied or assigned to Users and Groups.

Box 2:

The conditional access policy must be applied when users access the Azure portal, which is a cloud app. That is: Microsoft Azure Management

Box 3:

Access control must require multi-factor authentication when granting access.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/conditional-access/app-based-mfa>

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.

Correct Answer: C

Azure AD can be the initial Azure AD managed domain. Azure AD can also be an on-premises Active Directory Domain Services that is federated with the Azure AD.

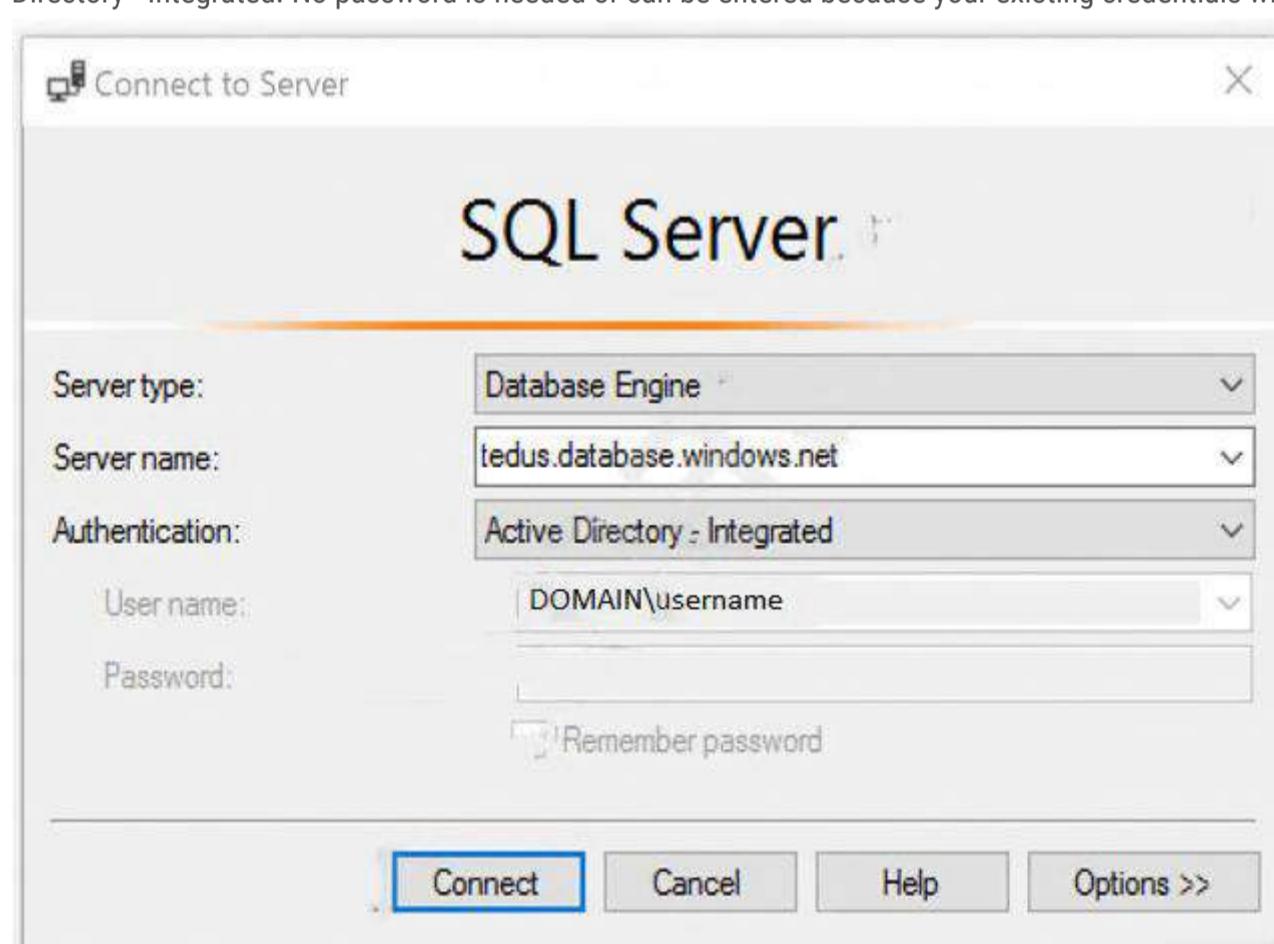
Using an Azure AD identity to connect using SSMS or SSDT

The following procedures show you how to connect to a SQL database with an Azure AD identity using SQL Server Management Studio or SQL Server Database Tools.

Active Directory integrated authentication

Use this method if you are logged in to Windows using your Azure Active Directory credentials from a federated domain.

1. Start Management Studio or Data Tools and in the Connect to Server (or Connect to Database Engine) dialog box, in the Authentication box, select Active Directory - Integrated. No password is needed or can be entered because your existing credentials will be presented for the connection.



2. Select the Options button, and on the Connection Properties page, in the Connect to database box, type the name of the user database you want to connect to.

(The AD domain name or tenant ID option is only supported for Universal with MFA connection options, otherwise it is greyed out.)

✉️  **MrXBasit**  9 months ago

Correct

upvoted 14 times

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.

Correct Answer: B

When soft-delete is enabled, resources marked as deleted resources are retained for a specified period (90 days by default). The service further provides a mechanism for recovering the deleted object, essentially undoing the deletion.

Purge protection is an optional Key Vault behavior and is not enabled by default. Purge protection can only be enabled once soft-delete is enabled.

When purge protection is on, a vault or an object in the deleted state cannot be purged until the retention period has passed. Soft-deleted vaults and objects can still be recovered, ensuring that the retention policy will be followed.

The default retention period is 90 days, but it is possible to set the retention policy interval to a value from 7 to 90 days through the Azure portal. Once the retention policy interval is set and saved it cannot be changed for that vault.

Reference:

<https://docs.microsoft.com/en-us/azure/key-vault/general/overview-soft-delete>

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
```

5m	> 85"
CPU Usage	
Percentage CPU	
avg Percentage CPU	

Answer Area

Correct Answer:

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

5m	> 85"
CPU Usage	
Percentage CPU	
avg Percentage CPU	

Reference:

<https://docs.microsoft.com/en-us/cli/azure/monitor/metrics/alert>

Note: The question is included in a number of questions that depicts the identical set-up. However, every question has a distinctive result. Establish if the solution satisfies the requirements.

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

Correct Answer: B

✉  **NStanhope** Highly Voted 9 months, 3 weeks ago

Correct - Instead, use CDN - <https://docs.microsoft.com/en-us/azure/architecture/best-practices/cdn>
upvoted 19 times

✉  **ucsdmiami2020** 4 months, 2 weeks ago

Further supporting the use of a CDN (Content Distributed Network), per Microsoft docs URL <https://docs.microsoft.com/en-us/azure/architecture/best-practices/cdn#how-and-why-a-cdn-is-used>

"Streaming video files to the client on demand. Video benefits from the low latency and reliable connectivity available from the globally located datacenters that offer CDN connections. Microsoft Azure Media Services (AMS) integrates with Azure CDN to deliver content directly to the CDN for further distribution."

upvoted 3 times

✉  **StephanieMii** 8 months, 3 weeks ago

CDN might be best practice but the question is if it meets the goal. I think it does.
upvoted 2 times

✉  **ranjitklive** 8 months, 3 weeks ago

Azure Cache for Redis is Distributed, in-memory, scalable solution providing super-fast data access. I think it is more suitable for database query results or session data caching and not content like video/images which you just fetch from azure storage and display.
upvoted 6 times

✉  **Veks** 3 weeks, 3 days ago

Hmm, Azure Cache for Redis 6.0 includes Redis streams now...
I agree that CDN is correct because u have to ask your self who is writing these questions and why.
I'm sure that Redis is the solution that meets the goal, but the problem is, is it a solution form Microsoft exam question writer :)
upvoted 1 times

✉  **edengoforit** Most Recent 2 months, 4 weeks ago

Answer is B(No) - Instead use CDN
upvoted 2 times

Note: The question is included in a number of questions that depicts the identical set-up. However, every question has a distinctive result. Establish if the solution satisfies the requirements.

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

Correct Answer: A

Reference:

<https://docs.microsoft.com/en-in/azure/cdn/>

✉  **ZodiaC** Highly Voted  9 months ago

10000000000000000000000% CORRECT!

upvoted 8 times

✉  **d0bermannn** 8 months, 1 week ago

you can safely delete 17 zeroes)

upvoted 18 times

✉  **BishopeL** 8 months ago

Just type "CORRECT"

upvoted 10 times

✉  **ranjitklive** Most Recent 8 months, 3 weeks ago

What is the difference between Azure CDN and Azure Media Services?

<https://docs.microsoft.com/en-us/azure/media-services/latest/media-services-overview>

upvoted 3 times

Note: The question is included in a number of questions that depicts the identical set-up. However, every question has a distinctive result.

Establish if the solution satisfies the requirements.

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

Correct Answer: B

✉  **jvyas** [Highly Voted ] 6 months, 1 week ago

Instead you use CDN
upvoted 5 times

✉  **Veks** [Most Recent ] 3 weeks, 3 days ago

What storage u use has nothing to do with what your app is doing. OK, you will not use cold storage, of course, but faster or little slower disks don't have a big impact on the solution that has to provide a lot of content over internet and fast. This question is not about disk (storage) latency but about internet access to content and its latency.
Definitely NO.

<https://www.backblaze.com/blog/whats-the-diff-nas-vs-san/>
upvoted 1 times

✉  **Vrushalij** 8 months ago

No is correct answer
upvoted 4 times

✉  **ranjitklive** 8 months, 3 weeks ago

Does Azure storage uses SAN behind-the-scenes? The closes option in Azure for the requirement given is Azure Media Services.
<https://docs.microsoft.com/en-us/azure/media-services/latest/media-services-overview>
upvoted 2 times

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.

Correct Answer: C

Configure the web app to the Standard App Service Tier. The Standard tier supports auto-scaling, and we should minimize the cost. We can then enable autoscaling on the web app, add a scale rule and add a Scale condition.

Reference:

<https://docs.microsoft.com/en-us/azure/monitoring-and-diagnostics/monitoring-autoscale-get-started> <https://azure.microsoft.com/en-us/pricing/details/app-service/plans/>

✉️  **examTaker455** Highly Voted 9 months, 1 week ago

D1 is Shared Tier and does not offer autoscaling. You need to switch to Standard, Premium or Isolated.

upvoted 16 times

✉️  **ZodiaC** 9 months ago

So you have to reduce cost som you need standard app tier. 1000% correct!

upvoted 6 times

✉️  **Gautam47** Highly Voted 7 months, 1 week ago

Tier D1 is a basically shared app service plan, so we need to move standard or premium plan to enable auto scaling. As we need to provide low cost solution, then standard plan will be best for this approach

upvoted 8 times

✉️  **Netspud** Most Recent 2 months ago

Selected Answer: C

C is correct

upvoted 3 times

✉️  **edengoforit** 2 months, 4 weeks ago

Answer is C: Use Standard App Service Plan

upvoted 1 times

✉️  **Mev4953** 3 months, 1 week ago

It could be helpful to get a better understanding. (just search "standart" on the web page)

https://medium.com/@zaab_it/azure-app-service-plan-tiers-f07d5e22297a

upvoted 1 times

✉️  **jvyas** 3 months, 2 weeks ago

Selected Answer: C

Standard plan offers auto-scaling as well as cost effective option compared to premium plan

upvoted 2 times

✉️  **GreenPanda** 8 months, 2 weeks ago

correct

upvoted 2 times

✉️  **MrXBasit** 9 months ago

C is right

upvoted 2 times

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.

Correct Answer: C

Metric alerts in Azure Monitor provide a way to get notified when one of your metrics cross a threshold. Metric alerts work on a range of multi-dimensional platform metrics, custom metrics, Application Insights standard and custom metrics.

Note: Signals are emitted by the target resource and can be of several types. Metric, Activity log, Application Insights, and Log.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/platform/alerts-metric>

✉️  **Pirgos** Highly Voted 9 months, 2 weeks ago

C, <https://docs.microsoft.com/en-us/azure/azure-monitor/alerts/alerts-metric-logs#configuring-metric-alert-for-logs>
upvoted 11 times

✉️  **MiraA** 6 months, 2 weeks ago

From that page:
"Metric Alerts are stateful - only notifying once when alert is fired and once when alert is resolved; as opposed to Log alerts, which are stateless and keep firing at every interval if the alert condition is met."
upvoted 4 times

✉️  **MiraA** 6 months, 2 weeks ago

From that page:
"Metric Alerts for Log provide multiple dimensions, allowing filtering to specific values like Computers, OS Type, etc. simpler; without the need for defining a complex query in Log Analytics."
upvoted 3 times

✉️  **MiraA** Highly Voted 6 months, 2 weeks ago

Signal types:
* Activity Log ... includes service health records along with records on any configuration changes made to the resources (and is available to all Azure resources)
* Audit Log ... contains the history of sign-in activity and audit trail of changes made within a particular tenant
* Metric ... numerical values that are collected at regular intervals and describe some aspect of a system at a particular time
* Application Log ... ?

The Metrics feature can only store numeric data in a particular structure, whereas the Logs feature can store a variety of datatypes (each with its own structure).

<https://docs.microsoft.com/en-us/azure/azure-monitor/alerts/alerts-overview>
<https://docs.microsoft.com/en-us/azure/azure-monitor/essentials/data-platform-metrics>
<https://docs.microsoft.com/en-us/azure/azure-monitor/logs/data-platform-logs>
upvoted 8 times

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.

Correct Answer: B

The SearchParameters.QueryType Property gets or sets a value that specifies the syntax of the search query. The default is 'simple'. Use 'full' if your query uses the Lucene query syntax.

You can write queries against Azure Search based on the rich Lucene Query Parser syntax for specialized query forms: wildcard, fuzzy search, proximity search, regular expressions are a few examples.

Reference:

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.search.models.searchparameters> <https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.search.models.searchparameters.querytype>

✉  **gunz123**  9 months, 3 weeks ago

Answer is correct

<https://docs.microsoft.com/en-us/azure/search/search-query-overview>
upvoted 10 times

✉  **7ack**  9 months, 3 weeks ago

Correct, although I'm not sure Azure search is in the exam...
upvoted 10 times

✉  **jay158**  9 months, 3 weeks ago

Answer : D
<https://docs.microsoft.com/en-us/azure/search/search-query-odata-filter#examples>
upvoted 1 times

✉  **jay158** 9 months, 2 weeks ago

my bad should be B
upvoted 7 times

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

Correct Answer: B

Edit JSON - Azure portal -

1. Sign in to the Azure portal.
2. From the left menu, choose All services. In the search box, find "logic apps", and then from the results, select your logic app.
3. On your logic app's menu, under Development Tools, select Logic App Code View.
4. The Code View editor opens and shows your logic app definition in JSON format.

Reference:

<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-enterprise-integration-overview> <https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-author-definitions>

✉  **abdou1987** Highly Voted 9 months, 1 week ago

the Logic App has not been part of the exam since March
upvoted 11 times

✉  **MiraA** Most Recent 6 months, 2 weeks ago

I think being a developer I can use both options - Logic App Code View or Logic Apps Designer. It depends on the change required, usage of a source control, the project complexity, CI/CD...

Note: Some Azure Logic Apps capabilities, such as defining parameters and multiple triggers in logic app definitions, are available only in JSON, not the Logic Apps Designer. So for these tasks, you must work in Code View or another editor.

<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-author-definitions>

upvoted 4 times

✉  **ning** 8 months, 1 week ago

No idea, why Logic App Designer cannot work???
upvoted 3 times

✉  **tomomo1219** 8 months ago

I think it's because "You are a developer at your company." Logic App Designer is for non-developers.
upvoted 5 times

✉  **BishopeL** 8 months ago

"You are a developer" hence, the Code Viewer should be suitable for you.

<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-author-definitions>

upvoted 3 times

Note: The question is included in a number of questions that depicts the identical set-up. However, every question has a distinctive result.

Establish if the solution satisfies the requirements.

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

Correct Answer: B

API Management allows to secure access to the back-end service of an API using client certificates.

Reference:

<https://docs.microsoft.com/en-us/rest/api/apimanagement/apimanagementrest/azure-api-management-rest-api-backend-entity>

✉  **lexowe9241** Highly Voted 7 months, 1 week ago

Hmm, there is "Authenticate with Basic policy" for api-management <https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies#Basic>

So maybe Yes is correct answer

upvoted 10 times

✉  **PhilLI** 3 months, 2 weeks ago

Agree. My research lead me also to this page.

Authentication policies:

- Authenticate with Basic -> Authenticate with a backend service using Basic authentication.
- Authenticate with client certificate -> Authenticate with a backend service using client certificates.
- Authenticate with managed identity -> Authenticate with the managed identity for the API Management service.

upvoted 3 times

✉  **Mev4953** 3 months, 1 week ago

I agree with you.

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies>

upvoted 1 times

✉  **MiraA** 6 months, 2 weeks ago

The answer is YES (Basic + the HTTP(s) endpoint) based on this screenshot:

<https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-mutual-certificates#configure-an-api-to-use-client-certificate-for-gateway-authentication>

Target: "Azure Logic App" or "HTTP(s) endpoint"

Gateway credentials: "None" or "Basic" or "Client cert"

upvoted 3 times

✉  **MiraA** 6 months, 2 weeks ago

My own correction... :-(

The answer is NO.

The solution mentions "You configure Basic gateway credentials for the Azure resource." and there is no such option for generic Azure resource.

upvoted 5 times

✉  **koolexam** 4 months, 1 week ago

But you can do that at collection level in APIM.

upvoted 1 times

✉  **leonidn** Highly Voted 3 months ago

Selected Answer: B

Basic client credentials can be defined for HTTP endpoint, not an App Service. My previous answer is incorrect.

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies#Basic>

upvoted 5 times

✉  **leonidn** Most Recent 3 months ago

Selected Answer: A

Use the authentication-basic policy to authenticate with a backend service using Basic authentication.

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies#Basic>
upvoted 1 times

✉️ **phvogel** 5 months, 3 weeks ago

The <authentication-basic> policy statement just lets you specify the name and password to use -- it doesn't let you specify an endpoint (HTTP or HTTPS). I'll vote No.

upvoted 1 times

✉️ **asdasdasg2** 3 months, 2 weeks ago

That doesn't make sense, you can specify the endpoint in the backend section of the policy

upvoted 2 times

✉️ **maukaba** 5 months, 4 weeks ago

The link referenced in the answer is now deprecated: <https://docs.microsoft.com/en-us/rest/api/apimanagement/apimanagementrest/azure-api-management-rest-api-backend-entity>

Also basic auth is available

upvoted 2 times

✉️ **maukaba** 5 months, 4 weeks ago

It's a restful backend API hence it's http(s). Both Basic auth & client cert auth are available options for gateway backend auth. Hence it's A.

upvoted 2 times

✉️ **BishopeL** 8 months ago

The correct answer is NO

upvoted 1 times

✉️ **GreenPanda** 8 months, 2 weeks ago

why no?

upvoted 1 times

✉️ **aradice** 9 months, 3 weeks ago

No-> falta https. <https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies#ClientCertificate>

upvoted 4 times

Note: The question is included in a number of questions that depicts the identical set-up. However, every question has a distinctive result.

Establish if the solution satisfies the requirements.

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

Correct Answer: B

The API back end is hosted in an Azure App Service instance. It is an Azure resource and not an HTTP(s) endpoint.

Reference:

<https://docs.microsoft.com/en-us/rest/api/apimanagement/apimanagementrest/azure-api-management-rest-api-backend-entity>

✉  **jay158** Highly Voted 9 months, 3 weeks ago

This is scenario questions.

If backend is accepts HTTP(S)

Then Basic AUTH or Certificate will work.

so Client Certificate + HTTP(s) YES

upvoted 22 times

✉  **aradice** Highly Voted 9 months, 3 weeks ago

yes? <https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-mutual-certificates>

upvoted 6 times

✉  **MiraA** 6 months, 2 weeks ago

The answer is YES (client cert + the HTTP(s) endpoint) based on this screenshot:

<https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-mutual-certificates#configure-an-api-to-use-client-certificate-for-gateway-authentication>

Target: "Azure Logic App" or "HTTP(s) endpoint"

Gateway credentials: "None" or "Basic" or "Client cert"

upvoted 3 times

✉  **aradice** 9 months, 3 weeks ago

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies#ClientCertificate>

upvoted 2 times

✉  **leonidn** Most Recent 3 months ago

Selected Answer: A

This is one of the possible options

<https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-mutual-certificates#configure-an-api-to-use-client-certificate-for-gateway-authentication>

upvoted 3 times

✉  **Mev4953** 3 months, 1 week ago

The given link is deprecated.

upvoted 1 times

✉  **phvogel** 5 months, 3 weeks ago

The <authentication-cert> policy statement just lets you specify the id or thumbprint of the certificate to use (optionally the body and password to decrypt the body) -- it doesn't let you specify an endpoint (HTTP or HTTPS). I'll vote No.

upvoted 1 times

✉  **Omar102** 7 months ago

Only ClientCert, Basic is not supported anymore

upvoted 2 times

✉  **koolexam** 4 months, 1 week ago

What makes you say so? It is supported.

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies#AuthenticationPolicies>

upvoted 1 times

✉  **BishopeL** 8 months ago

The answer is 'NO'.

It is an Azure resource and not an HTTP(s) endpoint.

upvoted 3 times

✉  **ndchris2003** 8 months, 4 weeks ago

The correct answer is Yes.

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies#ClientCertificate>

upvoted 2 times

✉  **MrXBasit** 9 months ago

Answer is wrong.

upvoted 1 times

✉  **ZodiacC** 9 months ago

1000% CORRECT!

upvoted 1 times

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

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

Does the solution meet the goal?

A. Yes

B. No

Correct Answer: B

API Management allows to secure access to the back-end service of an API using client certificates. Furthermore, the API back end is hosted in an Azure App

Service instance. It is an Azure resource and not an HTTP(s) endpoint.

Reference:

<https://docs.microsoft.com/en-us/rest/api/apimanagement/apimanagementrest/azure-api-management-rest-api-backend-entity>

✉  **jay158** Highly Voted 9 months, 3 weeks ago

This is scenario questions.

If backend is accepts HTTP(S)

Then Basic AUTH or Certificate will work.

so Basic + HTTPS Yes

upvoted 19 times

✉  **MiraA** 6 months, 2 weeks ago

Target: "Azure Logic App" or "HTTP(s) endpoint"

Gateway credentials: "None" or "Basic" or "Client cert"

<https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-mutual-certificates#configure-an-api-to-use-client-certificate-for-gateway-authentication>

upvoted 3 times

✉  **ndchris2003** Highly Voted 8 months, 4 weeks ago

The correct answer is Yes.

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies#ClientCertificate>

upvoted 6 times

✉  **leonidn** Most Recent 3 months ago

Selected Answer: A

Use the authentication-basic policy to authenticate with a backend service using Basic authentication.

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies#Basic>

upvoted 1 times

✉  **asdadasg2** 3 months, 2 weeks ago

Correct answer should be YES - Basic auth adds the HTTP(s) basic auth header, and therefore should work with an HTTP(s) endpoint

Source: <https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies#Basic>

upvoted 1 times

✉  **phvogel** 5 months, 3 weeks ago

The <authentication-basic> policy statement just lets you specify the name and password to use -- it doesn't let you specify an endpoint (HTTP or HTTPS). I'll vote No.

upvoted 1 times

✉  **BishopeL** 8 months ago

The answer is 'NO'.

It is an Azure resource and not an HTTP(s) endpoint.

upvoted 4 times

✉  **aradice** 9 months, 3 weeks ago

yes <https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-mutual-certificates>

upvoted 3 times

 **aradice** 9 months, 3 weeks ago

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies#ClientCertificate>

upvoted 2 times

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

Solution: You configure Client cert gateway credentials for the Azure resource.

Does the solution meet the goal?

A. Yes

B. No

Correct Answer: A

API Management allows to secure access to the back-end service of an API using client certificates.

Reference:

<https://docs.microsoft.com/en-us/rest/api/apimanagement/apimanagementrest/azure-api-management-rest-api-backend-entity>

✉  **jay158** Highly Voted 9 months, 3 weeks ago

This is scenario questions.

If backend is accepts HTTP(S)

Then Basic AUTH or Certificate will work.

so Certificate + Azure Resource NO

<https://www.youtube.com/watch?v=HQ0U7lwP93o>

upvoted 14 times

✉  **MiraA** 6 months, 2 weeks ago

Target: "Azure Logic App" or "HTTP(s) endpoint"

Gateway credentials: "None" or "Basic" or "Client cert"

<https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-mutual-certificates#configure-an-api-to-use-client-certificate-for-gateway-authentication>

upvoted 3 times

✉  **PhillI** 3 months, 2 weeks ago

<https://docs.microsoft.com/en-us/azure/app-service/app-service-web-configure-tls-mutual-auth>

So I think it's YES

upvoted 2 times

✉  **edengoforit** Most Recent 3 months ago

Other explanation from other site. It seems like it's talking about from APIM to Azure Service?

API Management allows to secure access to the back-end service of an API using client certificates. Furthermore, the API back end is hosted in an Azure App Service instance. It is an Azure resource and not an HTTP(s) endpoint.

upvoted 1 times

✉  **leonidn** 3 months ago

Selected Answer: B

Can be defined for HTTP endpoint, not an App Service.

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies#Basic>

upvoted 2 times

✉  **phvogel** 5 months, 3 weeks ago

The <authentication-basic> policy statement just lets you specify the name and password to use -- it doesn't let you specify a resource (only the <authentication-managed-identity> lets you do that). I'll vote No.

upvoted 1 times

✉  **ndchris2003** 8 months, 4 weeks ago

The correct answer is No.

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies#ClientCertificate>

upvoted 3 times

✉  **ZodiacC** 9 months ago

NO! 100% !

upvoted 2 times

✉  **aradice** 9 months, 3 weeks ago

no? <https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-mutual-certificates>

upvoted 3 times

 **aradice** 9 months, 3 weeks ago

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies#ClientCertificate>

upvoted 3 times

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.

Correct Answer: D

The Filter property gets or sets the OData \$filter expression to apply to the search query.

Reference:

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.search.models.searchparameters> <https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.search.models.searchparameters.querytype>

✉  **7ack** Highly Voted 9 months, 3 weeks ago

Azure search was in AZ-203, but it's not in the AZ-204 list of measured skills. Is this even still relevant?

upvoted 11 times

✉  **Bogdan75** 1 month, 2 weeks ago

You're right, it's not on the list of measured skills: <https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RE4oZ7B>

upvoted 1 times

✉  **hstml** Highly Voted 7 months, 1 week ago

The solution D - Filter is correct.

The thing is that you filter the queried information by a price range and distance to airport. The QueryType is about the syntax of what you can pass into the search.

Read the explanations in the docs: <https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.search.models.searchparameters?view=azure-dotnet>

upvoted 7 times

✉  **MiraA** 6 months, 2 weeks ago

Geo-search example:

<https://docs.microsoft.com/en-us/azure/search/search-query-simple-examples#example-6-geo-search>

upvoted 3 times

✉  **aruni_mishra** 3 months, 1 week ago

correct link:

<https://docs.microsoft.com/en-us/azure/search/search-query-simple-examples#example-6-geospatial-search>

upvoted 1 times

✉  **PhILLI** 3 months, 2 weeks ago

So [A] should be the answer then?

<https://docs.microsoft.com/en-us/azure/search/query-simple-syntax>

The searchMode parameter is relevant in this example. Whenever boolean operators are on the query, you should generally set searchMode=all to ensure that all of the criteria is matched. Otherwise, you can use the default searchMode=any that favors recall over precision.

upvoted 1 times

✉  **PhILLI** 3 months, 2 weeks ago

I see I'm wrong ...

upvoted 1 times

✉  **PhILLI** Most Recent 3 months, 2 weeks ago

Selected Answer: D

checkout MiraA's link

upvoted 2 times

✉  **ning** 7 months, 2 weeks ago

querytype cannot work for geo search, it is D, filter with odata can work with geo data

upvoted 2 times

✉ **BishopeL** 8 months ago

https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.search.models.searchparameters.filter?view=azure-dotnet#Microsoft_Azure_Search_Models_SearchParameters_Filter

upvoted 1 times

✉ **BishopeL** 8 months ago

Correct answer is D.

upvoted 3 times

✉ **hussamAlHunaiti** 8 months, 3 weeks ago

Wrong answer, the correct answer is B- Querytype property

upvoted 2 times

✉ **wolf_lu** 9 months ago

choose B ,querytype

upvoted 2 times

Question #29

Topic 1

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

Correct Answer: A

For business-to-business (B2B) solutions and seamless communication between organizations, you can build automated scalable enterprise integration workflows by using the Enterprise Integration Pack (EIP) with Azure Logic Apps.

Reference:

<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-enterprise-integration-overview> <https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-author-definitions>

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.

Correct Answer:

Answer Area

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

Create a SearchIndexClient object to connect to the search index.

Set the DataSources property of the SearchServiceClient.

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

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

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

1. The index needs to be populated. To do this, we will need a SearchIndexClient. There are two ways to obtain one: by constructing it, or by calling Indexes.GetClient on the SearchServiceClient. Here we will use the first method.
2. Create the indexBatch with the documents

Something like:

```
var hotels = new Hotel[];  
{  
    new Hotel()  
    {  
        HotelId = "3",  
        BaseRate = 129.99,  
        Description = "Close to town hall and the river"  
    }  
};  
var batch = IndexBatch.Upload(hotels);
```

3. The next step is to populate the newly-created index

Example:

```
var batch = IndexBatch.Upload(hotels);  
try  
{  
    indexClient.Documents.Index(batch);  
}
```

Reference:

<https://docs.microsoft.com/en-us/azure/search/search-howto-dotnet-sdk>

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.

Correct Answer: D

Reference:

<https://docs.microsoft.com/en-us/azure/event-grid/subscription-creation-schema>

✉  **ning**  8 months, 1 week ago

Only C is mentioned both topic and subscription, which are two critical parts for event grid, so I will go C, anyway, this question is very poorly worded

upvoted 12 times

✉  **BishopeL**  8 months ago

For your interest, please see <https://docs.microsoft.com/en-us/azure/event-grid/event-filtering>

Correct answer is D.

upvoted 8 times

✉  **edengoforit** 3 months ago

D doesn't contain any action of Sign-in. I am more inclined to C

upvoted 2 times

✉  **ucsdmiami2020** 4 months, 2 weeks ago

I agree with D per the following text found in Microsoft docs URL <https://docs.microsoft.com/en-us/azure/event-grid/concepts>

"A subscription tells Event Grid which events on a topic you're interested in receiving. When creating the subscription, you provide an endpoint for handling the event. You can filter the events that are sent to the endpoint. You can filter by event type or subject pattern."

upvoted 1 times

✉  **SivajiTheBoss**  1 month, 1 week ago

Correct Answer is C

upvoted 2 times

✉  **edengoforit** 3 months ago

Answer is C?

Custom topics are application and third-party topics. When you create or are assigned access to a custom topic, you see that custom topic in your subscription.

When designing your application, you have flexibility when deciding how many topics to create. For large solutions, create a custom topic for each category of related events. For example, consider an application that sends events related to modifying user accounts and processing orders. It's unlikely any event handler wants both categories of events. Create two custom topics and let event handlers subscribe to the one that interests them. For small solutions, you might prefer to send all events to a single topic. Event subscribers can filter for the event types they want.

upvoted 2 times

✉  **MiraA** 6 months, 2 weeks ago

Does it matter the A and D solution doesn't mention "sign-in" events at all?

And does it comply with "All authentication events must be processed by PolicyApp."?

upvoted 1 times

✉  **asdasdasg2** 3 months, 2 weeks ago

This confused me too but I think "sign-in" and "sign-out" are the only two authentication events

upvoted 1 times

✉️ 🚩 **wolf_lu** 9 months ago

correct answer is D

upvoted 1 times

✉️ 🚩 **shoguns6** 9 months, 2 weeks ago

Is it A or C?

upvoted 1 times

✉️ 🚩 **ZodiaC** 9 months ago

C IS CORRECT 1000%

upvoted 13 times

✉️ 🚩 **Arrrqqq** 9 months, 1 week ago

C is more logical since sign outs must be processed as soon as possible, but there is no requirement for sign-ins - so looks like sign-ins can wait for processing. You won't get this prioritisation with single topic

upvoted 16 times

Topic 2 - Question Set 2

HOTSPOT -

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:

Answer Area**App service plan setting Value**

Number of VM instances

2
4
8
16

Pricing tier

Isolated
Standard
Premium
Consumption

Answer Area**App service plan setting Value**

Number of VM instances

2
4
8
16

Correct Answer:

Pricing tier

Isolated
Standard
Premium
Consumption

Number of VM instances: 4 -

You are not charged extra for deployment slots.

Pricing tier: Isolated -

The App Service Environment (ASE) is a powerful feature offering of the Azure App Service that gives network isolation and improved scale capabilities. It is essentially a deployment of the Azure App Service into a subnet of a customer's Azure Virtual Network (VNet).

Reference:

<https://azure.microsoft.com/sv-se/blog/announcing-app-service-isolated-more-power-scale-and-ease-of-use/>

mlantonis Highly Voted 10 months, 4 weeks ago

Box 1: 4

There are four customers that use this service, and each instance of the WebJob processes data for a single customer and must run as a singleton instance. So, the number of VM should be 4. WebJobs is a feature of Azure App Service that enables you to run a program or script in the same instance as a web app. Like running background tasks.

Box 2: Isolated

Azure resources must be located in an isolated network .

In the Isolated tier, the App Service Environment defines the number of isolated workers that run your apps, and each worker is charged. In addition, there's a flat Stamp Fee for the running the App Service Environment itself. Isolated: This tier runs dedicated Azure VMs on dedicated Azure Virtual Networks. It provides network isolation on top of compute isolation to your apps. It provides the maximum scale-out capabilities.

upvoted 47 times

goudigubba Highly Voted 1 year, 2 months ago

Got this in the exam yesterday.

upvoted 13 times

dhost 1 year ago

What is the correct answer?

upvoted 1 times

joanbdm 10 months, 4 weeks ago

4 & isolated

upvoted 2 times

Soumayard 10 months, 3 weeks ago

Heyy, did you get a lot of questions like the ones here?

upvoted 1 times

veenet Most Recent 1 month ago

the resource must be allocated as Isolate

upvoted 1 times

yifado5713 3 months, 3 weeks ago

Many questions are not from the dumps so prepare well before appearing for the exam. I passed with 720 score.

upvoted 2 times

sari67 4 months, 1 week ago

I passed the exam today with score 882.All the case studies and questions were the same with these samples in examtopics, except for two or three questions and one case study related to logic app. Good luck!

upvoted 5 times

john4p 4 months, 1 week ago

Nice, thanks for the info.

upvoted 1 times

sangmin214 5 months, 2 weeks ago

4/Isolated

upvoted 1 times

rohansingh04121985 7 months, 2 weeks ago

I have cleared the exam, if anyone need paid pdf, then send me an email on azuredveloper007@gmail.com

upvoted 7 times

prabhjot 11 months ago

yes the ans is correct

upvoted 2 times

mlantonis 11 months, 1 week ago

Box 1: 4

There are four customers that use this service, and each instance of the WebJob processes data for a single customer and must run as a singleton instance. So, the number of VM should be 4.

Box 2: Isolated

Azure resources must be located in an isolated network .

In the Isolated tier, the App Service Environment defines the number of isolated workers that run your apps, and each worker is charged. In addition, there's a flat Stamp Fee for the running the App Service Environment itself. Isolated: This tier runs dedicated Azure VMs on dedicated Azure Virtual Networks. It provides network isolation on top of compute isolation to your apps. It provides the maximum scale-out capabilities.

Reference:

<https://azure.microsoft.com/sv-se/blog/announcing-app-service-isolated-more-power-scale-and-ease-of-use>

upvoted 6 times

Spooky7 11 months, 2 weeks ago

I really have an issue with this question. Why there have to be 4 VMs? Single Azure Plan can be used by multiple applications. They simply reuse existing VMs available within the plan. If the plan have for example 4 VMs then EACH application will use those 4 VMs. WebJob run as a Singleton

will run on 1 VM max, but it doesn't mean that each WebJob will need separate VM, right? All 4 may reuse single VM or I understand sth wrong?
upvoted 4 times

✉ **Molte** 3 months, 3 weeks ago
Yeah I thought the same....has nobody an answer for this?
upvoted 2 times

✉ **glam** 11 months, 3 weeks ago
4
Isolated
upvoted 1 times

✉ **Bakhodir** 11 months, 3 weeks ago
Each deployment must be tested by using deployment slots prior to serving production data. 8 instances 2 (staging and production) for each customer. How it will be tested in case of 4 instances?
upvoted 2 times

✉ **jms309** 11 months, 3 weeks ago
You can have several deployment slots within the same instance so you don't need 8 instances for it but 4. The number of slots you can have will depend on the instance tier you are using. You can check out the next link in order to see it by your own
<https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/azure-subscription-service-limits#app-service-limits>
upvoted 2 times

✉ **jokergester** 1 year ago
4 since scenario is singleton and for each customer
Isolated since scenario that resources should be in "Isolated network"
upvoted 4 times

✉ **dchand** 1 year, 2 months ago
Answer is correct.
There are four customer use this service, and Each instance of the WebJob processes data for a single customer and must run as a singleton instance. So, number of VM should be 4.
Azure resources must be located in an isolated network -- so, it must be deployed to ASE using isolation tier
upvoted 4 times

✉ **Andy234** 1 year, 3 months ago
Why not use 2 vm instances? Can't that be done to minimize the costs even if there are 4 clients?
upvoted 4 times

✉ **profesorklaus** 1 year, 5 months ago
This is not proper answer. Isolated pricing tier is mission critical. Here you have example for only 4 users! Isolated pricing tier is most expensive and ASE also. Network isolation can be achieved in Standard tier.
upvoted 4 times

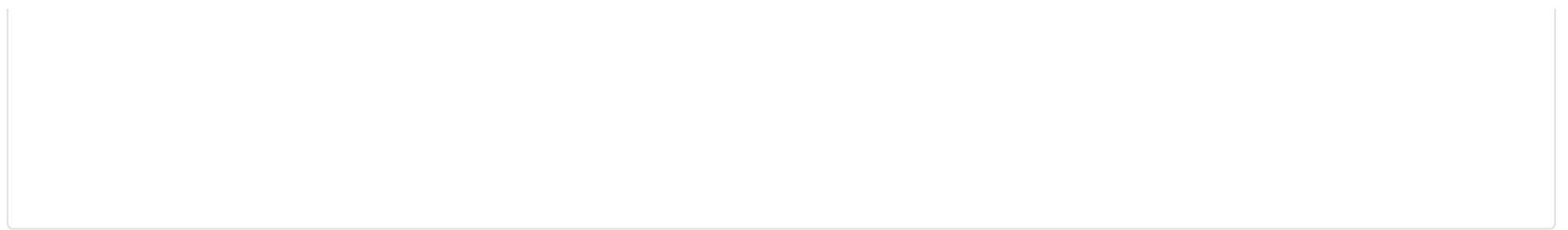
✉ **sts1** 1 year, 5 months ago
Hmm.
From App Service Pricing (<https://azure.microsoft.com/en-us/pricing/details/app-service/windows/>)
"The Isolated plan hosts your apps in a private, dedicated Azure environment and is ideal for apps that require secure connections with your on-premises network"
upvoted 4 times

✉ **profesorklaus** 1 year, 5 months ago
But example says about on-premise database, not network. Azure costs must be minimized. With Isolated it is not minimized. Four number of vm's it's ok.
upvoted 2 times

✉ **mehul9595** 1 year, 4 months ago
I believe it is because of this reason "Each instance of the WebJob processes data for a single customer and must run as a singleton instance." ASE with Isolated is best choice here.
upvoted 2 times

✉ **lsildursHeir** 1 year, 4 months ago
The answer is correct. <https://docs.microsoft.com/en-us/azure/app-service/web-sites-integrate-with-vnet> VNET integration does not place / locate the app service resources in a dedicated VNET.
upvoted 3 times

✉ **matija1** 1 year, 5 months ago
Azure resources must be located in an isolated network.
upvoted 4 times



DRAG DROP -

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:

Answer Area

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

Answer Area

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

Box 1: Deployment -

To deploy Azure Functions to Kubernetes use the func kubernetes deploy command has several attributes that directly control how our app scales, once it is deployed to Kubernetes.

Box 2: ScaledObject -

With --polling-interval, we can control the interval used by KEDA to check Azure Service Bus Queue for messages.

Example of ScaledObject with polling interval

```
apiVersion: keda.k8s.io/v1alpha1
```

```
kind: ScaledObject
```

```
metadata:
```

```
name: transformer-fn
```

```
namespace: tt
```

```
labels:
```

```
deploymentName: transformer-fn
```

```
spec:
```

```
scaleTargetRef:
```

```
deploymentName: transformer-fn
```

```
pollingInterval: 5
```

```
minReplicaCount: 0
```

maxReplicaCount: 100

Box 3: Secret -

Store connection strings in Kubernetes Secrets.

Example: to create the Secret in our demo Namespace:

```
# create the k8s demo namespace
```

```
kubectl create namespace tt
```

```
# grab connection string from Azure Service Bus
```

```
KEDA_SCALER_CONNECTION_STRING=$(az servicebus queue authorization-rule keys list \
```

```
-g $RG_NAME \
```

```
--namespace-name $SBN_NAME \
```

```
--queue-name inbound \
```

```
-n keda-scaler \
```

```
--query "primaryConnectionString" \
```

```
-o tsv)
```

create the kubernetes secret

```
kubectl create secret generic tt-keda-auth \
```

```
--from-literal KedaScaler=$KEDA_SCALER_CONNECTION_STRING \
```

```
--namespace tt
```

Reference:

<https://www.thinktecture.com/en/kubernetes/serverless-workloads-with-keda/>

✉  **mlantonis**  10 months, 4 weeks ago

Box 1: Deployment

To deploy Azure Functions to Kubernetes use the func kubernetes deploy command has several attributes that directly control how our app scales, once it is deployed to Kubernetes.

Box 2: ScaledObject

With --polling-interval, we can control the interval used by KEDA to check Azure Service Bus Queue for messages.

Box 3: Secret

Store connection strings in Kubernetes Secrets.

upvoted 34 times

✉  **neerajupadhyay82**  1 year, 2 months ago

kubernetes is marked as out of scope but still there are few questions coming in the exam from this section

upvoted 13 times

✉  **Dev666**  2 months, 4 weeks ago

Box 1: Deployment -

Box 2: ScaledObject -

Box 3: Secret

upvoted 1 times

✉  **finnishr** 8 months, 3 weeks ago

1. Azure Function code - Deployment

-To deploy Azure Functions to Kubernetes use the func kubernetes deploy command

2. Polling interval - ScaledObject

- This is the interval to check each trigger on. By default KEDA will check each trigger source on every ScaleObject every 30 seconds.

3. Azure Storage connection string - Secret

- Store connection string in Kubernetes secret

Source for ScaledObject: <https://keda.sh/docs/1.4/concepts/scaling-deployments/>

upvoted 5 times

✉  **glam** 11 months, 3 weeks ago

Box 1: Deployment -

Box 2: ScaledObject -

Box 3: Secret -

upvoted 3 times

✉  **Kiranvvv** 1 year, 4 months ago

<https://www.thinktecture.com/en/kubernetes/serverless-workloads-with-keda/> is the right link

upvoted 5 times

✉  **Leandromellor** 1 year, 5 months ago

is this question in the exam?

upvoted 4 times

 **dirtygooback** 1 year, 5 months ago

Yes. There are several Kubernetes questions. I found this odd since all the study material from MS states they use the container registry.
upvoted 7 times

 **notjon** 1 year, 5 months ago

yes it is, got it yesterday when taking the 204
upvoted 14 times

HOTSPOT -

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	https://github.com/Contos/webapp
\$webappname	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
az appservice plan create
az webapp deployment
az group delete

```
--name $webappname --resource-group myResourceGroup --sku FREE
```

▼

az webapp create
az appservice plan create
az webapp deployment
az group delete

```
--name $webappname --resource-group myResourceGroup
```

▼

--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

Correct Answer:

Answer Area

```
az group create --location westeurope --name myResourceGroup
az webapp
az appservice plan create
az webapp deployment
az group delete
```

```
--name $webappname --resource-group myResourceGroup --sku FREE
az webapp create
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
```

Box 1: az appservice plan create

The azure group creates command successfully returns JSON result. Now we can use resource group to create a azure app service plan

Box 2: az webapp create -

Create a new web app..

Box 3: --plan \$webappname -

..with the serviceplan we created in step 1.

Box 4: az webapp deployment -

Continuous Delivery with GitHub. Example:

```
az webapp deployment source config --name firstsamplewebsite1 --resource-group websites --repo-url $gitrepo --branch master --git-token
$token
```

Box 5: --repo-url \$gitrepo --branch master --manual-integration

Reference:

<https://medium.com/@satish1v/devops-your-way-to-azure-web-apps-with-azure-cli-206ed4b3e9b1>

 **kemtin** Highly Voted  1 year, 4 months ago

Given answer is correct, got this on my test yesterday
upvoted 50 times

 **Wanni** Highly Voted  1 year, 4 months ago

`#!/bin/bash`

```
# Replace the following URL with a public GitHub repo URL
gitrepo=https://github.com/Azure-Samples/php-docs-hello-world
webappname=mywebapp$RANDOM
```

```
# Create a resource group.
az group create --location westeurope --name myResourceGroup
```

```
# Create an App Service plan in 'FREE' tier.
az appservice plan create --name $webappname --resource-group myResourceGroup --sku FREE
```

```
# Create a web app.
```

```
az webapp create --name $webappname --resource-group myResourceGroup --plan $webappname  
# Deploy code from a public GitHub repository.  
az webapp deployment source config --name $webappname --resource-group myResourceGroup \  
--repo-url $gitrepo --branch master --manual-integration  
  
# Copy the result of the following command into a browser to see the web app.  
echo http://$webappname.azurewebsites.net
```

upvoted 18 times

✉ **Baskman** Most Recent 1 month, 2 weeks ago

Got this in the exam 03/22

upvoted 1 times

✉ **Alasmindas** 1 month, 2 weeks ago

Got this in 03/22 , went with the given answers, the answers are right

upvoted 1 times

✉ **oescm** 2 months, 2 weeks ago

Got this one 02/2022. Went with given answer.

upvoted 4 times

✉ **Mev4953** 3 months ago

Got this in the exam 01/22

upvoted 4 times

✉ **lugospod** 3 months ago

Got this one 01/2022. Went with given answer.

upvoted 4 times

✉ **rick_cschen** 5 months ago

have this on exam

upvoted 4 times

✉ **PierrGo** 10 months ago

I had this question on my exam this morning, so it's still there (answers are correct)

upvoted 7 times

✉ **francis6170** 10 months, 3 weeks ago

got this in the exam :)

upvoted 4 times

✉ **mlantonis** 10 months, 4 weeks ago

Box 1: az appservice plan create

Using the RG that we created above, we first create the ASP.

Box 2: az webapp create

Then we create the new Web App.

Box 3: --plan \$webappname

Then we specify the ASP.

Box 4: az webapp deployment

Then we deploy the Web

Box 5: --repo-url \$gitrepo --branch master --manual-integration

Finally, we specify the git repo.

upvoted 7 times

✉ **mlantonis** 11 months, 1 week ago

Box 1: az appservice plan create

Using the RG that we created above, we first create the ASP.

Box 2: az webapp create

Then we create the new Web App.

Box 3: --plan \$webappname

Then we specify the ASP.

Box 4: az webapp deployment

Then we deploy the Web

Box 5: --repo-url \$gitrepo --branch master --manual-integration

Finally, we specify the git repo.

upvoted 3 times

✉ **glam** 11 months, 2 weeks ago

Given answer is correct

upvoted 1 times

✉  **kimalto452** 11 months, 2 weeks ago

why cli ? we have powershell...

upvoted 1 times

✉  **HGSandhagen** 1 year, 1 month ago

The question is not very clear. What means "to automatically deploy": One time or with each new commit. If deploy one time, --manual-integration is correct and future deployments are synced with "az webapp deployment source sync...". For continues deployment use --git-token. But in the question there is no variable \$token mentioned.

upvoted 1 times

✉  **lesiris** 1 year, 3 months ago

I think the right answer is missing for the last box. It should be --repo-url \$gitrepo --branch master --git-token \$token.

On this link <https://docs.microsoft.com/en-us/azure/app-service/scripts/cli-deploy-github>, it's clearly written : For GitHub deployment with continuous deployment, see Create an app with continuous deployment from GitHub.

And the link will take you to <https://docs.microsoft.com/en-us/azure/app-service/scripts/cli-continuous-deployment-github>, where we can find the right answer.

What do you think ? There are comments that tell the givent answer is correct, but I can't see how it can be right ...

upvoted 4 times

✉  **10x** 1 year, 2 months ago

You need --git-token only if you want auto sync.

upvoted 1 times

✉  **10x** 1 year, 2 months ago

https://docs.microsoft.com/en-us/cli/azure/webapp/deployment/source?view=azure-cli-latest#az_webapp_deployment_source_config

upvoted 1 times

✉  **dknangia** 1 year, 3 months ago

I agree with @lesiris

upvoted 1 times

✉  **Jay1987** 1 year, 4 months ago

<https://docs.microsoft.com/en-us/azure/app-service/scripts/cli-deploy-github>

upvoted 4 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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

Correct Answer: B

You need to catch the triggered event, so move the photo processing to an Azure Function triggered from the blob upload.

Note: Azure Storage events allow applications to react to events. Common Blob storage event scenarios include image or video processing, search indexing, or any file-oriented workflow.

Events are pushed using Azure Event Grid to subscribers such as Azure Functions, Azure Logic Apps, or even to your own http listener.

However, the processing must start in less than one minute.

Note: Only storage accounts of kind StorageV2 (general purpose v2) and BlobStorage support event integration. Storage (general purpose v1) does not support integration with Event Grid.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-event-overview>

✉  **YahyaSonmez**  1 year, 6 months ago

Hi All,

The answer (B) is correct. Because, the trick is in the "less than one minute" detail.

You can read about "..10-minute delay in processing new blobs.." in "3-Minimizing latency" description.

Microsoft says: ".....Use Event Grid instead of the Blob storage trigger for the following scenarios:"

1-Blob-only storage accounts: Blob-only storage accounts are supported for blob input and output bindings but not for blob triggers.

2-High-scale: High scale can be loosely defined as containers that have more than 100,000 blobs in them or storage accounts that have more than 100 blob updates per second.

3-Minimizing latency: If your function app is on the Consumption plan, there can be up to a ##10-minute delay in processing new blobs## if a function app has gone idle. To avoid this latency, you can switch to an App Service plan with Always On enabled. You can also use an Event Grid trigger with your Blob storage account. For an example, see the Event Grid tutorial.

REFERENCE: <https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-trigger?tabs=csharp#event-grid-trigger>

I wish you a good day.

upvoted 101 times

✉  **Bartimaeus** 2 months ago

I believe your understanding is incorrect - the answer says:

"Trigger the photo processing from Blob storage events."

Therefore there's no mention about actually using "Blob storage trigger".

Also, in the description of the trigger there's this note:

"Polling works as a hybrid between inspecting logs and running periodic container scans."

So the trigger actually uses the blob analytics logs, not blob storage events.

It's in fact Event Grid that uses the blob storage events.

Reference: <https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-trigger?tabs=csharp#polling>
upvoted 2 times

✉  **Spooky7** 11 months, 2 weeks ago

I've experienced this in one project I was participating in. If the amount of blobs becomes high enough (like 50k+) blob trigger becomes completely unreliable. It may not trigger at all or delay can be greater than 1 hour. It had nothing to do with Consumption Plan. Switching to Event Grid resolved that issue. So blob trigger DOESN'T guarantee processing within 1 minute, so answer (B) is correct

upvoted 13 times

✉  **krz1** 11 months, 3 weeks ago

But "Blob storage events are pushed using Azure Event Grid to subscribers such as Azure Functions,"

upvoted 3 times

✉ **Zidimirite** 1 year ago

You are right, since this is a MS exam they always want to show off the variations that you can do with their platform and them specifying v2 is definitely a tell... But to get around the latency you could also turn on "Always on", which looking at that alone you could say A is right. This is not a great question.

upvoted 4 times

✉ **venkatk** Highly Voted 1 year, 10 months ago

Answer is not at all clear from the explanation. It seems like answer should be yes instead of no.

upvoted 25 times

✉ **xRiot007** 1 year, 10 months ago

The answer is correct. "No". You need an Azure Function for processing.

upvoted 9 times

✉ **Camios** 1 year, 9 months ago

Except the question says what triggers the processing, not what does the processing. Question/answer is poorly written.

upvoted 32 times

✉ **angelsrp** 1 year, 9 months ago

you can capture an event without processing the data related to the event. Given answer is correct

upvoted 3 times

✉ **TangAnna** Most Recent 5 days, 8 hours ago

The answer is YES. Blob storage Event(implemented by Event Grid) can be a good solution.

upvoted 1 times

✉ **Goyo** 2 months, 2 weeks ago

Selected Answer: B

The correct answer is NO

upvoted 2 times

✉ **ehurfheiz** 3 months, 1 week ago

Selected Answer: B

NO seems the correct answer

upvoted 2 times

✉ **altafpatel1984** 4 months, 2 weeks ago

"As messages can arrive after some delay, use the etag fields to understand if your information about objects is still up-to-date."

As per above, since Event can have delay, it does not guarantee for requirement here to start in less than one minute. Hence B is correct.

Reference: <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-event-overview>

upvoted 1 times

✉ **Quanster** 7 months, 3 weeks ago

Badly worded question but I say "No" correct; but the hint on "must start in less than one minute" and reference to "Trigger" is probably the telling point in the question.

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-trigger?tabs=csharp#event-grid-trigger>
- Refer to Alternatives - "Use Event Grid instead of the Blob storage trigger for the following scenarios:" AND

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-event-overview>

- "When changes are infrequent, but your scenario requires immediate responsiveness, event-based architecture can be especially efficient."

upvoted 3 times

✉ **UDevelop** 7 months, 3 weeks ago

Answer is Yes. Confirmed on Udemy.

upvoted 1 times

✉ **Kalaisuran** 9 months, 3 weeks ago

My answer : Yes.

Common Blob storage event scenarios include image or video processing, search indexing, or any file-oriented workflow. Asynchronous file uploads are a great fit for events. When changes are infrequent, but your scenario requires immediate responsiveness, event-based architecture can be especially efficient.

As per the description in this link <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-event-overview>

upvoted 2 times

✉ **Idkhow** 10 months ago

says here on the google:

"Common Blob storage event scenarios include image or video processing, search indexing, or any file-oriented workflow. Note: Only storage accounts of kind StorageV2 (general purpose v2) and BlobStorage support event integration"

so it's a yes

upvoted 2 times

✉️  **glam** 11 months, 2 weeks ago

B. No..

upvoted 2 times

✉️  **jay158** 11 months, 2 weeks ago

Answer should be A

<https://microsoft.github.io/AzureTipsAndTricks/blog/tip157.html>

Concept is simple. when image is stored in Blob, trigger a function App, which will resize the image and store it. The process will start almost instantaneously.

Am I missing something?

upvoted 4 times

✉️  **faizalzain** 1 year ago

i think the answer is yes, there's a same question in udemy pool and the answer marked as yes.

upvoted 2 times

✉️  **Ramito2020** 1 year ago

Based on this, for me it is YES.

Common Blob storage event scenarios include image or video processing, search indexing, or any file-oriented workflow. Asynchronous file uploads are a great fit for events. When changes are infrequent, but your scenario requires immediate responsiveness, event-based architecture can be especially efficient.

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-event-overview>

upvoted 2 times

✉️  **john080808** 1 year, 1 month ago

The answer is correct. it should be "No" but the explanation is wrong.

People did not read the question carefully. " Users upload photos to a web service which then stores the photos in Azure Storage Blob storage", and it asked "You need to design the process that starts the photo processing", or in other words, how to trigger the photo processing. As photo processing will upload the image processing result to Azure Storage Blob storage, so definitely not answer A.

Actually you need to use Http post triggering the photo processing, so the answer is "No"

upvoted 6 times

✉️  **Bartimaeus** 2 months ago

I think your answer is incorrect, because there's actually nothing about this part:

"... photo processing will upload the image processing result to Azure Storage Blob"

There's only: "Users upload photos to a web service which then stores the photos in Azure

Storage Blob storage", so "stores the photos", not the result of processing them, or "processed photos".

Additionally, it's reasonable to store both versions of the photos, because if the app has a website, which can be used both on mobile and PC.

upvoted 1 times

✉️  **MiraA** 7 months, 1 week ago

My explanation...

There must be an existing HTTP trigger which accepts the client's uploaded photo and which stores this photo to Azure Blob storage, right?

This trigger can launch the photo processing as well - in parallel to the photo storing operation...

So it seems (for me) the proper place to trigger the photo processing with no delay is the entry HTTP trigger itself. It has the data of the photo and it knows where it will be stored so it can determine where the processed version should be stored.

upvoted 1 times

✉️  **azuregenerator** 1 year, 1 month ago

I'd say the requirement regarding the processing in less than one minute is mentioned so you DON'T consider the "blob change feed" as an option

Quote from [0]

"...The change feed is a log of changes that are organized into hourly segments but appended to and updated every few minutes...."

That's why I'd say the proposed answer is wrong and really should be A), yes we can trigger the photo processing from Blob storage events in less than one minute via Event Grid subscription. See also [1] for further information.

[0] <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-change-feed?tabs=azure-portal#understand-change-feed-organization>

[1] <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-event-overview>

upvoted 3 times

✉️  **kwaazaar** 1 year ago

So answer is NO: every few minutes (from ref [0]) means that it can take more than one minute for the event to appear in the change feed. So less than one minute becomes impossible.

upvoted 1 times

✉️  **atomicicebreaker** 1 year ago

It's just that the solution doesn't mention change feed. It's V2 account, that supports event grid integration and there is "event" mentioned in the solution. Whatever would be triggered it would be almost instant.

upvoted 2 times

✉️  **JohnWooDeere** 1 year, 2 months ago

the correct answer is definitely YES
upvoted 1 times

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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

Correct Answer: A

Specify custom warm-up.

Some apps might require custom warm-up actions before the swap. The applicationInitialization configuration element in web.config lets you specify custom initialization actions. The swap operation waits for this custom warm-up to finish before swapping with the target slot. Here's a sample web.config fragment.

```
<system.webServer>
<applicationInitialization>
<add initializationPage="/" hostName="[app hostname]" />
<add initializationPage="/Home/About" hostName="[app hostname]" />
</applicationInitialization>
</system.webServer>
```

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots#troubleshoot-swaps>

✉  **eric_draven**  1 year, 8 months ago

A is YES, seems answers are in opposite order, explanation does not match with answer
upvoted 105 times

✉  **ztt** 9 months, 2 weeks ago

Bit the explanation is incorrect so the correct answer is NO
upvoted 2 times

✉  **Juanlu** 1 year, 1 month ago

I agree too
upvoted 2 times

✉  **borism89** 1 year, 6 months ago

I agree
upvoted 7 times

✉  **jb42**  1 year, 7 months ago

Answer is correct I think. Using the applicationInitialization element only app routes can be defined inside this element. This way, not only the main route is called before swapping, but also the other defined routes. This avoids a cold start for the defined routes. But scripts cannot be run in applicationInitialization. Scripts would be run using a .deployment file in the root folder. See <https://docs.microsoft.com/en-us/azure/app-service/deploy-continuous-deployment#prepare-your-repository>. And this file is not mentioned in the question.
upvoted 22 times

✉  **lighting** 10 months ago

I think scripts here is not meaning like "javascript / powershell scripts ...". The question means we must ensure the scenario "app is warmed up before swap" executed. So I think it should be yes
upvoted 2 times

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

upvoted 2 times

✉  **Zidimirite** 1 year ago

I don't see how a .deployment file would run scripts or tests whether resources are available and I don't see how it could be used for warmups that delay the slot-swap. Could you elaborate?

upvoted 1 times

✉ **Adol** 1 year, 3 months ago

I agree that the Answer is no, because you either take the .deployment file in root or a script in /run folder
upvoted 5 times

✉ **profesorklaus** 1 year, 4 months ago

I think your answer is correct. Because it clearly says that it must run the script. "scripts cannot be run in applicationInitialization" - I agree in 100%.
upvoted 5 times

✉ **Evo_Morales** Most Recent 2 weeks, 4 days ago

Poorly worded question. Once the slot starts getting prepared for the swap, a warm-up request is made to the root directory of the site on every instance. However, if that is not enough, then it may make a request to all the important routes in the application or prepopulate in-memory cache. Yes, application initialization configuration would help in that case: iis-80-application-initialization. You can also specify custom warm-up.

upvoted 2 times

✉ **iamstudying** 1 month, 1 week ago

Selected Answer: B

Buddies, in official test they also mention endpoint will run scripts. Answer is YES
upvoted 3 times

✉ **Baskman** 1 month, 2 weeks ago

Got this in the exam 03/22
upvoted 1 times

✉ **Goyo** 2 months, 2 weeks ago

Selected Answer: A

The correct answer is NO
upvoted 1 times

✉ **Goyo** 2 months, 2 weeks ago

The correct answer is NO
upvoted 1 times

✉ **leonidn** 2 months, 3 weeks ago

Selected Answer: A

Since we are asked about scripts, that is not the correct solution. applicationInitialization is used to invoke operations via HTTP.
upvoted 1 times

✉ **leonidn** 2 months, 2 weeks ago

It was more specific on the exam. I went with option B (yes) there.
upvoted 2 times

✉ **lugospod** 3 months ago

Got this one 01/2022. Went with NO
upvoted 3 times

✉ **ScubaDiver123456** 3 months, 1 week ago

Selected Answer: A

I am voting No as the app init configuration is used for making HTTP requests only to your web app. No way to execute a script.

"AppInit module uses the list of URL paths specified inside web.config file and makes internal HTTP requests to each of those. All these requests are within the web app process."

Source: <https://ruslany.net/2017/11/most-common-deployment-slot-swap-failures-and-how-to-fix-them/>
upvoted 3 times

✉ **ScubaDiver123456** 3 months, 1 week ago

Argh.. now I am hesitant about my answer. I found this article where you can define a PHP script that runs when invoked as a page from the app init configuration.

<https://www.electrongoek.com/2018/12/22/improving-performance-with-application-initialization-on-app-service-windows/>
upvoted 1 times

✉ **Arnab101** 3 months, 1 week ago

Selected Answer: B

Auto swap slots with Production and custom warm up settings are enough to ensure slot swap failures.
upvoted 1 times

✉ **r_k** 5 months, 1 week ago

The answer is correct:

You can also customize the warm-up behavior with one or both of the following app settings:

WEBSITE_SWAP_WARMUP_PING_PATH: The path to ping over HTTP to warm up your site. Add this app setting by specifying a custom path that begins with a slash as the value. An example is /statuscheck. The default value is /.

WEBSITE_SWAP_WARMUP_PING_STATUSES: Valid HTTP response codes for the warm-up operation. Add this app setting with a comma-separated list of HTTP codes. An example is 200,202 . If the returned status code isn't in the list, the warmup and swap operations are stopped. By default, all response codes are valid.

WEBSITE_WARMUP_PATH: A relative path on the site that should be pinged whenever the site restarts (not only during slot swaps). Example values include /statuscheck or the root path, /.

Note

The <applicationInitialization> configuration element is part of each app start-up, whereas the two warm-up behavior app settings apply only to slot swaps.

upvoted 2 times

✉  **Saurabh_Kulkarni** 7 months ago

Correct answer is yes. Below are notes from Udemy course (Allen).

The Microsoft documentation gives two ways in which you can add a warm-up behavior for your web applications. One is to add the applicationInitialization configuration element to the web.config file. And the other is to add app settings for your web application

For further reference , please visit the URL

<https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots>

upvoted 6 times

✉  **MiraA** 7 months, 1 week ago

Maybe a silly question...

"Swap with preview (multi-phase swap)" cannot be combined with "Auto swap"?

See <https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots#Multi-Phase>

It requires some user interaction so it couldn't be considered as "Auto swap", I think.

So the response should be YES (not regarding it is marked as A/B) as it seems the <applicationInitialization> is the only way to make some customization. But I cannot find that <applicationInitialization> is able "to run the scripts"...

upvoted 1 times

✉  **MiraA** 7 months, 1 week ago

One thought...

The <applicationInitialization> can contain something like <add initializationPage="/Home/About" hostName="[app hostname]" />.

Maybe an HTTP error returned from such an initialization page can stop swapping operation? If yes then the initialization page can perform some tests on the resources and run some scripts and return HTTP error if some problem occurred...

upvoted 1 times

✉  **Quanster** 7 months, 3 weeks ago

B which is Yes.

Refer Step 4 of <https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots#configure-auto-swap>

upvoted 2 times

✉  **Quanster** 7 months, 1 week ago

To avoid confusion; it should be step 4 of what happens during a swap <https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots#what-happens-during-a-swap>

upvoted 1 times

✉  **UDevelop** 7 months, 3 weeks ago

Answer is YES! 100% correct.

upvoted 1 times

✉  **fesioche** 8 months ago

For me answer is YES:

Solution has two parts:

1. "Update the web.config file to include the applicationInitialization configuration element." Nothing to say.

2. "Specify custom initialization actions to run the scripts". The actions are:

2.1. Add a method to your web application to have the required scripts running.

2.2. Add the WEBSITE_SWAP_WARMUP_PING_PATH app setting to ensure the method is checked on whether it has been executed.

2.3. Use the WEBSITE_SWAP_WARMUP_PING_STATUSES app setting to check on whether the right status code has been returned for the method.

upvoted 4 times

✉  **fesioche** 5 months, 3 weeks ago

After studying the scenario in detail, my final answer is NO. The problem is not running script before performing the exchange, I explain how to do it in the previous comment.

The problem is that you CANNOT ENABLE AUTO SWAP IN PRODUCTION SLOT

REF: <https://docs.microsoft.com/en-us/learn/modules/stage-deploy-app-service-deployment-slots/4-deploy-a-web-app-by-swapping-deployment-slots>

upvoted 3 times

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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

Correct Answer: B

Instead update the web.config file to include the applicationInitialization configuration element. Specify custom initialization actions to run the scripts.

Note: Some apps might require custom warm-up actions before the swap. The applicationInitialization configuration element in web.config lets you specify custom initialization actions. The swap operation waits for this custom warm-up to finish before swapping with the target slot.

Here's a sample web.config fragment.

```
<system.webServer>
<applicationInitialization>
<add initializationPage="/" hostName="[app hostname]" />
<add initializationPage="/Home/About" hostName="[app hostname]" />
</applicationInitialization>
</system.webServer>
```

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots#troubleshoot-swaps>

✉  **eric_draven** Highly Voted  1 year, 8 months ago

A is YES, seems answers are in opposite order, explanation does not match with answer
upvoted 53 times

✉  **lugospod** 3 months, 1 week ago

I would go with YES. Why? Again the question wording sucks. There is no definition what is the meaning of "scripts" and "resources". if we assume that just means that the application files, then we are not talking about executing custom script that does some additional preparation logic, but rather we want the app prewarmed, which is done by just turning on auto-swap (it will execute the http request to the application root)
If the scripts are custom scripts, then the answer is no, and then we go into custom prewarming logic.

So I am running under assumption that they just want prewarmed app and scripts are just files executed when running the request to app root.
upvoted 3 times

✉  **clarionprogrammer** 1 year ago

'No' is the right answer here. The focus of the question is on this "You need to ensure that scripts run and resources are available before a swap operation occurs." Simply enabling auto swap doesn't do that.
upvoted 30 times

✉  **vladhof** 3 months ago

What do you mean A is YES? Yes is B
upvoted 1 times

✉  **borism89** 1 year, 6 months ago

Agree with Eric
upvoted 3 times

✉  **nzcoder** Highly Voted  1 year, 5 months ago

let's not say A or B, say Yes or No? I guess the answer should be No?
upvoted 32 times

✉  **bhushan_786** 1 year, 3 months ago

Exactly :) Use of common sense is not common now a days :P
upvoted 8 times

✉  **Evo_Morales** Most Recent 2 weeks, 4 days ago

Sometimes hitting the site's root URL is not enough to completely warm up the application. For example it maybe necessary to hit all important routes in an ASP.NET MVC app or to pre-populate the in-memory cache. That is where the Application Initialization Module can help.

upvoted 1 times

✉  **Rockm0uld** 3 weeks, 5 days ago

Selected Answer: A

A. Please fix

upvoted 2 times

✉  **iamstudying** 1 month, 1 week ago

Selected Answer: A

No.

Only setting auto swap is not sufficient, buddies!

upvoted 2 times

✉  **nqthien041292** 1 month, 2 weeks ago

Selected Answer: A

Vote A: No

upvoted 2 times

✉  **Alasmindas** 1 month, 2 weeks ago

Got this in 03/22 exam and cleared. Went with "NO"

upvoted 1 times

✉  **anshu0795** 3 months, 1 week ago

Selected Answer: A

Answer should be No(A)

upvoted 3 times

✉  **Arnab101** 3 months, 1 week ago

Selected Answer: A

Enabling auto swap slots with testing isn't necessary. Auto swap is already defined with production. Custom warm up settings are necessary to ensure slot swap failure can be avoided.

upvoted 3 times

✉  **LeoAlioth** 3 months, 2 weeks ago

Selected Answer: A

No is the answer and matches the explanation

upvoted 1 times

✉  **Amrit123** 4 months, 4 weeks ago

No is the correct answer.

upvoted 2 times

✉  **Saurabh_Kulkarni** 7 months ago

NO is the right answer.

upvoted 5 times

✉  **MiraA** 7 months, 1 week ago

It seems to me the question #5 and the question #6 share the same topic and the responses were copy&pasted. So both are wrong or both are right. ;-)

I incline that they are both wrong.

upvoted 1 times

✉  **UDevelop** 7 months, 3 weeks ago

Answer is NO!

upvoted 1 times

✉  **nikhilnair** 8 months, 3 weeks ago

A is YES, seems answers are in opposite order, explanation does not match with answer

upvoted 1 times

✉  **Ravi22** 9 months, 1 week ago

Answer A (NO)

upvoted 2 times

✉  **SreekumarM** 9 months, 1 week ago

Hi I am Sreekumar, anybody like to share Contributor access please share it in my mobile 9995716419. I am preparing the AZ-204 exam. Thanks.

upvoted 1 times

✉  **Dubem007** 6 months, 4 weeks ago

how did it go brother! please send me any useful information and dumps for the az-204 exam as am preparing too
upvoted 1 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

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

Correct Answer: B

Instead update the web.config file to include the applicationInitialization configuration element. Specify custom initialization actions to run the scripts.

Note: Some apps might require custom warm-up actions before the swap. The applicationInitialization configuration element in web.config lets you specify custom initialization actions. The swap operation waits for this custom warm-up to finish before swapping with the target slot.

Here's a sample web.config fragment.

```
<system.webServer>
<applicationInitialization>
<add initializationPage="/" hostName="[app hostname]" />
<add initializationPage="/Home/About" hostName="[app hostname]" />
</applicationInitialization>
</system.webServer>
```

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots#troubleshoot-swaps>

✉️  **sti88** [Highly Voted] 1 year, 1 month ago

The answer is "No".

You need to ensure that scripts run and resources are available before a swap operation occurs. <-- The only way to ensure that scripts run and resources are available before a swap operation occurs is to specify custom initialization actions in the applicationInitialization configuration element. Simply enabling auto swap is not enough to ensure that scripts run.

upvoted 51 times

✉️  **eric_draven** [Highly Voted] 1 year, 8 months ago

A is YES, seems answers are in opposite order, explanation does not match with answer

upvoted 45 times

✉️  **VK_Gladiator** 1 year, 3 months ago

Auto-swap ensures that warm-up step is complete before swapping it. so, answer should be 'YES'

upvoted 2 times

✉️  **VK_Gladiator** 1 year, 3 months ago

Reference link: <https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots#Warm-up>

upvoted 3 times

✉️  **Tom87** 1 year ago

But you have to configure custom warm-up scripts. Simply disabling and enabling auto-swap has no effect.

upvoted 10 times

✉️  **SwatiN** 12 months ago

It states that deploy the app in production slot. by deploying application directly to production slot, will it warm up site? i think ans is NO
upvoted 1 times

✉️  **JJ08** 1 year, 8 months ago

Agree, correct answer is NO.

upvoted 55 times

✉️  **gc12345** [Most Recent] 1 month, 1 week ago

Ans is No.

For more information on customizing the applicationInitialization element, see [Most common deployment slot swap failures and how to fix them](#).

You can also customize the warm-up behavior with one or both of the following app settings:

WEBSITE_SWAP_WARMUP_PING_PATH: The path to ping over HTTP to warm up your site. Add this app setting by specifying a custom path that begins with a slash as the value. An example is /statuscheck. The default value is /.

WEBSITE_SWAP_WARMUP_PING_STATUSES: Valid HTTP response codes for the warm-up operation. Add this app setting with a comma-separated list of HTTP codes. An example is 200,202 . If the returned status code isn't in the list, the warmup and swap operations are stopped. By default, all response codes are valid.

WEBSITE_WARMUP_PATH: A relative path on the site that should be pinged whenever the site restarts (not only during slot swaps). Example values include /statuscheck or the root path, /.

<https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots>

upvoted 1 times

✉️ **iamstudying** 1 month, 1 week ago

Selected Answer: A

No.

Need to configure web.config and also deploy to Testing slot, not Production

upvoted 1 times

✉️ **SivajiTheBoss** 1 month, 2 weeks ago

Selected Answer: A

Correct Answer: YES

upvoted 1 times

✉️ **SivajiTheBoss** 1 month, 2 weeks ago

Correct Answer: No only couldnt edit the previous comments. Noticed it is the production deployment slot. If it is test deployment slot then answer is No.

upvoted 1 times

✉️ **SivajiTheBoss** 1 month, 2 weeks ago

IF it is test deployment then answer could be Yes, But for production it is No

upvoted 1 times

✉️ **nqthien041292** 1 month, 2 weeks ago

Selected Answer: A

Vote A: No

upvoted 1 times

✉️ **Baskman** 1 month, 2 weeks ago

Got this in the exam 03/22

upvoted 1 times

✉️ **silvatyrant** 2 months ago

I was under the impression it was "B) NO". BUT, after some research it seems "A) YES" is the correct answer IF we do the following:

- 1) Add custom warm-up to our web.config (<applicationInitialization> tags)
- 2) Add "WEBSITE_SWAP_WARMUP_PING_PATH" key to App Settings (web.config or appSettings.json) and add "/statusCheck" endpoint as the value, which invokes statusCheck method in the code.
- 3) Add "WEBSITE_SWAP_WARMUP_PING_STATUSES" (make 200, 202 for example)
- 4) Modify code to only return 200 once statusCheck method has been called.

The swap will then only occur once the statusCheck (warm-up steps) method has been executed and returns a valid status code (as denoted in step 3 above).

upvoted 1 times

✉️ **leonidn** 2 months, 3 weeks ago

Selected Answer: A

We also need a custom warm-up. If it is not specified, statusCheck will not be invoked.

<https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots#swap-operation-steps>

upvoted 2 times

✉️ **Dev666** 2 months, 4 weeks ago

Selected Answer: B

Agree, correct answer is NO.

upvoted 1 times

✉️ **rick1010** 2 months, 4 weeks ago

"YES"

What happens during a swap

Swap operation steps

4. If auto swap is enabled with custom warm-up, trigger Application Initiation by making an HTTP request to the application root ("/") on each instance of the source slot.

If applicationInitialization isn't specified, trigger an HTTP request to the application root of the source slot on each instance.

If an instance returns any HTTP response, it's considered to be warmed up.

link:

<https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots#what-happens-during-a-swap>

upvoted 1 times

✉️ **lugospod** 3 months ago

Got this one 01/2022. Went with NO

upvoted 3 times

✉️ **lugospod** 3 months ago

Sorry, it was a variation of this... disable, but then an action then can't work.. so similar to this.

upvoted 1 times

✉️ **TanujitRoy** 3 months, 2 weeks ago

Selected Answer: A

Answer should be No

upvoted 1 times

✉️ **UDevelop** 7 months, 3 weeks ago

Answer is NO!

upvoted 3 times

✉️ **azurelearner204** 8 months, 2 weeks ago

The answer is no, respectfully :-D

upvoted 4 times

✉️ **somenkr** 9 months, 2 weeks ago

Answer Provider/Admin : Please do the correction of these answers. These are faulty and create buzz and waste lot of time of us. Your answers are not matching with your explanations.

upvoted 5 times

✉️ **TanujitRoy** 4 months, 1 week ago

Taale tame chusiba

upvoted 1 times

✉️ **Ravi22** 9 months, 4 weeks ago

Answer: A (NO)

upvoted 3 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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

Correct Answer: B

Not necessary to convert the account, instead move photo processing to an Azure Function triggered from the blob upload..

Azure Storage events allow applications to react to events. Common Blob storage event scenarios include image or video processing, search indexing, or any file- oriented workflow.

Note: Only storage accounts of kind StorageV2 (general purpose v2) and BlobStorage support event integration. Storage (general purpose v1) does not support integration with Event Grid.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-event-overview>

✉  **oleks** Highly Voted 1 year, 8 months ago

B is correct

upvoted 28 times

✉  **MiraA** 6 months, 3 weeks ago

The answer is NO - the Even Grid integration should be used.

<https://docs.microsoft.com/en-us/azure/event-grid/resize-images-on-storage-blob-upload-event>

upvoted 5 times

✉  **Justing_Gao** Highly Voted 1 year, 9 months ago

A BlockBlobStorage account is a specialized storage account in the premium performance tier for storing unstructured object data as block blobs or append blobs. Compared with general-purpose v2 and BlobStorage accounts, BlockBlobStorage accounts provide low, consistent latency and higher transaction rates.

upvoted 14 times

✉  **syj123** 1 year, 8 months ago

so, Do you mean that BlockBlobStorage account is better but not necessary?

upvoted 2 times

✉  **Goyo** Most Recent 2 months, 2 weeks ago

Selected Answer: B

The correct answer is NO

upvoted 1 times

✉  **dmeld** 5 months, 1 week ago

Answer is No. Blob storage trigger cannot handle the requirement less than one minutes. You should use the Event Grid trigger. Hence, it is not useful change the account storage tier from v2 to block blob account.

upvoted 1 times

✉  **Chked** 9 months, 2 weeks ago

Answer - NO

"You can't convert an existing standard performance storage account to a block blob storage account with premium performance. To migrate to a premium performance storage account, you must create a premium block blob account, and migrate the data to the new account."

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-performance-tiers>

upvoted 8 times

✉  **kondapaturi** 10 months ago

B-No is the correct, Here we need to develop the processing logic , and the best way is to create an Azure Function with a blob storage trigger.

upvoted 2 times

✉  **az204dev** 3 months, 3 weeks ago

Using Azure Function with blob storage trigger will not satisfy the requirement to process image in less than 1 minute. Instead use event grid.
upvoted 1 times

✉  **PierrGo** 10 months ago

I had this question this morning. I answered "B" (no), I think this is the right answer
upvoted 3 times

✉  **[Removed]** 10 months, 1 week ago

"B" (No) is the correct answer
upvoted 2 times

✉  **azurelearner666** 10 months, 1 week ago

No, converting to BlockBlobStorage does not solve the scenario (to process pictures after they are uploaded in 1min max)
upvoted 1 times

✉  **mlantonis** 10 months, 4 weeks ago

Correct Answer: No

Changing the Azure Storage account type won't help. Not necessary to convert the account.
upvoted 4 times

✉  **glam** 11 months, 2 weeks ago

B. No...

upvoted 3 times

✉  **svaza** 1 year, 2 months ago

The desire outcome is - "When photos are uploaded, they must be processed to produce and save a mobile-friendly version of the image"
So merely changing storage account type won't help, there should be a process to do this activity in response to when photo is uploaded. This can be achieved using Azure Functions Blob storage account trigger. So answer is correct
upvoted 4 times

✉  **dineshkm06tnj** 1 year, 5 months ago

Right Answer

upvoted 2 times

✉  **zyrex** 1 year, 7 months ago

Azure Storage Service is also not SaaS but IaaS.

upvoted 3 times

HOTSPOT -

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	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> HTTP request header Client cookie HTTP message body URL query string </div>
Encoding type	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> HTML URL Unicode Base64 </div>

Answer Area

Property	Value
Client certificate location	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> HTTP request header Client cookie HTTP message body URL query string </div>
Encoding type	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> HTML URL Unicode Base64 </div>

Accessing the client certificate from App Service.

If you are using ASP.NET and configure your app to use client certificate authentication, the certificate will be available through the `HttpRequest.ClientCertificate` property. For other application stacks, the client cert will be available in your app through a base64 encoded value in the "X-ARR-ClientCert" request header. Your application can create a certificate from this value and then use it for authentication and authorization purposes in your application.

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/app-service-web-configure-tls-mutual-auth>

 **mlantonis** Highly Voted  10 months, 4 weeks ago

Box 1: HTTP request header

If you are using ASP.NET and configure your app to use client certificate authentication, the certificate will be available through the `HttpRequest.ClientCertificate` property.

Box 2: Base64

For other application stacks, the client cert will be available in your app through a base64 encoded value in the "X-ARR-ClientCert" request header. Your application can create a certificate from this value and then use it for authentication and authorization purposes in your application.

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/app-service-web-configure-tls-mutual-auth>

upvoted 22 times

✉  **27close** Highly Voted 1 year, 5 months ago

With client certificates enabled, App Service injects an X-ARR-ClientCert request header with the client certificate.

upvoted 12 times

✉  **AZ204Cert** Most Recent 1 week, 6 days ago

Got it in my exam 04/05/22 (selected HTTP request header, Base64)

upvoted 2 times

✉  **petitbilly** 1 month, 2 weeks ago

Got it in my exam 03/22

upvoted 1 times

✉  **Chiboy** 2 months, 3 weeks ago

This came out on 29/1(today)

upvoted 3 times

✉  **vladhof** 3 months ago

It's correct

upvoted 1 times

✉  **rick_cschen** 5 months ago

have this on exam

upvoted 3 times

✉  **[Removed]** 10 months, 1 week ago

The correct answer is "HTTP request header" and "Base64".

upvoted 8 times

✉  **glam** 11 months, 2 weeks ago

Answer is correct..

upvoted 5 times

✉  **27close** 1 year, 5 months ago

The following Node.js sample code gets the X-ARR-ClientCert header and uses node-forge to convert the base64-encoded PEM st

upvoted 6 times

DRAG DROP -

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

**Azure CLI Commands****Answer Area**

az group create

az group update

Correct Answer:

az webapp update

az webapp create

az appservice plan create



You can host native Linux applications in the cloud by using Azure Web Apps. To create a Web App for Containers, you must run Azure CLI commands that create a group, then a service plan, and finally the web app itself.

Step 1: az group create -

In the Cloud Shell, create a resource group with the az group create command.

Step 2: az appservice plan create

In the Cloud Shell, create an App Service plan in the resource group with the az appservice plan create command.

Step 3: az webapp create -

In the Cloud Shell, create a web app in the myAppServicePlan App Service plan with the az webapp create command. Don't forget to replace <unique-app-name> with a unique app name, and <docker-ID> with your Docker ID.

Reference:

<https://docs.microsoft.com/mt-mt/azure/app-service/containers/quickstart-docker-go?view=sql-server-ver15>

Secure01 Highly Voted 1 year, 5 months ago

Within the same resource group, you can't mix Windows and Linux apps in the same region.

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

"None of your current resource groups reside in a location that supports Linux"

So you have to create new resource group. Answer is correct.

upvoted 39 times

✉ **rgullini** 7 months, 2 weeks ago

This explanation is correct and it is applicable BEFORE January 21, 2021. Now the article says:

"Linux and Windows App Service plans can now share resource groups. This limitation has been lifted from the platform and existing resource groups have been updated to support this"

upvoted 18 times

✉ **kags** 6 months, 2 weeks ago

Agreed. Just created both linux and windows, core3.1 and .net 5 respectively in same resource group.

upvoted 3 times

✉ **Netspud** 1 month, 3 weeks ago

Many are missing the point here, it says "None of your current resource groups reside in a location that supports Linux". So you need to create a group in an area that does support Linux. Doesn't matter if you mix them or not, there is currently nothing that supports Linux, so something new is required.

For me the answer is correct.

upvoted 6 times

✉ **Edwardenis** 1 year, 1 month ago

I don't agree with you.

1. the link you posted doesn't say anything about restriction on mixing App service plan in the same region.
2. I just created 2 app service plan in the same RG. One app service plan on windows in the region of the RG East US and the other app service plan in Linux in Central US

upvoted 1 times

✉ **azurelearner666** 10 months, 1 week ago

It does if you read it... see under limitations, it says "You can't mix Windows and Linux apps in the same App Service plan."

upvoted 4 times

✉ **JulienYork** 1 year, 3 months ago

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

upvoted 1 times

✉ **lde** Highly Voted 1 year, 2 months ago

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

Historically, you can't mix Windows and Linux apps in the same resource group. However, all resource groups created on or after January 21, 2021 do support this scenario. For resource groups created before January 21, 2021, the ability to add mixed platform deployments will be rolled out across Azure regions (including National cloud regions) soon.

upvoted 18 times

✉ **azurelearner666** 10 months, 1 week ago

This should be updated on the exam to reflect reality... so we have to respond wrong now to pass... LOL

upvoted 4 times

✉ **Edwardenis** 1 year, 1 month ago

Ohhh Thanks for the notice, that's why I could create both app service plans.

upvoted 2 times

✉ **silvatyrant** Most Recent 2 months ago

1) Linux and Windows apps can now be deployed in the same RG.

2) They mention doing an initial deployment as well. "az webapp up" is best suited to do this. Not "az webapp create". The "create" action will not do an initial deployment.

upvoted 3 times

✉ **Mev4953** 3 months ago

Got this in the exam 01/22

upvoted 3 times

✉ **Mev4953** 3 months ago

No, sorry I didn't. I read wrong :)

upvoted 2 times

✉ **resonant** 4 months, 1 week ago

A couple of things to note in this question:

1. It says "Which three Azure CLI commands should you use to develop the solution?" which means that you HAVE to choose 3 options. Therefore, even if it looks like you don't have to create or update a resource group, that should be enough hint that at least you should choose one of them.

2. You can't change the location of a resource group once it is created. Not even with the "az group update" command.

With 1. and 2. it should be clear enough that you have to create the resource group anyways, even if you didn't pay attention to the fact that the question says none of the locations of the resource groups already created can have Linux (independently of the fact that Linux and Windows can NOW coexist in the same resource group).

upvoted 8 times

✉ **rick_cschen** 5 months ago

have this on exam

upvoted 1 times

✉  **r_k** 5 months, 1 week ago

Link in solution is no longer valid. But answer is correct.

Similar Reference: <https://docs.microsoft.com/en-us/dotnet/architecture/devops-for-aspnet-developers/deploying-to-app-service>

upvoted 1 times

✉  **sujitwarrier11** 10 months ago

currently any resource group created after 21st Jan 2021 do support mixed linux and windows web apps. So only two commands are needed to create the web app, create appservice plan and create web app. Since 3 commands are compulsory we will ignore the above fact and also do az group create.

upvoted 4 times

✉  **mattvasc** 1 month, 3 weeks ago

But the question says: " You must minimize the number of resource groups required."

So wouldn't be better to edit the group instead of creating another?

upvoted 1 times

✉  **PierrGo** 10 months ago

Got this question on the exam. I answered exactly like the proposed answered (create a resource group, create the app plan, create the app)

upvoted 7 times

✉  **mattvasc** 1 month, 3 weeks ago

And what about the part:

" You must minimize the number of resource groups required."

upvoted 1 times

✉  **francis6170** 10 months, 3 weeks ago

got this in the exam :)

upvoted 3 times

✉  **mlantonis** 10 months, 4 weeks ago

Provided answer is correct, but it is old.

Note: Historically, you can't mix Windows and Linux apps in the same resource group. However, all resource groups created on or after January 21, 2021 do support this scenario. For resource groups created before January 21, 2021, the ability to add mixed platform deployments will be rolled out across Azure regions (including National cloud regions) soon.

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

upvoted 5 times

✉  **glam** 11 months, 2 weeks ago

Answer is correct.

upvoted 2 times

✉  **WillPassExam** 1 year, 1 month ago

There is no need to create a new RG if your RG is created after Jan 21, 2021. I guess this question will be updated/removed from this exam soon.
<https://docs.microsoft.com/en-us/azure/app-service/overview#app-service-on-linux>

Historically, you can't mix Windows and Linux apps in the same resource group. However, all resource groups created on or after January 21, 2021 do support this scenario. For resource groups created before January 21, 2021, the ability to add mixed platform deployments will be rolled out across Azure regions (including National cloud regions) soon.

upvoted 4 times

✉  **borntolearn** 1 year, 3 months ago

Answer is correct

upvoted 5 times

✉  **Skyrocket** 1 year, 3 months ago

The answer is correct.

upvoted 7 times

✉  **funfun** 1 year, 3 months ago

why not just create a new app service plan in the same resource group but the plan in different region, then create web app? In such case, only 2 steps are needed without creating a new resource group

upvoted 2 times

✉  **Phantom88** 1 year, 3 months ago

You can't change the location of a resource group. So, you can't use az group update for such cases.

upvoted 3 times

DRAG DROP -

Fourth Coffee has an ASP.NET Core web app that runs in Docker. The app is mapped to the 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

```
az webapp config container set  
--docker-custom-image-name  
$dockerHubContainerPath  
--name $appName  
--resource-group  
fourthCoffeePublicWebResourceGroup
```

Answer Area

```
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
```

Correct Answer:

Azure CLI Commands

```
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
```

Answer Area

```
#/bin/bash  
appName="FourthCoffeePublicWeb$random"  
location="WestUS"  
dockerHubContainerPath="FourthCoffee/publicweb:v1"  
fqdn="http://www.fourthcoffee.com">www.fourthcoffee.com
```



```
az webapp create  
--name $appName  
--plan AppServiceLinuxDockerPlan  
--resource-group  
fourthCoffeePublicWebResourceGroup
```

```
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
```

Step 1: #bin/bash -

The appName is used when the webapp-name is created in step 2.

Step 2: az webapp create -

Create a web app. In the Cloud Shell, create a web app in the myAppServicePlan App Service plan with the az webapp create command.

Step 3: az webapp config container set

In Create a web app, you specified an image on Docker Hub in the az webapp create command. This is good enough for a public image. To use a private image, you need to configure your Docker account ID and password in your Azure web app.

Step 4: az webapp config hostname add

The webapp-name is used when the webapp is created in step 2.

In the Cloud Shell, follow the az webapp create command with az webapp config container set.

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/containers/tutorial-custom-docker-image> <https://docs.microsoft.com/en-us/azure/app-service/tutorial-custom-container?pivots=container-linux> <https://docs.microsoft.com/en-us/azure/app-service/scripts/cli-configure-custom-domain>

✉️ **lukasstart09** 1 year, 5 months ago

Looks like a WRONG answer.

Tried in my console:

Step2:

'your-appname' app doesn't exist.

THE RIGHT ANSWER IS (JVTM):

1. Declare variables.
2. webapp create
3. set container (after this, app could be checked as running)
4. publish app to desired URL (assign domain)

upvoted 83 times

✉️ **azurelearner666** 10 months, 1 week ago

This looks to me like the right answer!

upvoted 4 times

✉️ **ahadjithoma** 1 year, 4 months ago

Can you swap steps 3 and 4?

upvoted 4 times

✉  **azurelearner666** 10 months, 1 week ago
you mean 2 and 3, right? otherwise, how can you configure something that you haven't created?
upvoted 1 times

✉  **Secure01** 1 year, 5 months ago
Agree. That the real live scenario I went through recently. However it seems last two steps can be done in reverse order...
upvoted 3 times

✉  **AakashNeedsEmAll**  1 year, 5 months ago
Why not 4 -> 3 -> 1 -> 2?
upvoted 38 times

✉  **rreey** 1 year, 5 months ago
Agree.....
upvoted 6 times

✉  **TangAnna**  4 days, 15 hours ago
The provided answer is correct
upvoted 1 times

✉  **petitbilly** 1 month, 2 weeks ago
Got it in exam 03/22
upvoted 1 times

✉  **Baskman** 1 month, 2 weeks ago
Got this in the exam 03/22
upvoted 1 times

✉  **oescm** 2 months, 2 weeks ago
Got this one 02/2022. Went with highly voted answer.
upvoted 4 times

✉  **Mev4953** 3 months ago
Got this in the exam 01/22
upvoted 3 times

✉  **lugospod** 3 months ago
Got this one 01/2022. Wen with most voted (to avoid writing answers again)
upvoted 4 times

✉  **pandaz** 3 months ago
did you pass?
upvoted 1 times

✉  **vladhof** 3 months ago
The provided answer is correct now. It looks to have been updated
upvoted 4 times

✉  **rick_cschen** 5 months ago
have this on exam
upvoted 3 times

✉  **r_k** 5 months, 1 week ago
The answer seems wrong to me. All the examples I found show container coming after every thing else.
Step 1: #bin/bash
Step 2: az webapp create
Step 3: az webapp config container set
Step 4: az webapp config container set

<https://docs.microsoft.com/en-us/azure/app-service/tutorial-custom-container?pivots=container-linux>
upvoted 1 times

✉  **r_k** 5 months, 1 week ago
I meant:
Step 1: #bin/bash
Step 2: az webapp create
Step 3: az webapp config hostname add
Step 4: az webapp config container set
upvoted 3 times

✉  **Drummer** 7 months, 3 weeks ago
4-3-1-2
#BIN/BASH
AZ WEBAPP CREATE
CONFIG CONTAINER SET
HOSTNAME ADD

<https://docs.microsoft.com/en-us/azure/app-service/containers/tutorial-custom-docker-image>

<https://docs.microsoft.com/cs-cz/azure/app-service/scripts/cli-configure-custom-domain#code-try-0>
upvoted 4 times

✉ **albertobs** 9 months ago

It seems that it has already been corrected by Examtopics, the previous capture was wrong.

Correct order: (declare variables), az webapp create, az webapp config container set, az webapp config hostname add
upvoted 22 times

✉ **DParekh** 10 months, 2 weeks ago

Correct Answer - 4, 3, 2, 1 Why? until you created web app , you can not config host name
upvoted 3 times

✉ **mlantonis** 10 months, 4 weeks ago

Step 1: #bin/bash
Declare variables, like the appName, which is used for the webapp-name

Step 2: az webapp create
Create the Web App

Step 3: az webapp config container set
Set the container. Aafter this, Web App could be checked as running.

Step 4: az webapp config hostname add
Publish Web App to the desired URL

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/containers/tutorial-custom-docker-image>

<https://docs.microsoft.com/cs-cz/azure/app-service/scripts/cli-configure-custom-domain#code-try-0>
upvoted 16 times

✉ **azurelearner666** 10 months, 1 week ago

yes, but steps 3 and 4 are swappable. though seem to be in the "correct order" for the exam.
upvoted 1 times

✉ **mlantonis** 11 months, 1 week ago

Step 1: #bin/bash
Declare variables, like the appName, which is used for the webapp-name

Step 2: az webapp create
Create the Web App

Step 3: az webapp config container set
Set the container. Aafter this, Web App could be checked as running.

Step 4: az webapp config hostname add
Publish Web App to the desired URL
upvoted 6 times

✉ **glam** 11 months, 2 weeks ago

4 > 3 > 1 > 2
upvoted 4 times

DRAG DROP -

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.	

Actions	Answer Area
Create a user-assigned managed identity for the application.	Create the Azure Functions app with a Consumption plan type.
Create the Azure Functions app with a Premium plan type.	Create a user-assigned managed identity for the application.
Create an access policy in Azure Key Vault for the application identity.	Create an access policy in Azure Key Vault for the application identity.
Correct Answer: 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.	

Step 1: Create the Azure Functions app with a Consumption plan type.

Use the Consumption plan for serverless.

Step 2: Create a system-assigned managed identity for the application.

Create a system-assigned managed identity for your application.

Key Vault references currently only support system-assigned managed identities. User-assigned identities cannot be used.

Step 3: Create an access policy in Key Vault for the application identity.

Create an access policy in Key Vault for the application identity you created earlier. Enable the "Get" secret permission on this policy. Do not

configure the

"authorized application" or applicationId settings, as this is not compatible with a managed identity.

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/app-service-key-vault-references>

✉  **parzman** Highly Voted 1 year, 5 months ago

It should be:

1. Create Azure Function with a Premium Plan as we need to connect to a VNet (<https://docs.microsoft.com/es-es/azure/azure-functions/functions-create-vnet>)
2. Create a system-assigned managed identity
3. Create an access policy in the Key Vault

upvoted 326 times

✉  **Azprep** 1 week, 6 days ago

Agreed

upvoted 1 times

✉  **Molte** 4 months ago

Agreed with the premium plan. But for point 2 couldn't both system- and user-assigned managed identity be right?

upvoted 1 times

✉  **Sivaramakrishnan** 2 months ago

The lifecycle of a system-assigned identity is directly tied to the Azure service instance that it's enabled on. If the instance is deleted, Azure automatically cleans up the credentials and the identity in Azure AD.

upvoted 1 times

✉  **m33yux** 3 months, 2 weeks ago

Must be system-assigned to comply the last point "Authentication to the Azure Key Vault instance must be removed if the Azure Function application is deleted." If you create the Managed Identity manually, you need to explicitly delete the Managed Identity when the resource is deleted (this is because you can have multiple resources related to one User-Assigned Managed Identity).

upvoted 9 times

✉  **Chiboy** 2 months, 3 weeks ago

Moreover, you can't use a user assigned identity on Azure key Vault.

upvoted 2 times

✉  **azurelearner666** 10 months, 1 week ago

Agreed! the provided solution is completely wrong...

Admin, can it be updated?

upvoted 13 times

✉  **azurelearner666** 10 months, 1 week ago

or moderator... would be great to have the right responses on the solution section :)

upvoted 7 times

✉  **cloud_exam1** 1 year, 5 months ago

Agreed

upvoted 3 times

✉  **AakashNeedsEmAll** Highly Voted 1 year, 5 months ago

I believe we need a premium plan to avoid cold starts. Consumption plan will not work.

upvoted 49 times

✉  **vb3d** 1 year, 1 month ago

vnet support is mentioned here too to use the premium plan

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

upvoted 6 times

✉  **lxung** 1 year, 3 months ago

Agreed!! Plan should be premium given the fact that the app has to avoid cold start and other vnet requirements.

upvoted 3 times

✉  **awron_durat** 1 year, 3 months ago

100% agree. Otherwise, it breaks the request for no cold starts.

upvoted 3 times

✉  **Evo_Morales** Most Recent 2 weeks, 4 days ago

New to the forum...is there a quick way to find the right answer or do you just need to read every comment...is the answer shown on the answer section the most vetted?

upvoted 2 times

✉  **gc12345** 1 month, 1 week ago

Consumption: This tier is only available to function apps. It scales the functions dynamically depending on workload.
<https://docs.microsoft.com/en-us/learn/modules/introduction-to-azure-app-service/3-azure-app-service-plans>
upvoted 1 times

✉️ **SivajiTheBoss** 1 month, 1 week ago

Correct Answer:

1. Premium plan
2. System-assigned managed identity
3. Create access policy in Key Vault

Information:

The Azure Functions Premium plan (sometimes referred to as Elastic Premium plan) is a hosting option for function apps. The Premium plan provides features like VNet connectivity, no cold start, and premium hardware.

A managed identity from Azure Active Directory (Azure AD) allows your app to easily access other Azure AD-protected resources such as Azure Key Vault. The identity is managed by the Azure platform and does not require you to provision or rotate any secrets.

Your application can be granted two types of identities:

A system-assigned identity is tied to your application and is deleted if your app is deleted. An app can only have one system-assigned identity.

A user-assigned identity is a standalone Azure resource that can be assigned to your app. An app can have multiple user-assigned identities.

<https://docs.microsoft.com/en-us/azure/app-service/overview-managed-identity?tabs=dotnet>

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

upvoted 4 times

✉️ **meoukg** 1 month, 1 week ago

Got it on 03/2022, I chose as below:

1. Create Azure Function with an App Service Plan type.
2. Create a system-assigned managed identity for the application.
3. Create an access policy in Key Vault for the application identity.

upvoted 2 times

✉️ **SivajiTheBoss** 1 month, 2 weeks ago

Correct answer:

1. Create Azure Function with a Premium Plan
2. Create a system-assigned managed identity
3. Create an access policy in the Key Vault

upvoted 1 times

✉️ **sindhu2693** 2 months, 2 weeks ago

Answer is wrong it should be premium plan and system assigned identity

upvoted 4 times

✉️ **leonidn** 2 months, 3 weeks ago

1. Premium Plan because of VNet
2. System-assigned because of "must be removed if the Azure Function application is deleted"
3. Create an access policy. That is our intention.

upvoted 3 times

✉️ **mshenoy83** 3 months ago

1. We can create an Azure Function inside a Vnet with App Service Plan.

upvoted 1 times

✉️ **lugospod** 3 months ago

Got this one 01/2022. Wen with most voted (to avoid writing answers again)

upvoted 3 times

✉️ **Ameet9** 3 months ago

Explanation is different from the answer

upvoted 1 times

✉️ **ShivakumarDagam** 4 months ago

1. Premium plan type
2. System-assigned managed identity for the application
3. Access policy in the Key Vault

upvoted 2 times

✉️ **biswajit29** 4 months, 1 week ago

not sure on what basis the selected answer is given here !! The answer given by parpman is correct.

upvoted 1 times

✉️ **rick_cschen** 5 months ago

have this on exam

upvoted 2 times

✉️  **Drummer** 7 months, 3 weeks ago

Answer:

Box 1: Create the Azure Functions app with a Premium plan type
Box 2: Create a system-assigned managed identity for the application
Box 3: Create an access policy in Azure Key Vault

upvoted 5 times

✉️  **UDevelop** 7 months, 3 weeks ago

Given answer is correct!

upvoted 1 times

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.

Correct Answer: D

Windows Azure Web Sites (WAWS) offers 3 modes: Standard, Free, and Shared.

Standard mode carries an enterprise-grade SLA (Service Level Agreement) of 99.9% monthly, even for sites with just one instance.

Standard mode runs on dedicated instances, making it different from the other ways to buy Windows Azure Web Sites.

Incorrect Answers:

B: Shared and Free modes do not offer the scaling flexibility of Standard, and they have some important limits.

Shared mode, just as the name states, also uses shared Compute resources, and also has a CPU limit. So, while neither Free nor Shared is likely to be the best choice for your production environment due to these limits.

 **profesorklaus** Highly Voted 1 year, 4 months ago

Answer is correct. No doubts!

upvoted 74 times

 **27close** Highly Voted 1 year, 4 months ago

answer is d- this is production and requires autoscaling when cpu is peak. the rest is constraints by limit without auto scaling

upvoted 18 times

 **drgn7676** Most Recent 1 week, 4 days ago

Selected Answer: D

Uses the Standard pricing tier

upvoted 1 times

 **DarkyShad0W** 1 week, 5 days ago

Selected Answer: D

D. AppService Standar with AutoScale

upvoted 1 times

 **Bartimaeus** 2 months ago

Selected Answer: D

I think the question C vs D is not really about price, because the same VMs you would run with App Service would cost you much less with a scale set. Even with Load Balancer and storage it's cheaper (at least 30\$/month per instance).

However the answer says:

1. Deploy the website to a virtual machine

2. Configure a Scale Set to increase the virtual machine instance count when the CPU load is high.

Which is in fact incorrect, because you deploy the app to the scale set - you can't add an existing VM with data to a scale set or configure it to add VM instances.

You deploy a "VM scale set" as a entire entity. You can attach a custom VHD there, but it's not stated in the answer.

upvoted 1 times

 **ashishlakhera** 2 months ago

Selected Answer: D

selected D

upvoted 1 times

 **Goyo** 2 months, 2 weeks ago

Selected Answer: D

Answer is correct

upvoted 3 times

✉️ **Dev666** 2 months, 4 weeks ago

Selected Answer: D

Answer is correct

upvoted 1 times

✉️ **ucsdmiami2020** 5 months ago

Selected Answer: D

Please and thank you

upvoted 3 times

✉️ **UDevelop** 7 months, 3 weeks ago

Given answer is correct!

upvoted 1 times

✉️ **bharatazure** 10 months ago

Answer is D as VM is out of picture and best fit solution is App service and Basic plan do not provide Auto scaling so best option for this is App Service + Standard Plan

upvoted 2 times

✉️ **ranjitklive** 9 months ago

App service plans available:

- 1) Free and Shared - Applications from multiple customers on single VM. intended to be used only for development and testing purposes. No SLA.
- 2) Basic Service Plan - lower traffic requirements and do not need advanced auto scale and traffic management features. . Built-in network load balancing support automatically distributes traffic across instances.
- 3) Standard Service Plan - For running production workloads. Built-in network load balancing support automatically distributes traffic across instances. The Standard plan includes auto scale that can automatically adjust the number of virtual machine instances running to match your traffic needs.
- 4) Premium v2 Service Plan - Faster processors, SSD storage and double memory-to-core ratio compared to Standard.
- 5) Premium v3 Service Plan - faster processors, Hyper-V virtualisation and support for VNet connectivity.
- 6) Isolated Service Plan - mission critical workloads, which are required to run in a virtual network.

upvoted 9 times

✉️ **azurelearner666** 10 months, 1 week ago

Right, the solution is:

D) App Service that uses the Standard service tier. Configure the App Service plan to automatically scale when the CPU load is high.

Nowadays, the auto scaling could be done too due to high memory... it all depends on the web application, on what does it do.

upvoted 3 times

✉️ **mlantonis** 10 months, 4 weeks ago

Correct Answer: D

We should definitely prefer App Service over VM.

To enable autoscaling of resources, we have to use the Standard App Service plan or higher (Premium or Isolated).

Reference:

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

<https://azure.microsoft.com/en-us/pricing/details/app-service/windows>

<https://azure.microsoft.com/en-us/pricing/details/app-service/linux>

upvoted 9 times

✉️ **prabhjot** 11 months ago

correct ans is D

upvoted 1 times

✉️ **mlantonis** 11 months, 1 week ago

Correct Answer: D

We should definitely prefer App Service over VM.

The pricing tier of an App Service plan determines what App Service features you get and how much you pay for the plan. There are a few categories of pricing tiers:

- Shared compute: Free and Shared, the two base tiers, runs an app on the same Azure VM as other App Service apps, including apps of other customers. These tiers allocate CPU quotas to each app that runs on the shared resources, and the resources cannot scale out.
- Dedicated compute: Basic, Standard, Premium, PremiumV2, and PremiumV3 tiers run apps on dedicated Azure VMs. Only apps in the same App Service plan share the same compute resources. The higher the tier, the more VM instances are available to you for scale-out.
- Isolated: This tier runs dedicated Azure VMs on dedicated Azure Virtual Networks. It provides network isolation on top of compute isolation to your apps. It provides the maximum scale-out capabilities.

upvoted 1 times

✉️ **mlantonis** 11 months, 1 week ago

Standard mode carries an enterprise-grade SLA (Service Level Agreement) of 99.9% monthly, even for sites with just one instance. Standard mode runs on dedicated instances.

Incorrect Answers:

Shared and Free modes do not offer the scaling flexibility of Standard, and they have some important limits. Shared mode, just as the name states, also uses shared Compute resources, and also has a CPU limit. So, while neither Free nor Shared is likely to be the best choice for your production environment due to these limits.

Reference:

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

<https://azure.microsoft.com/en-us/pricing/details/app-service/windows>

[https://azure.microsoft.com/en-us/pricing/details/app-service/linux](#)

upvoted 1 times

✉️  **glam** 11 months, 2 weeks ago

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.

upvoted 2 times

✉️  **jms309** 1 year ago

I would say that correct answer is C, since is the only one that can scale "without limits" to satisfy high traffic volumes. Standard app service plan has a limit of 10 instances while scale set has a limit of 1000 VM. Also Scale Sets can easily integrate with Azure load balancer or Application Gateway which is great to manage web traffic

upvoted 1 times

✉️  **prabhjot** 11 months ago

No mention about VM Scale SET (what it says is Vm) and the set up scale set

upvoted 1 times

HOTSPOT -

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 | <input type="checkbox"/> group
<input type="checkbox"/> webapp
<input type="checkbox"/> appservice plan
<input type="checkbox"/> webapp deployment slot
<input type="checkbox"/> webapp deployment source | create --location centralus --name \$resourcegroupname |
| az | <input type="checkbox"/> group
<input type="checkbox"/> webapp
<input type="checkbox"/> appservice plan
<input type="checkbox"/> webapp deployment slot
<input type="checkbox"/> webapp deployment source | create --name \$webappname --resource-group \$resourcegroupname --sku S3 |
| az | <input type="checkbox"/> group
<input type="checkbox"/> webapp
<input type="checkbox"/> appservice plan
<input type="checkbox"/> webapp deployment slot
<input type="checkbox"/> webapp deployment source | create --name \$webappname --resource-group \$resourcegroupname --plan \$webappname |
| az | <input type="checkbox"/> group
<input type="checkbox"/> webapp
<input type="checkbox"/> appservice plan
<input type="checkbox"/> webapp deployment slot
<input type="checkbox"/> webapp deployment source | create --name \$webappname --resource-group \$resourcegroupname --slot staging |
| az | <input type="checkbox"/> group
<input type="checkbox"/> webapp
<input type="checkbox"/> appservice plan
<input type="checkbox"/> webapp deployment slot
<input type="checkbox"/> webapp deployment source | config --name \$webappname --resource-group \$resourcegroupname \
--slot staging --repo-url \$gitrepo --branch master --manual-integration |

Correct Answer:

Answer Area

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

The screenshot shows the Azure CLI command history with five entries. Each entry consists of a command prompt (az), the command itself, and its output. The 'group' command creates a resource group. The 'appservice plan' command creates an app service plan. The 'webapp' command creates a web app. The 'webapp deployment slot' command creates a deployment slot. The 'webapp deployment source' command configures the deployment slot to pull code from a GitHub repository.

Box 1: group -

```
# Create a resource group.  
az group create --location westeurope --name myResourceGroup
```

Box 2: appservice plan -

```
# Create an App Service plan in STANDARD tier (minimum required by deployment slots). az appservice plan create --name $webappname --resource-group myResourceGroup --sku S1
```

Box 3: webapp -

```
# Create a web app.  
az webapp create --name $webappname --resource-group myResourceGroup \
--plan $webappname
```

Box 4: webapp deployment slot -

```
#Create a deployment slot with the name "staging".  
az webapp deployment slot create --name $webappname --resource-group myResourceGroup \
--slot staging
```

Box 5: webapp deployment source -

```
# Deploy sample code to "staging" slot from GitHub.  
az webapp deployment source config --name $webappname --resource-group myResourceGroup \
--slot staging --repo-url $gitrepo --branch master --manual-integration
```

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/scripts/cli-deploy-staging-environment>

sskPL Highly Voted 1 year, 5 months ago

Given answer is correct.

upvoted 117 times

Harshad_Mehta Highly Voted 1 year, 5 months ago

why do you guys have to comment if the answer is correct.

upvoted 23 times

✉️ **thomas204** 1 year, 5 months ago

Because some answers are wrong and commenting when correct is just comforting for others.

upvoted 164 times

✉️ **azurelearner666** 10 months, 1 week ago

Agree! love this site because of the community and the discussions. they also help to understand the reasoning!!

upvoted 17 times

✉️ **lasyan3** 7 months, 1 week ago

Totally agreed, thanks to all the community members :)

upvoted 5 times

✉️ **azurelearner666** 10 months, 1 week ago

you commented too as well, right? ;)

upvoted 6 times

✉️ **Evo_Morales** Most Recent ⓘ 2 weeks, 4 days ago

Saw this question on a recent test

upvoted 1 times

✉️ **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22

upvoted 2 times

✉️ **Chiboy** 2 months, 3 weeks ago

I don't know if I am the only one. But I find that even when the answers are correct, the comments from us give fresh and refreshing incite into the answers. I have severally been reminded of some factors I did not take into consideration when arriving at an answer, even though correct. I cannot thank this forum enough. Please let us continue commenting on every answer(correct and incorrect). We are greatly helping each other. Thanks.

upvoted 4 times

✉️ **rick_cschen** 5 months ago

have this on exam

upvoted 4 times

✉️ **Rmdg** 5 months, 3 weeks ago

Answer is 100% correct.

upvoted 4 times

✉️ **debanjan10** 6 months, 3 weeks ago

Order:

group, appservice plan, webapp, slot, source

upvoted 1 times

✉️ **Yoldas** 10 months ago

The given answer is correct.

upvoted 1 times

✉️ **mlantonis** 10 months, 4 weeks ago

Box 1: group

Create a resource group.

Box 2: appservice plan

Create an App Service plan in STANDARD tier (minimum required by deployment slots)

Box 3: webapp

Create a web app

Box 4: webapp deployment slot

#Create a deployment slot with the name "staging"

Box 5: webapp deployment source

Deploy sample code to "staging" slot from GitHub.

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/scripts/cli-deploy-staging-environment>

upvoted 7 times

✉️ **mlantonis** 11 months, 1 week ago

Box 1: group

Create a resource group.

Box 2: appservice plan

Create an App Service plan in STANDARD tier (minimum required by deployment slots)

Box 3: webapp
Create a web app

Box 4: webapp deployment slot
#Create a deployment slot with the name "staging"

Box 5: webapp deployment source
Deploy sample code to "staging" slot from GitHub.
upvoted 3 times

✉️  **UnknowMan** 11 months, 1 week ago

Correct

upvoted 1 times

✉️  **glam** 11 months, 2 weeks ago

Given answer is correct.

upvoted 1 times

✉️  **TomHendr** 1 year, 3 months ago

It would be better if the answers are always correct! Would cause less discussion and less confusion.

upvoted 5 times

✉️  **Archimedes** 1 year, 2 months ago

This is a user contributed effort. It is up to us to correct and comment.

upvoted 6 times

✉️  **azurelearner666** 10 months, 1 week ago

yes, but the admins could fix the wrong responses... would not take that long IMHO.

upvoted 1 times

✉️  **pac1311** 1 year, 3 months ago

correct :)

upvoted 1 times

✉️  **amansani** 1 year, 3 months ago

Correct Answer

upvoted 1 times

✉️  **khoant** 1 year, 3 months ago

Correct answer.

upvoted 1 times

HOTSPOT -

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 = 
        .value();
        .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);
    }
}
```

Answer Area

```
function ensureTip() {
    var r = 
        .value();
        .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);
    }
}
```

Correct Answer:

✉  **dol** Highly Voted  1 year, 5 months ago

Right answer in second drop down is the first one (... "tip" in i...)
Similiar example can be found on <https://docs.microsoft.com/en-us/azure/cosmos-db/how-to-write-stored-procedures-triggers-udfs>
upvoted 118 times

✉  **insanewriters** 10 months, 2 weeks ago

Since we have to ensure that i["tip"] is a number, I believe the answer is correct as-is.

Let's say that the object does not include a tip attribute. isNaN(i["tip"]) evaluates to isNaN(undefined) which is true. This would also be true for any non-numeric value (unless the string contained a number). i["tip"] === null would only evaluate true if the tip attribute was manually set to null. If it was missing, it would be undefined.

upvoted 12 times

✉  **SlavMar** 10 months ago

But they suggest IsNaN(i) (not isNaN(i["tip"])) which makes no sense as this is supposed to be whole body

upvoted 10 times

✉  **altafpatel1984** 5 months ago

No. They suggest isNaN(i)["tip"]

upvoted 2 times

✉  **mattvasc** 4 months, 1 week ago

Which is also wrong. It should be: isNaN(i["tip"])

upvoted 9 times

✉  **ivan0590** 3 weeks, 2 days ago

I agree. The first option is the right one.

isNaN(i) returns a Boolean. It always returns false since i never is a number.

By doing isNaN(i)["tip"] you would be trying to access the property "tip" of a boolean, which it doesn't exists. So, this would return undefined, even if the "tip" property exists in i.

upvoted 1 times

✉  **sujitwarrier11** 10 months, 1 week ago

where is the validation that the tip value is a number? so the current answer is right. isNaN checks if the value is not a number. if true it sets value to 0.

upvoted 6 times

✉  **altafpatel1984** 4 months, 4 weeks ago

But they suggest IsNaN(i), not isNaN(i["tip"]) which makes no sense as syntax is incorrect.

upvoted 5 times

✉  **MiraA** 6 months, 3 weeks ago

My opinion to NaN()...

The "old" clients will send no "tip" value at all => set "tip" to 0 to match the new expectations.

The "new" clients will send some "tip" value => pass "tip" value to a web service as it is; the web service has possibility to detect NaN() itself and to reject the request as invalid with proper HTTP status code (and log such invalid request to detect malformed clients). The client know something went wrong and that his request wasn't processed.

I consider 0 to be a default value of "tip" which will be used for "old" clients only.

Correcting wrong (NaN) values in "tip" to 0 at this moment is bad idea as it hides a problem with the client's communication.

A reference to "a numeric value" requirement in the assignment is related to CosmosDB primarily I think.

upvoted 1 times

✉  **GigaCaster** 9 months, 3 weeks ago

I believe the given answer is correct as I can type "sell10" within the tip field and still get a false result with the 'if (!("tip" in i))' where they specifically point out in the question that you must have a number value and not just any value.

upvoted 5 times

✉  **mattvasc** 4 months, 1 week ago

Actually, for the given answer to be correct the isNaN should take as a parameter i["tip"] and not only i.

upvoted 4 times

✉  **faizalzain** 1 year ago

agreed

upvoted 1 times

✉  **Skyrocket** Highly Voted  1 year, 3 months ago

Admin, request you to update answers to avoid any further confusion.

1. getRequest
2. (!("tip" in i))
3. setBody

upvoted 61 times

✉  **Forhallf** 1 year, 2 months ago

Skyrocket is correct.

```
function validateToDoltemTimestamp() {  
    var context = getContext();  
    var request = context.getRequest();  
  
    // item to be created in the current operation  
    var itemToCreate = request.getBody();  
  
    // validate properties  
    if (!("timestamp" in itemToCreate)) {  
        var ts = new Date();  
        itemToCreate["timestamp"] = ts.getTime();  
    }  
  
    // update the item that will be created  
    request.setBody(itemToCreate);  
}
```

<https://docs.microsoft.com/en-us/azure/cosmos-db/how-to-write-stored-procedures-triggers-udfs>
upvoted 5 times

✉ **sujitwarrier11** 10 months, 1 week ago

where is the validation that the tip value is a number? so the current answer is right. isNaN checks if the value is not a number. if true it sets

value to 0.

upvoted 3 times

✉ **btrump** 1 year, 2 months ago

This is not correct. The prompt states, "must be present and contain a numeric value."

if i["tip"] == "foo" your passes but fails to meet the requirement.

upvoted 10 times

✉ **jasifu3** 1 month, 3 weeks ago

your argument is valid, but there is no better alternative. isNaN(i)["tip"] is evaluated as false["tip"] -> undefined every time.

upvoted 1 times

✉ **Basu525** 1 year, 2 months ago

this is the correct answer. admins please rectify it.

upvoted 2 times

✉ **sujitwarrier11** 10 months, 1 week ago

where is the validation that the tip value is a number? so the current answer is right. isNaN checks if the value is not a number. if true it sets value to 0.

upvoted 3 times

✉ **AZ204Cert** Most Recent 1 week, 6 days ago

Got this on 04/05/22 (selected getRequest, 2. (!"tip" in i), 3. setBody)

upvoted 1 times

✉ **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22

upvoted 1 times

✉ **DonOnur** 1 month, 4 weeks ago

I guess for the second option, none of the choices is correct.

upvoted 1 times

✉ **sieiro** 4 months, 3 weeks ago

I vote for !"tip" in i answer. In the other option "NaN" we will replace, for old clients, a invalid (not numeric) tip with a 0 value, instead of returning an error.

upvoted 1 times

✉ **rick_cschen** 5 months ago

have this on exam

upvoted 2 times

✉ **altafpatel1984** 5 months ago

Here not only have to check tip exist but also that it should be number, and so given answer is correct.

upvoted 1 times

✉ **nonoss** 6 months ago

The seconde should be : if(!("tip" in i)) {

based on " if (!("timestamp" in itemToCreate)) { " in the following snippet from the documentation:

```
function validateToDoltemTimestamp() {  
    var context = getContext();
```

```
var request = context.getRequest();

// item to be created in the current operation
var itemToCreate = request.getBody();

// validate properties
if (!("timestamp" in itemToCreate)) {
    var ts = new Date();
    itemToCreate["timestamp"] = ts.getTime();
}

// update the item that will be created
request.setBody(itemToCreate);
}
```

<https://docs.microsoft.com/en-us/azure/cosmos-db/sql/how-to-write-stored-procedures-triggers-udfs?tabs=javascript#pre-triggers>
upvoted 2 times

✉ **Abhiroop** 6 months ago

is it correct ? or NaN is correct(option 2)?
upvoted 1 times

✉ **AOE** 8 months, 1 week ago

To those who believe that isNaN is the appropriate answer, please check again what is written: we have isNaN(i)["tip"]. isNaN(i) will always return true as it checks the whole request body. If we had isNaN(i["tip"]), then it might be correct. but the second check will return undefined and not null. So the whole condition is completely wrong. "tip" in i will not check for number but at least it will check if it contains a value in a proper way.
upvoted 8 times

✉ **ddoth** 7 months, 2 weeks ago

That makes a lot of sense, thank you.
upvoted 1 times

✉ **Cullington** 8 months, 4 weeks ago

Ugly unreadable code
upvoted 4 times

✉ **Sidebottom** 8 months, 4 weeks ago

First of all this trigger is written in JavaScript and the clause i["tip"]==null condition is wrongly written if tip is not coming from any front channel application then i["tip"]==undefined and I also checked the i["tip"]==null returns false for undefined value ,so in the box2 it will be the first option i.e if(!("tip" in i))
upvoted 1 times

✉ **Snowtoad** 9 months, 2 weeks ago

This is an interesting one. On the one hand, performing the NaN check does ensure that the value is a number as expected. However, the number of read locations for data usually far exceeds the number of write locations. With this in mind, should it not be assumed, for performance, that the data within "tip" be of the correct type when written? If an API said that a value would be of a type, I would not expect to have to double check that each time I read the value.
My first instinct was the NaN, but the more I think about it, I think that the !(tip in i) is the correct method and that the number validation should not be performed on the read, but on the write (elsewhere).

upvoted 1 times

✉ **vini778** 10 months, 3 weeks ago

@skyrocket - you are right.
upvoted 1 times

✉ **mlantonis** 10 months, 4 weeks ago

Box 1: getContext().getRequest();

Box 2: if(!("tip" in i)) {

Box 3: r.setBody(i);

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/sql/how-to-write-stored-procedures-triggers-udfs?tabs=javascript#pre-triggers>
upvoted 6 times

✉ **sujitwarrier11** 10 months, 1 week ago

where is the validation that the tip value is a number? so the current answer is right. isNaN checks if the value is not a number. if true it sets value to 0.
upvoted 2 times

✉ **sanic** 11 months ago

Hi Guys,
I don't really understand why the answer with ("tip" in i) is the most upvoted, and why we would like to set any body on request.
First of all, we have a requirement - the tip amount MUST be a number. Therefore, we must validate it. Secondly, we have to write it into the database - currently, with the most upvoted answer, we do not store anything in the database, but we just set request body, which is not even a response and does not have any effect. Could somebody elaborate on that?

upvoted 6 times

✉  **Arrqqq** 9 months, 1 week ago

This is just how stored procedures for Cosmos DB are implemented. Inside the procedure you transform the request, and afterwards the transformed request is saved to database. You are not supposed to explicitly save the data here.
Almost identical code is in documentation <https://docs.microsoft.com/en-us/azure/cosmos-db/how-to-write-stored-procedures-triggers-udfs?tabs=javascript#pre-triggers>

upvoted 1 times

✉  **mlantonis** 11 months, 1 week ago

Box 1: getContext().getRequest();

Box 2: if!("tip" in i) {

Box 3: r.setBody(i);

```
function validateToDoItemTimestamp() {  
    var context = getContext();  
    var request = context.getRequest();
```

```
// item to be created in the current operation  
var itemToCreate = request.getBody();
```

```
// validate properties  
if (!("timestamp" in itemToCreate)) {  
    var ts = new Date();  
    itemToCreate["timestamp"] = ts.getTime();  
}
```

```
// update the item that will be created  
request.setBody(itemToCreate);  
}
```

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/how-to-write-stored-procedures-triggers-udfs?tabs=javascript#pre-triggers>

upvoted 2 times

✉  **sujitwarrier11** 10 months, 1 week ago

where is the validation that the tip value is a number? so the current answer is right. isNaN checks if the value is not a number. if true it sets value to 0.

upvoted 2 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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

Correct Answer: B

Instead 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.

Note: Large, long-running functions can cause unexpected timeout issues. General best practices include:

Whenever possible, refactor large functions into smaller function sets that work together and return responses fast. For example, a webhook or HTTP trigger function might require an acknowledgment response within a certain time limit; it's common for webhooks to require an immediate response. You can pass the

HTTP trigger payload into a queue to be processed by a queue trigger function. This approach lets you defer the actual work and return an immediate response.

Reference:

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

✉️  **sasisang** Highly Voted 1 year, 4 months ago

if someone knows the exact answer or any reference , then only comment. It is so confusing
upvoted 65 times

✉️  **john4p** 4 months, 1 week ago

A. Yes

"230 seconds is the maximum amount of time[...] For longer processing times, consider using the DURABLE FUNCTIONS ASYNC PATTERN[...]"
<https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale#timeout>

upvoted 15 times

✉️  **Netspud** 2 months, 1 week ago

See question 17, which would suggest the correct answer for this question is NO. The issue is the calling app is timing out not the function (i.e. the function is not replying as completed to the calling app in time, so use a queue, queue replies as completed in time, and work is deferred). At least after reading the two that is how I understand it. Very confusing question.

upvoted 1 times

✉️  **Awry** Highly Voted 1 year, 5 months ago

Shouldn't this be TRUE?

<https://docs.microsoft.com/en-us/azure/azure-functions/durable/durable-functions-overview?tabs=csharp#async-http>
upvoted 51 times

✉️  **WillPassExam** 1 year ago

Agree :)

Durable function is one of the suggested two options for long processing tasks (the other is to defer the actual work (e.g. push to service bus queue + queue triggered function solution))
<https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale#timeout>

Regardless of the function app timeout setting, 230 seconds is the maximum amount of time that an HTTP triggered function can take to respond to a request. This is because of the default idle timeout of Azure Load Balancer. For longer processing times, consider using the Durable Functions async pattern or defer the actual work and return an immediate response.

upvoted 22 times

✉️  **noro5** 2 months, 2 weeks ago

True, I think the explanation mentions this

<https://docs.microsoft.com/en-us/azure/architecture/patterns/async-request-reply#example>
which looks exactly like the Async Pattern of Durable Function

upvoted 1 times

 **sieiro** 4 months, 3 weeks ago

I think that maybe durable functions exceed the timeout of other functions, but if the functions fails or interrupt don't cover the "The app must process the blob data".

upvoted 1 times

 **Secure01** 1 year, 5 months ago

Seems you are right...

Durable Functions provides built-in support for this pattern(Pattern #3: Async HTTP APIs), simplifying or even removing the code you need to write to interact with long-running function executions.

upvoted 6 times

 **Evo_Morales** Most Recent 1 week, 3 days ago

Regardless of the function app timeout setting, 230 seconds is the maximum amount of time that an HTTP triggered function can take to respond to a request. This is because of the default idle timeout of Azure Load Balancer. For longer processing times, consider using the Durable Functions async pattern or defer the actual work and return an immediate response.

upvoted 1 times

 **Vegetta95** 1 month, 1 week ago

We have two important pieces of information

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

It's possible to implement HTTP triggered Azure function which is triggered by an HTTP request.

To make a function triggered by blob we have to create Blob triggered Azure function which is definitely not HTTP. If we don't have those two pieces of the puzzle I'd say the answer with Durable Function is correct because it helps with a 5-minute limit. What am I missing?

upvoted 1 times

 **GEEK4CODE** 1 month, 2 weeks ago

Selected Answer: A

The app must process the blob data and cannot return without completion -> Durable async pattern

upvoted 1 times

 **Alasmindas** 1 month, 2 weeks ago

Got this in exam 03/22 and cleared. Went with YES

upvoted 4 times

 **Nina2022** 2 months ago

it is not clear, is the app triggered using blob out trigger or http trigger ?

upvoted 2 times

 **Freidrich** 2 months ago

Selected Answer: B

Wrong.

upvoted 1 times

 **Freidrich** 1 month, 3 weeks ago

Apologies, I misvoted. The correct answer is A: Yes.

upvoted 1 times

 **heisenberg33** 2 months ago

Selected Answer: A

A. Yes Ref: <https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale#timeout>

upvoted 1 times

 **Arnab101** 3 months, 1 week ago

Selected Answer: B

Confusing.

"<https://docs.microsoft.com/en-us/azure/azure-functions/functions-triggers-bindings?tabs=csharp>" says "For triggers, the direction is always in"

Does that mean the trigger with input binding was never the solution?

This could mean the durable function async pattern won't solve the issue

upvoted 2 times

 **Arnab101** 3 months, 1 week ago

Selected Answer: A

Using Durable functions Async pattern is one of the options

upvoted 1 times

 **LeoAlioth** 3 months, 2 weeks ago

Selected Answer: A

Regardless of the function app timeout setting, 230 seconds is the maximum amount of time that an HTTP triggered function can take to respond to a request. This is because of the default idle timeout of Azure Load Balancer. For longer processing times, consider using the Durable Functions async pattern or defer the actual work and return an immediate response.

upvoted 1 times

 **vladhof** 3 months ago

The response has nothing to do with processing.

upvoted 1 times

✉  **leotheavanadev** 4 months, 3 weeks ago

No (B) is Correct. The only way to prevent azure functions from time-out is using App Service Plan Tier or Premium. Durable Functions have nothing to do with this

upvoted 4 times

✉  **AzureXin** 4 months, 3 weeks ago

Correct answer: A = YES

upvoted 1 times

✉  **Lucario95** 5 months ago

Selected Answer: A

Durable functions is used when normal requests to Azure Function would time-out.

Thus Answer A is correct

upvoted 4 times

✉  **r_k** 5 months ago

The correct answer is No.

<https://docs.microsoft.com/en-us/azure/azure-functions/durable/durable-functions-http-features?tabs=csharp#limitations>

upvoted 1 times

✉  **altafpatel1984** 5 months ago

If HTTP function can timeout then queue triggered function can also timeout! so durable function seems only way. or should use app service plan.

upvoted 1 times

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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?

A. Yes

B. No

Correct Answer: A

Large, long-running functions can cause unexpected timeout issues. General best practices include:

Whenever possible, refactor large functions into smaller function sets that work together and return responses fast. For example, a webhook or HTTP trigger function might require an acknowledgment response within a certain time limit; it's common for webhooks to require an immediate response. You can pass the

HTTP trigger payload into a queue to be processed by a queue trigger function. This approach lets you defer the actual work and return an immediate response.

Reference:

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

✉  **msdevanms** Highly Voted 1 year, 5 months ago

Answer is correct

upvoted 44 times

✉  **noro5** 2 months, 2 weeks ago

Yes, the note section here confirms that

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale#timeout>

upvoted 1 times

✉  **Secure01** Highly Voted 1 year, 5 months ago

Answer is NO. The best solution is durable functions

Durable Functions provides built-in support for this pattern(Pattern #3: Async HTTP APIs), simplifying or even removing the code you need to write to interact with long-running function executions.

Durable Functions provides built-in support for this pattern(Pattern #3: Async HTTP APIs), simplifying or even removing the code you need to write to interact with long-running function executions.

<https://docs.microsoft.com/en-us/azure/azure-functions/durable/durable-functions-overview?tabs=csharp#async-http>

upvoted 15 times

✉  **TakumaK** 10 months, 2 weeks ago

don't overthink. stick to what the question is asking. and why does this comment have the upvotes that many?

upvoted 14 times

✉  **AOE** 8 months, 1 week ago

Both are correct: service bus queue or durable function async pattern

upvoted 16 times

✉  **SummerWarrior** 3 months, 2 weeks ago

If a service bus queue trigger is used, wouldn't the function app still be timed out? The problem seems to be the processing time of the blob data.

upvoted 3 times

✉  **Yah88** 1 year, 1 month ago

you aren't asked for best solution, but for solution that works.

upvoted 17 times

✉  **Figa** 1 year, 4 months ago

Why should this Answer be false?

Can't be both correct? They are not asking for the optimal solution.

upvoted 13 times

✉️ **Cornholioz** 1 year, 4 months ago

You may be right. There are questions where two answers are true. I think both Durable Timers and this solution are both true.
upvoted 6 times

✉️ **Cornholioz** 1 year, 4 months ago

But then again, can you really chunk the Blob data into multiples just so the refactored smaller function sets can process in parallel? What if the Blob data is just one huge chunk of a single transaction that has to be completed in shot even if takes long. That makes the Durable Functions the better/right/only answer :)

upvoted 1 times

✉️ **tevivi8222** 1 year, 1 month ago

It was timing out because you were doing a long task during HTTP request, which can't live forever. If you're saving a huge blob and it's not being done during the lifecycle of that request, the time doesn't really matter.

upvoted 1 times

✉️ **Freidrich** Most Recent 2 months ago

Selected Answer: A

Correct, this is also a solution.

upvoted 1 times

✉️ **fksifujasdasdasdaqweqw** 3 months ago

The key point here is "The app is triggered using an output binding on the blob."

There is no input blob binding.

upvoted 1 times

✉️ **asdadasg2** 3 months, 1 week ago

The answer is correct - service bus and durable functions are both correct here.

The idea for this question is that you need to implement out of process messaging - both of these design patterns fit the goal

upvoted 1 times

✉️ **SummerWarrior** 3 months, 2 weeks ago

The given answer doesn't seem to be correct.

The timeout problem we have is because blob processing is long. It doesn't matter if function app is going to process from a queue trigger/blob trigger. So to get rid of the problem, isn't the right solution is to use durable functions?

upvoted 1 times

✉️ **DhanukaJ** 5 months, 2 weeks ago

Same as the previous, answer should be "No", because the question is state that the function is triggered using BLOB output binding is used to modify the state of the BLOB. Not to trigger the function.

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-output?tabs=csharp>

upvoted 2 times

✉️ **MiraA** 6 months, 3 weeks ago

From the assignment: "The app is triggered using an output binding on the blob."

What does it exactly mean? Does it means passing a Stream object with the blob data?

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-output>

And is it possible to store such payload (Stream object) in a Service Bus queue to be used to invoke a queue trigger function? Or payload would be a (string) path to the blob? Then the queue trigger function must connect to Blob Storage and read the blob by itself?

I would prefer Durable Function to achieve this...

upvoted 3 times

✉️ **fesioche** 8 months ago

Answer is YES:

The key is in "You need to ensure the app does not time out and processes the blob data."

"

Warning

In addition, storage logs are created on a "best effort" basis. There's no guarantee that all events are captured. Under some conditions, logs may be missed.

If you require faster or more reliable blob processing, consider creating a queue message when you create the blob. Then use a queue trigger instead of a blob trigger to process the blob. Another option is to use Event Grid; see the tutorial Automate resizing uploaded images using Event Grid.

"

Ref: <https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-trigger?tabs=csharp>

upvoted 2 times

✉️ **LauraGF** 8 months, 1 week ago

The documentation says "You can pass the HTTP trigger payload into a queue to be processed by a queue trigger function. This approach lets you defer the actual work and return an immediate response" but in this answer it says "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" It's not exactly the same. Would it be valid? Or is it a cheat answer?

upvoted 2 times

✉  **AmitTech** 10 months ago

When it comes to an HTTP trigger, the maximum function timeout is 230 seconds. For long-running functions with HTTP triggers, you should use Durable Functions or pass the HTTP payload to another function-based trigger.

upvoted 2 times

✉  **kondapaturi** 10 months ago

Answer is YES - a webhook or HTTP trigger function might require an acknowledgment response within a certain time limit; it's common for webhooks to require an immediate response. You can pass the HTTP trigger payload into a queue to be processed by a queue trigger function. This approach lets you defer the actual work and return an immediate response.

upvoted 1 times

✉  **Yogendra_examtopic** 10 months, 1 week ago

Solution to this is "Yes".

Read this -

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale#:~:text=Regardless%20of%20the,an%20immediate%20response>.

upvoted 1 times

✉  **mlantonis** 10 months, 3 weeks ago

YES

Regardless of the function app timeout setting, 230 seconds is the maximum amount of time that an HTTP triggered function can take to respond to a request. This is because of the default idle timeout of Azure Load Balancer. For longer processing times, consider using the Durable Functions async pattern or defer the actual work and return an immediate response.

So, 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.

Reference:

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

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale#timeout>

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-best-practices#avoid-long-running-functions>

upvoted 12 times

✉  **glam** 11 months, 2 weeks ago

A. Yes

upvoted 3 times

✉  **daporh** 1 year, 2 months ago

The answer is correct. Durable function async pattern just sets up a specified timeout and since we don't know how long the function will run, as the function always times out, then the best option is to defer the processing to a queue trigger function.

upvoted 4 times

✉  **rajwit** 1 year, 3 months ago

Answer is correct

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale#timeout>

Regardless of the function app timeout setting, 230 seconds is the maximum amount of time that an HTTP triggered function can take to respond to a request. This is because of the default idle timeout of Azure Load Balancer. For longer processing times, consider using the Durable Functions async pattern or defer the actual work and return an immediate response.

230seconds/60 = 3.84 hence better to move forward with best practice

upvoted 4 times

✉  **clarionprogrammer** 1 year ago

This is the best explanation as to why it is correct.

upvoted 2 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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?

A. Yes

B. No

Correct Answer: B

Instead 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.

Note: Large, long-running functions can cause unexpected timeout issues. General best practices include:

Whenever possible, refactor large functions into smaller function sets that work together and return responses fast. For example, a webhook or HTTP trigger function might require an acknowledgment response within a certain time limit; it's common for webhooks to require an immediate response. You can pass the

HTTP trigger payload into a queue to be processed by a queue trigger function. This approach lets you defer the actual work and return an immediate response.

Reference:

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

✉  **00avatar** Highly Voted 1 year, 3 months ago

Answer "No" is correct. Always On enables waking up on HTTPTrigger, but does not prevent the exceeding the max time out time of 230 seconds.
<https://docs.microsoft.com/en-us/azure/azure-functions/dedicated-plan#always-on>

upvoted 46 times

✉  **abdou1987** 11 months ago

Answer is YES
the default time for App service plan is 30 to unlimit
<https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale#timeout>

upvoted 3 times

✉  **abdou1987** 10 months, 4 weeks ago

Sorry i cant delete my previois comment.
I confirm the answer is NO. Whatever the app service plan the maximum timeout for HTTP triggers is 230 seconds.

upvoted 21 times

✉  **Basu525** 1 year, 2 months ago

Yes absolutely, as per Microsoft documentation, "Regardless of the function app timeout setting, 230 seconds is the maximum amount of time that an HTTP triggered function can take to respond to a request. This is because of the default idle timeout of Azure Load Balancer." So App service plan with Always On is not a solution.

upvoted 4 times

✉  **clarionprogrammer** 1 year ago

Agreed. 'No' is correct.
Here is the reference cited above.
<https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale#timeout>

upvoted 5 times

✉  **Amrit862** 1 year, 2 months ago

Answer is still 'No' but default time for dedicated host is 30 mins, it can be technically configured to infinite...but have to do that manually and that is not mentioned in solution.
ref: <https://docs.microsoft.com/en-us/azure/azure-functions/functions-host-json#functiontimeout>

upvoted 1 times

✉  **Cornholioz** Highly Voted 1 year, 4 months ago

Answer "B.No" seems right because this is not about App Services Best Practices.

upvoted 9 times

✉  **Takumak** Most Recent 10 months, 2 weeks ago

"Always On" feature of Azure App Service is to keep the host process running to allow more responsive to requests after significant idle periods.

This is UNRELATED to the timeout.

So the answer is obvious!!

upvoted 3 times

 **mlantonis** 10 months, 4 weeks ago

Correct Answer: No

Always On enables waking up on HTTP trigger, but does not prevent the exceeding the max time out time of 230 seconds.

If you run on an App Service plan, you should enable the Always on setting so that your function app runs correctly. On an App Service plan, the functions runtime goes idle after a few minutes of inactivity, so only HTTP triggers will "wake up" your functions. The Always on setting is available only on an App Service plan. On a Consumption plan, the platform activates function apps automatically.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/dedicated-plan#always-on>

upvoted 8 times

 **abdou1987** 11 months ago

Answer is YES

"Best for long-running scenarios where Durable Functions can't be used. Consider an App Service plan in the following situations:" link:

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale#overview-of-plans>

another link <https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale#timeout> that mentionned the duration is 30 min and upper

upvoted 1 times

 **abdou1987** 10 months, 4 weeks ago

Sorry i cant delete my previois comment.

I confirm the answer is NO. Whatever the app service plan the maximum timeout for HTTP triggers is 230 seconds.

upvoted 2 times

 **TakumaK** 10 months, 2 weeks ago

you are messing up this comment section by correcting your own wrong answer. :)

upvoted 1 times

 **UnknowMan** 11 months, 1 week ago

Answer "No" is correct

upvoted 2 times

 **glam** 11 months, 2 weeks ago

B. No.,

upvoted 3 times

 **bugimachi** 1 year, 3 months ago

The page, however, does not talk about Service Bus queues (any more).

upvoted 1 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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

Correct Answer: A

Azure Storage events allow applications to react to events. Common Blob storage event scenarios include image or video processing, search indexing, or any file-oriented workflow.

Events are pushed using Azure Event Grid to subscribers such as Azure Functions, Azure Logic Apps, or even to your own http listener.

Note: Only storage accounts of kind StorageV2 (general purpose v2) and BlobStorage support event integration. Storage (general purpose v1) does not support integration with Event Grid.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-event-overview>

✉  **Ankang** Highly Voted 1 year, 9 months ago

as is correct

upvoted 43 times

✉  **fadikh** Highly Voted 1 year, 1 month ago

The answer is correct, but it should have also mentioned that the function app must not be on a consumption plan. because in that case, it might take up to 10 minutes to process the event.

upvoted 19 times

✉  **BrettusMaximus** 11 months, 3 weeks ago

So the answer is NO. Cant wait 10 minutes

upvoted 5 times

✉  **altafpatel1984** 5 months ago

That limitation is only for Consumption plan. Since no mention of it, we can assume user can opt for premium, app service plan.

upvoted 4 times

✉  **bbou** 1 year ago

No 10 seconds

upvoted 1 times

✉  **bbou** 1 year ago

I was wrong - yes up to 10 minutes

upvoted 4 times

✉  **karthik0328** Most Recent 1 month, 3 weeks ago

Selected Answer: B

If we assume consumption plan then there is no guarantee that the process would start in the minute, if there is uncertainty only work on what is provided. Schrodinger's cat :)

upvoted 1 times

✉  **Freidrich** 2 months ago

Selected Answer: B

The proposed solution does not resolve our issue, as we are not guaranteed from this action that the relevant process starts within 1 minute of an upload. For instance, if we use a Blob storage trigger while on a Consumption plan.

upvoted 1 times

✉  **leonidn** 3 months, 2 weeks ago

There is nothing said that an Azure Function triggered by Azure Blob storage trigger. The solution allows using any kind of trigger mechanism, including EventGrid. So then, I'm for 'Yes', because there are no reasons to say that it's incorrect.

upvoted 6 times

✉ **beonsoft** 5 months, 3 weeks ago

It is YES.

The question is "You need to design the process that STARTS the photo processing.". So that you don't need to wait for the result.

upvoted 3 times

✉ **ning** 7 months, 3 weeks ago

Please see <https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-trigger?tabs=csharp>, this is apparently no!

upvoted 5 times

✉ **Marcin4455** 4 months ago

Could you highlight specifically why?

upvoted 4 times

✉ **ozbonny** 8 months, 3 weeks ago

I would say yes

upvoted 1 times

✉ **ning** 8 months, 4 weeks ago

I would say it is a "NO", no need to over think, azure function trigger up to 10 minutes, azure grid event can be done within 1 minute

upvoted 3 times

✉ **altafpatel1984** 5 months ago

That limitation is only for Consumption plan.

upvoted 1 times

✉ **DamianSobanski** 9 months, 2 weeks ago

The answer is NO. There is state that it should be executed in less than 1 min but Event Grid does not tihs. Event can be executed in less than 10 min.

upvoted 2 times

✉ **altafpatel1984** 5 months ago

That limitation is only for Consumption plan.

upvoted 1 times

✉ **j888** 9 months, 3 weeks ago

I will say 'no' in general cause it is not stating the hosting or the plan the function is on. Please see timing for the function:
<https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale#timeout>

I think using event triggers generally will be a more desirable behavior.

upvoted 1 times

✉ **kondapaturi** 10 months ago

YES is correct answer

upvoted 1 times

✉ **xupiter** 10 months, 2 weeks ago

Should be NO for two reasons:

1) The Azure Blob storage trigger requires a general-purpose storage account. Storage V2 accounts with hierarchical namespaces are also supported. The question has no mention about hierarchical namespaces.

2) For blobs, polling works on a "best effort" basis. There's no guarantee that all events are captured. If you require faster or more reliable blob processing, consider creating a queue message when you create the blob.

Link: <https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-trigger>

upvoted 6 times

✉ **ztt** 9 months, 1 week ago

Yes the link you provided contains the relevant information and even a warning against using BLOB triggers. Thanks!

upvoted 2 times

✉ **mlantonis** 10 months, 4 weeks ago

Correct Answer: Yes

upvoted 5 times

✉ **glam** 11 months, 2 weeks ago

A. Yes

upvoted 1 times

✉ **kishor1787** 1 year ago

Thanks

upvoted 1 times

 **Whirly** 1 year ago

Answer is Correct, use evnetgrid to trigger azure function to load images.

<https://docs.microsoft.com/en-us/azure/event-grid/resize-images-on-storage-blob-upload-event?toc=%2Fazure%2Fstorage%2Fblobs%2Ftoc.json&tabs=dotnet>

upvoted 5 times

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.

Correct Answer: B

Change feed support in Azure Blob Storage

The purpose of the change feed is to provide transaction logs of all the changes that occur to the blobs and the blob metadata in your storage account. The change feed provides ordered, guaranteed, durable, immutable, read-only log of these changes. Client applications can read these logs at any time, either in streaming or in batch mode. The change feed enables you to build efficient and scalable solutions that process change events that occur in your Blob Storage account at a low cost.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-change-feed>

✉️  **Ummara** Highly Voted 1 year, 9 months ago

B: the change feed provides transaction logs of all the changes that occur to the blobs and the blob metadata in your storage account. The change feed provides ordered, guaranteed, durable, immutable, read-only log of these changes. You can process these logs asynchronously, incrementally or in-full.

upvoted 56 times

✉️  **azurelearner666** 10 months, 1 week ago

Right!

upvoted 3 times

✉️  **mlantonis** Highly Voted 10 months, 4 weeks ago

Correct Answer: B

The purpose of the change feed is to provide transaction logs of all the changes that occur to the blobs and the blob metadata in your storage account. The change feed provides ordered, guaranteed, durable, immutable, read-only log of these changes. Client applications can read these logs at any time, either in streaming or in batch mode. The change feed enables you to build efficient and scalable solutions that process change events that occur in your Blob Storage account at a low cost.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-change-feed>

upvoted 10 times

✉️  **Freidrich** Most Recent 2 months ago

Selected Answer: B

Correct.

upvoted 1 times

✉️  **HimanshuNankani** 6 months, 2 weeks ago

What about the delete operations that are not logged by the change feed?

upvoted 4 times

✉️  **ozbonny** 8 months, 3 weeks ago

enabled change feed to get information and for auditing or compliance purpose

upvoted 1 times

✉️  **UnknowMan** 11 months, 1 week ago

Correct B

upvoted 3 times

✉️  **glam** 11 months, 2 weeks ago

B. Enable the change feed on the storage account and process all changes for available events.

upvoted 1 times

 **siddharth** 12 months ago

B is correct

upvoted 1 times

 **jokergester** 1 year, 1 month ago

For those who are confused with Azure Storage Analytics logging, read below. It also contains information about "Change Feed"

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-change-feed?tabs=azure-portal#what-is-the-difference-between-change-feed-and-storage-analytics-logging>

upvoted 6 times

 **dancsita** 1 year, 2 months ago

correct

upvoted 2 times

 **Dilipk84** 1 year, 3 months ago

correct

upvoted 2 times

 **khoant** 1 year, 3 months ago

Correct

upvoted 2 times

 **dineshkm06tnj** 1 year, 5 months ago

yes B is correct

upvoted 3 times

DRAG DROP -

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 setupScripts.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

Correct Answer:

Commands

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

Answer Area

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

Box 1: CMD [..]

Cmd starts a new instance of the command interpreter, Cmd.exe.

Syntax: CMD <string>

Specifies the command you want to carry out.

Box 2: FROM microsoft/aspnetcore-build:latest

Box 3: WORKDIR /apps/ContosoApp -

Box 4: COPY ./ .

Box 5: RUN powershell ./setupScript.ps1

 **agueda** Highly Voted 1 year, 1 month ago

It should be:

- FROM
- WORKDIR
- COPY
- RUN
- CMD

Same question on:

<https://www.examtopics.com/discussions/microsoft/view/13131-exam-az-300-topic-3-question-4-discussion/>

And:

<https://www.examtopics.com/discussions/microsoft/view/11045-exam-az-203-topic-1-question-7-discussion/>

upvoted 155 times

 **balis** 1 month ago

This is correct answer

It should be:

- FROM
- WORKDIR

- COPY
- RUN
- CMD

because WORKDIR will create directory if it doesn't exist <https://docs.docker.com/engine/reference/builder/#workdir>
upvoted 1 times

✉ **Den1354** 3 months ago

- FROM
- COPY
- WORKDIR
- RUN
- CMD

Otherwise we are going to set for work directory path which doesn't exist yet

upvoted 1 times

✉ **Dinima** 1 year, 1 month ago

You are correct. This has been discussed in Udemy course as well as follows,
The first statement in the Dockerfile must be the FROM statement to specify the image to use as the base image.

Then specify the Image working directory

Then copy all of the application contents using the COPY command

And then use the CMD command to run the PowerShell command and the ENTRYPOINT statement to run the dotnet application.
upvoted 23 times

✉ **Basu525** 1 year, 1 month ago

as per Udemy, the last steps would be CMD powershell ./script.ps1 and then ENTRYPOINT (dotnet, xx.dll) which I believe is the correct answer. But unfortunately the options are not there in Examtopic
upvoted 3 times

✉ **ranjithlive** 9 months ago

ENTRYPOINT instruction works very similarly to CMD in that it is used to specify the command executed when the container is started.
upvoted 3 times

✉ **solidrock** 6 months ago

which udemy course you guys are talking about?
upvoted 2 times

✉ **TakumaK** Highly Voted 10 months, 2 weeks ago

Just wondering who put the answers for the questions in this site? most of them are not correct.
upvoted 14 times

✉ **SlavMar** 10 months ago

VCE exams have same issues
Probably these are some braindumps of people who were not well prepared to take test or they took test just to scrap exam questions but they have no matter knowledge
upvoted 2 times

✉ **AZ204Cert** Most Recent 1 week, 6 days ago

Got this on 04/05/22 (selected FROM - WORKDIR - COPY - RUN - CMD)
upvoted 1 times

✉ **Evo_Morales** 2 weeks, 3 days ago

New to the site - it's disturbing how many answers that I see that conflict with top rated discussion comments. Anyone know how answers listed are determined? Is it scored automatically somehow?
upvoted 1 times

✉ **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22
upvoted 2 times

✉ **Baskman** 1 month, 2 weeks ago

Got this in the exam 03/22
upvoted 1 times

✉ **Alasmindas** 1 month, 2 weeks ago

Got this in the real exam on 03/22, cleared it - Went with FROM / WORKDIR/COPY/RUN/CMD
upvoted 3 times

✉ **DonOnur** 1 month, 4 weeks ago

According to docker:

<https://docs.docker.com/samples/rails/>

FROM

WORKDIR

COPY

RUN

CMD

upvoted 3 times

✉ **oescm** 2 months, 2 weeks ago

Got this one 02/2022. Went with highly voted answer.

upvoted 3 times

✉ **Mev4953** 3 months ago

Got this in the exam 01/22

upvoted 2 times

✉ **lugospod** 3 months ago

Got this one 01/2022. Wen with most voted (to avoid writing answers again)

upvoted 2 times

✉ **Arnab101** 3 months, 1 week ago

It should be:

- FROM

- WORKDIR

- COPY

- RUN

- CMD

CMD cannot be before FROM

Reference: <https://docs.docker.com/engine/reference/builder/>

upvoted 2 times

✉ **AidenYoukhana** 3 months, 3 weeks ago

FROM

WORKDIR

COPY

RUN

CMD

upvoted 2 times

✉ **Gautam47** 6 months ago

FROM

WORKDIR

COPY

RUN

CMD

upvoted 1 times

✉ **Drummer** 7 months, 3 weeks ago

In this other old exam has the same question

<https://www.examtopics.com/discussions/microsoft/view/13131-exam-az-300-topic-3-question-4-discussion/>

Answer is

1: FROM

2: WORKDIR

3: COPY

4: RUN

5: CMD

upvoted 5 times

✉ **ewertonews** 7 months, 3 weeks ago

Seems that the person who posted this answer wants people to fail the exam.

upvoted 4 times

✉ **jvyas** 6 months ago

I think they do it on purpose, so that they don't get removed or something.

upvoted 1 times

✉ **drw85** 7 months, 3 weeks ago

Not only is the answer completely wrong, the explanation is absolute garbage aswell.

CMD is the docker entrypoint, it's what docker runs when the container is started.

Has nothing to do with cmd.exe or anything like that...

upvoted 3 times

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.

Correct Answer: B

The Blob storage trigger starts a function when a new or updated blob is detected. The blob contents are provided as input to the function.

The Consumption plan limits a function app on one virtual machine (VM) to 1.5 GB of memory.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-trigger>

✉  **Kitkit** Highly Voted 1 year, 2 months ago

The answer is D. Use an App Service plan. Configure the Function App to use an Azure Blob Storage trigger.

Consumption plan can cause a 10-min delay in processing new blobs if a function app has gone idle. To avoid this latency, you can switch to an App Service plan with Always On enabled.

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-trigger?tabs=csharp>

upvoted 146 times

✉  **SlavMar** 10 months ago

Why not B then.

Using input for function apps seems to make more sense

upvoted 1 times

✉  **zzt** 9 months, 1 week ago

Seemingly there is no such thing as "input trigger" it is "input binding"

See: <https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-input?tabs=csharp>

upvoted 17 times

✉  **SlavMar** 10 months ago

I ment A

upvoted 1 times

✉  **Dinima** 1 year, 1 month ago

True, D, We have to use an Azure Blob storage trigger. In order to ensure the function is invoked immediately , m

upvoted 7 times

✉  **danielcr** Highly Voted 1 year, 2 months ago

A or D, never B.

With Consumption plan, you could have cold start, and the question say "must be processed as quickly as possible" so you need an App Service Plan.

Between A and D ... All triggers are Input, so i don't understand the difference.

upvoted 21 times

✉  **ewertonews** 7 months, 3 weeks ago

It cannot be A. There is no such thing as a input trigger. it's either a (Blob Storage) trigger or an input binding. They are different things.

upvoted 4 times

✉  **ranjitklive** 9 months ago

Agree with your point, all triggers are input..!!

upvoted 3 times

✉  **ewertonews** 7 months, 3 weeks ago

But that nomenclature is not used by MS.

A function can have a trigger and a input binding (HTTP trigger with a Storage Queue as input binding for example).

upvoted 2 times

✉  **noobpinkfloyd** [Most Recent] 3 weeks ago

Selected Answer: D

Consumption plan can have up to 10 minutes of cold start, and the 'input trigger' does not exist, there are triggers and input bindings.
upvoted 1 times

✉  **systerm** 3 weeks, 6 days ago

Selected Answer: D

We have triggers, input bindings and output bindings. 'Input trigger' - it is redundant.
upvoted 1 times

✉  **Nyalo** 1 month, 1 week ago

Selected Answer: D

D correct, input binding not input trigger
upvoted 1 times

✉  **vinarah** 1 month, 3 weeks ago

I think the correct answer is D since we have a requirement to minimize latency.
upvoted 1 times

✉  **Freidrich** 2 months ago

Selected Answer: D

The correct answer is D.
upvoted 1 times

✉  **DiegoManinetti** 2 months, 1 week ago

Selected Answer: D

The correct answer is D.
upvoted 1 times

✉  **MFahd** 2 months, 3 weeks ago

The correct answer is D:
upvoted 1 times

✉  **rkumar307** 2 months, 3 weeks ago

Selected Answer: D

correct answer is D. Use an App service plan. Configure the function app to use an azure blob storage trigger.
upvoted 1 times

✉  **mabusalma** 3 months ago

Answer d
1- Definitely not any consumption plan option, because they might be idle
2- Nothing called "input trigger"
upvoted 1 times

✉  **LeoAlioth** 3 months, 2 weeks ago

Selected Answer: D

consumption plan can cause a delay so D is the appropriate answer
upvoted 1 times

✉  **leonidn** 3 months, 2 weeks ago

Selected Answer: D

Consumption plan may cause up to 10 minutes delay.
upvoted 1 times

✉  **Lucario95** 3 months, 3 weeks ago

Selected Answer: D

Answer is D
upvoted 2 times

✉  **AidenYoukhana** 3 months, 3 weeks ago

Selected Answer: D

CORRECT ANSWER.
upvoted 1 times

✉  **iamdamzy** 3 months, 3 weeks ago

Correct Answer is D - Use an App Service plan. Configure the Function App to use an Azure Blob Storage trigger.
upvoted 1 times

✉  **Ojash** 3 months, 4 weeks ago

The Answer must be D.

upvoted 1 times

HOTSPOT -

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",  
            "copyIndex",  
            "priority",  
            "dependsOn"  
            "name": "storagesetup",  
            "count": 3  
        }  
    ],  
    {  
        "apiVersion": "2015-06-15",  
        "type": "Microsoft.Compute/virtualMachines",  
        "name": "[concat('VM', uniqueString(resourceGroup().id))]",  
        "copy",  
        "copyIndex",  
        "priority",  
        "dependsOn"  
        "[variables('loadBalancerName')]",  
        "[variables('virtualNetworkName')]",  
        "storagesetup",  
        ],  
        . . .  
    }  
],  
"outputs": {}  
}
```

Correct Answer:

Answer Area

```
{
  ...
  "resources": [
    {
      "apiVersion": "2016-01-01",
      "type": "Microsoft.Storage/storageAccounts",
      "name": "[concat(          (), 'storage', uniqueString(resourceGroup().id))]",
      "copy": {
        "copyIndex": 0,
        "priority": 10,
        "dependsOn": []
      },
      "location": "[resourceGroup().location]",
      ...
      "sku": {
        "name": "Standard_LRS"
      },
      "kind": "Storage",
      "properties": {},
      "copy": {
        "copyIndex": 0,
        "priority": 10,
        "dependsOn": []
      },
      "name": "storagesetup",
      "count": 3
    }
  ],
  {
    "apiVersion": "2015-06-15",
    "type": "Microsoft.Compute/virtualMachines",
    "name": "[concat('VM', uniqueString(resourceGroup().id))]",
    "copy": {
      "copyIndex": 0,
      "priority": 10,
      "dependsOn": [
        "[variables('loadBalancerName')]",
        "[variables('virtualNetworkName')]",
        "storagesetup",
        ],
      ...
    }
  ],
  "outputs": {}
}
```

Box 1: copyIndex -

Notice that the name of each resource includes the `copyIndex()` function, which returns the current iteration in the loop. `copyIndex()` is zero-based.

Box 2: copy -

By adding the `copy` element to the resources section of your template, you can dynamically set the number of resources to deploy.

Box 3: dependsOn -

Example:

```
"type": "Microsoft.Compute/virtualMachineScaleSets",
"apiVersion": "2020-06-01",
"name": "[variables('namingInfix')]",
"location": "[parameters('location')]",
"sku": {
    "name": "[parameters('vmSku')]",
    "tier": "Standard",
    "capacity": "[parameters('instanceCount')]"
},
"dependsOn": [
    "[resourceId('Microsoft.Network/loadBalancers', variables('loadBalancerName'))]"
]
```

```
[resourceld('Microsoft.Network/virtualNetworks', variables('virtualNetworkName'))]"  
],  
Reference:  
https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/copy-resources https://docs.microsoft.com/en-us/azure/virtual-machine-scale-sets/quick-create-template-windows
```

✉  **cloudbadadm** Highly Voted 1 year, 1 month ago

Answer: copyIndex, copy, Dependson. Check this link <https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/define-resource-dependency>.

upvoted 39 times

✉  **mlantonis** Highly Voted 11 months, 1 week ago

Box 1: copyIndex

Notice that the name of each resource includes the copyIndex() function, which returns the current iteration in the loop. copyIndex() is zero-based.

Box 2: copy

By adding copy loop to the resources section of your template, you can dynamically set the number of resources to deploy. You also avoid having to repeat template syntax.

Box 3: dependsOn

Within your Azure Resource Manager template (ARM template), the dependsOn element enables you to define one resource as a dependent on one or more resources.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/copy-resources>

<https://docs.microsoft.com/en-us/azure/virtual-machine-scale-sets/quick-create-template-windows>

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/define-resource-dependency>

upvoted 26 times

✉  **AZ204Cert** Most Recent 1 week, 6 days ago

Got this on 04/05/22 (selected copyIndex, copy, dependsOn)

upvoted 1 times

✉  **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22

upvoted 1 times

✉  **AidenYoukhana** 3 months, 3 weeks ago

CORRECT ANSWER.

upvoted 1 times

✉  **Rev1201** 7 months, 2 weeks ago

Answer is Correct!

upvoted 2 times

✉  **glam** 11 months, 2 weeks ago

Answer: copyIndex, copy, Dependson

upvoted 3 times

✉  **azuregenerator** 1 year, 1 month ago

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/template-tutorial-create-multiple-instances?tabs=CLI%2Cazure-cli>

upvoted 4 times

✉  **agueda** 1 year, 1 month ago

Agree with the answer

upvoted 9 times

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
<input type="radio"/>	<input type="radio"/>

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.

Correct Answer:**Answer Area**

Yes	No
<input type="radio"/>	<input checked="" type="radio"/>
<input checked="" type="radio"/>	<input type="radio"/>
<input checked="" type="radio"/>	<input type="radio"/>
<input checked="" type="radio"/>	<input type="radio"/>

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.

Box 1: No -

ExpirationTime - The time that the message expires.

InsertionTime - The time that the message was added to the queue.

Box 2: Yes -

maxDequeueCount - The number of times to try processing a message before moving it to the poison queue. Default value is 5.

Box 3: Yes -

When there are multiple queue messages waiting, the queue trigger retrieves a batch of messages and invokes function instances concurrently to process them.

By default, the batch size is 16. When the number being processed gets down to 8, the runtime gets another batch and starts processing those messages. So the maximum number of concurrent messages being processed per function on one virtual machine (VM) is 24.

Box 4: Yes -

Reference:

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

✉  **mlantonis** Highly Voted 10 months, 4 weeks ago

Box 1: No

It logs the following:

- ExpirationTime - The time that the message expires.
- InsertionTime - The time that the message was added to the queue.

Box 2: Yes

maxDequeueCount: The number of times to try processing a message before moving it to the poison queue. Default value is 5.

Box 3: Yes

When there are multiple queue messages waiting, the queue trigger retrieves a batch of messages and invokes function instances concurrently to process them. By default, the batch size is 16. When the number being processed gets down to 8, the runtime gets another batch and starts processing those messages. So the maximum number of concurrent messages being processed per function on one virtual machine (VM) is 24.

Box 4: Yes

[Table("Orders")]ICollector<Order> table bindings

And in the code it adds the order:

```
tableBindings.Add(JsonConvert.DeserializeObject<Object>(myQueueItem.AsString));
```

upvoted 50 times

✉  **idrisfl** Highly Voted 1 year, 1 month ago

Seems correct

<https://docs.microsoft.com/fr-fr/azure/azure-functions/functions-bindings-storage-queue#hostjson-settings>

upvoted 19 times

✉  **Anvsoc** Most Recent 4 months ago

correct

upvoted 1 times

✉  **tis_truth** 4 months, 2 weeks ago

Would love to answer this correctly but the full code isn't showing. The maxDequeueCount value isn't showing in the question codeset provided.
Does anyone have the full codeset?

upvoted 4 times

✉  **still6dark** 11 months, 1 week ago

Image isn't showing a full code? Please send me full code

upvoted 5 times

✉  **j888** 9 months, 3 weeks ago

Same.. obviously something is missing

upvoted 2 times

✉  **glam** 11 months, 2 weeks ago

Correct.

upvoted 1 times

✉  **kapetan** 1 year ago

The last statement is true: take a look at the input parameters:

...[Table("Orders")]ICollector<Order> table bindings...

and in the code it adds the order:

```
tableBindings.Add(JsonConvert.DeserializeObject<Object>(myQueueItem.AsString));
```

upvoted 2 times

✉  **Marusyk** 1 year, 1 month ago

Answer is correct

upvoted 3 times

✉  **Kuna_Lambo** 1 year, 1 month ago

AZ-203 Topic 1 Q#9

upvoted 2 times



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:

Consistency levels	
Strong	Bounded Staleness
Consistent Prefix	Eventual

Answer Area

Return the most recent patient status.

Consistency level

Return health monitoring data that is no less than one version behind.

Consistency level

After patient is discharged and all charges are assessed, retrieve the correct billing data with the final charges.

Consistency level

Correct Answer:

Consistency levels	
Strong	Bounded Staleness
Consistent Prefix	Eventual

Answer Area

Return the most recent patient status.

Strong

Return health monitoring data that is no less than one version behind.

Bounded Staleness

After patient is discharged and all charges are assessed, retrieve the correct billing data with the final charges.

Eventual

Box 1: Strong -

Strong: Strong consistency offers a linearizability guarantee. The reads are guaranteed to return the most recent committed version of an item. A client never sees an uncommitted or partial write. Users are always guaranteed to read the latest committed write.

Box 2: Bounded staleness -

Bounded staleness: The reads are guaranteed to honor the consistent-prefix guarantee. The reads might lag behind writes by at most "K" versions (that is

"updates") of an item or by "t" time interval. When you choose bounded staleness, the "staleness" can be configured in two ways:

The number of versions (K) of the item

The time interval (t) by which the reads might lag behind the writes

Box 3: Eventual -

Eventual: There's no ordering guarantee for reads. In the absence of any further writes, the replicas eventually converge.

Incorrect Answers:

Consistent prefix: Updates that are returned contain some prefix of all the updates, with no gaps. Consistent prefix guarantees that reads never see out-of-order writes.

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/consistency-levels>

 **AndresMza** Highly Voted 1 year, 1 month ago

Answers are correct

upvoted 55 times

 **mlantonis** Highly Voted 10 months, 4 weeks ago

Box 1: Strong

Box 2: Bounded staleness

Box 3: Eventual

Note: Consistent prefix: Updates that are returned contain some prefix of all the updates, with no gaps. Consistent prefix guarantees that reads never see out-of-order writes.

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/consistency-levels>

upvoted 17 times

□  **TakumaK** 10 months, 2 weeks ago

what is the Note for in your comment? you just copied it from the correct answer description which doesn't make sense to me.

upvoted 8 times

□  **Leo1328** Most Recent 5 days, 10 hours ago

<https://docs.microsoft.com/en-us/learn/modules/explore-azure-cosmos-db/5-choose-cosmos-db-consistency-level>

When the consistency level is set to bounded staleness, Cosmos DB guarantees that the clients always read the value of a previous write, with a lag bounded by the staleness window.

upvoted 1 times

□  **xRiot007** 1 month, 2 weeks ago

1 - Strong - strong consistency will guarantee the read of the most recent data.

2 - Bounded staleness

3. - Eventual - billing info is like a shopping list. It is irrelevant in what order billing info is retrieved as final charges will be summarized into a total anyway.

upvoted 3 times

□  **Baskman** 1 month, 2 weeks ago

Got this in the exam 03/22

upvoted 2 times

□  **Bartimaeus** 1 month, 2 weeks ago

I think it actually doesn't matter whether 2nd is Strong or Bounded Staleness.

We're only configuring consistency for reads (query).

Therefore, the result here will be the same, because you don't specify K / T in Bounded Staleness for reads - it's only for writes.

From docs for BS:

> As the staleness window approaches for either time or updates, whichever is closer, the service will throttle new *writes* to allow replication to catch up and honor the consistency guarantee.

(<https://docs.microsoft.com/en-us/azure/cosmos-db/consistency-levels#bounded-staleness-consistency>)

And as you may see in another section, the reads for Strong / BS consistency are performed for the same number of replicas (Local Minority). (<https://docs.microsoft.com/en-us/azure/cosmos-db/consistency-levels#consistency-levels-and-throughput>)

And as we have default consistency level set to Strong, the result will be the same in each case, because the write must be committed everywhere before it's actually retrieved.

upvoted 1 times

□  **Alasmindas** 1 month, 2 weeks ago

Got this in real exam on 03/22 and cleared, went with Strong/Bounded Staleness/Eventual

upvoted 2 times

□  **oescm** 2 months, 2 weeks ago

Got this one 02/2022. Went with highly voted answer.

upvoted 3 times

□  **rick1010** 2 months, 3 weeks ago

Box 1: Consistent prefix

Consistent prefix consistency

Consistent Prefix provides write latencies, availability, and read throughput comparable to that of eventual consistency, but also provides the ordering guarantees that suit the needs of scenarios where order is important.

Box 2: Bounded staleness

Box 3: Strong

Strong consistency offers a linearizability guarantee. Linearizability refers to serving requests concurrently. The reads are guaranteed to return the most recent committed version of an item. A client never sees an uncommitted or partial write. Users are always guaranteed to read the latest committed write.

upvoted 2 times

□  **Mev4953** 3 months ago

Got this in the exam 01/22

upvoted 2 times

□  **lugospod** 3 months ago

Got this one 01/2022. Went with most voted (to avoid writing answers again) event though I would not use Eventual in real life since I would like to be sure that I have correct information...i.e. patient leaves the hospital...receipt wants to be generated but one labs data still hasn't arrived, or it is not up to date...

upvoted 3 times

✉ **tamas_kiss** 4 months, 3 weeks ago

Box 2. Bounded staleness is enough

For a hospital we can suppose that we have only one region.

"Bounded Staleness provides the following consistency guarantees:

Consistency for clients in the same region for an account with single write region = Strong"

upvoted 2 times

✉ **Bartimaeus** 1 month, 2 weeks ago

> For a hospital we can suppose that we have only one region.

Why? The question says:

> The most recent patient status details must be retrieved even if multiple users in _different locations_ have updated the patient record.

upvoted 1 times

✉ **ning** 8 months ago

I think the second one is OK with Bounded staleness, due to factor this is hospital, with in the same region, it delays 5 seconds, cross region it delays 5 minutes; for this scenario, I think it is OK. This is not auto generating tons of data within seconds!

upvoted 1 times

✉ **Bartimaeus** 1 month, 2 weeks ago

> The most recent patient status details must be retrieved even if multiple users in different locations have updated the patient record. How do you know it's in the same region? Can be even US hospital in East US and Central US. Let's say you had laboratory test, which had to be conducted in a special facility (different region lab). The lab updated the record several times with various laboratory results.

Let's say at the same time you had some minor surgery in your main hospital. The doctor updates the record, but since coincidentally it's at the same time as lab posted results and he still has old version of data (> 2 versions old).

This violates the 2nd requirement.

There doesn't have to be tons of data - it can be just a case, when 2 facilities update the record at the same time.

Therefore I think the 2nd one should be Strong.

upvoted 1 times

✉ **paulomjeet** 8 months, 2 weeks ago

I think the answer should be Strong, Consistent prefix & Eventual as Bounded staleness has some fixed latency

upvoted 1 times

✉ **mc0re** 8 months, 3 weeks ago

For a single region account, the minimum value of K and T is 10 write operations or 5 seconds. So #2 must be Strong.

upvoted 3 times

✉ **ning** 8 months ago

5 seconds or 10 operations, whichever is smaller, do you expect more than one update in 5 seconds?

upvoted 1 times

✉ **gedev33** 8 months, 3 weeks ago

But Bounded Staleness also says "Consistency for clients in the same region for an account with single write region = Strong" and this is a hospital so presumably it's in the same region?

<https://docs.microsoft.com/en-us/azure/cosmos-db/consistency-levels>

upvoted 1 times

✉ **ozbonny** 8 months, 3 weeks ago

correct

upvoted 1 times

✉ **ning** 8 months, 4 weeks ago

The question says "most recent patient status" not "the committed patient status", so this must be eventual, which you always read most recent available data not the committed one.

For the second one, I agree bounded stateless set to up 1 is correct.

Finally, financial data have to strong, you must charge all bills before release the patient.

upvoted 1 times

HOTSPOT -

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.	Azure PowerShell Visual Studio command prompt Azure Migrate Azure Backup
Store images.	Azure Blob Storage Azure Data Lake Storage Azure File Storage Azure Table Storage

Correct Answer:

Answer Area

Action	Tool or service
Generalize the VM.	Azure PowerShell Visual Studio command prompt Azure Migrate Azure Backup
Store images.	Azure Blob Storage Azure Data Lake Storage Azure File Storage Azure Table Storage

Box 1: Azure Powershell -

Creating an image directly from the VM ensures that the image includes all of the disks associated with the VM, including the OS disk and any data disks.

Before you begin, make sure that you have the latest version of the Azure PowerShell module.

You use Sysprep to generalize the virtual machine, then use Azure PowerShell to create the image.

Box 2: Azure Blob Storage -

You can store images in Azure Blob Storage.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/capture-image-resource#create-an-image-of-a-vm-using-powershell>

  **st003**  1 year ago

The answer is right, it is show in AZ-900 as well.
upvoted 37 times

  **clarionprogrammer** 1 year ago

Powershell is correct.

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/capture-image-resource>

upvoted 6 times

✉  **mlantonis** Highly Voted 11 months, 1 week ago

Box 1: Azure Powershell

Creating an image directly from the VM ensures that the image includes all of the disks associated with the VM, including the OS disk and any data disks. Before you begin, make sure that you have the latest version of the Azure PowerShell module. You use Sysprep to generalize the virtual machine, then use Azure PowerShell to create the image.

Box 2: Azure Blob Storage

A VM Image is a collection of metadata and pointers to a set of VHDs (one VHD per disk) stored as page blobs in Azure Storage.

Reference:

<https://azure.microsoft.com/en-us/blog/vm-image-blog-post>

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/capture-image-resource>

upvoted 20 times

✉  **meoukg** Most Recent 1 month, 1 week ago

Got it on 03/2022, I chose as Generalize the VM = Azure PowerShell ; Store images = Azure Blob Storage

upvoted 2 times

✉  **BobCui** 4 months ago

Why not Azure Backup for the first box?

upvoted 3 times

✉  **ozbonny** 8 months, 3 weeks ago

powershell and blob storage

upvoted 2 times

✉  **glam** 11 months, 2 weeks ago

correct.

upvoted 3 times

✉  **titombo** 1 year, 1 month ago

What is the problem to store the VM images on Azure File Storage?

upvoted 4 times

 **DanVe** 1 year ago

Page blobs are the standard storage area for VM

upvoted 5 times

✉  **andsol** 1 year, 1 month ago

Looks like the answer is correct.

upvoted 5 times

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.

Correct Answer: AD

A: In Azure, you can run your functions directly from a deployment package file in your function app. The other option is to deploy your files in the d:\home\site

\wwwroot directory of your function app (see A above).

To enable your function app to run from a package, you just add a WEBSITE_RUN_FROM_PACKAGE setting to your function app settings.

Note: The host.json metadata file contains global configuration options that affect all functions for a function app.

D: To customize your deployment, include a .deployment file in the repository root.

You just need to add a file to the root of your repository with the name .deployment and the content:

[config]

command = YOUR COMMAND TO RUN FOR DEPLOYMENT

this command can be just running a script (batch file) that has all that is required for your deployment, like copying files from the repository to the web root directory for example.

Reference:

<https://github.com/projectkudu/kudu/wiki/Custom-Deployment-Script> <https://docs.microsoft.com/bs-latn-ba/azure/azure-functions/run-functions-from-deployment-package>

✉  **minisma** Highly Voted 1 year, 2 months ago

I think it is B and D

upvoted 48 times

✉  **rdemontis** 1 year, 1 month ago

I think you're correct: in fact

- run.cmd is used only to start a project as a dll file <https://www.sohabtariq.com/console-webjob/%C3%ACndex/>

- WEBSITE_RUN_FROM_PACKAGE doesn't consent the execution of any script. You can only run your web project from a package (.zip file typically)

<https://docs.microsoft.com/bs-latn-ba/azure/azure-functions/run-functions-from-deployment-package>

<https://github.com/Azure/app-service-announcements/issues/84>

- Instead in .csproj file PreBuild Event Target you can specify any command to execute before the compilation and the application execution.

<https://docs.microsoft.com/en-us/visualstudio/msbuild/msbuild-targets?view=vs-2019>

<https://stackoverflow.com/questions/44818730/is-there-a-net-core-cli-pre-before-build-task>

<https://stackoverflow.com/questions/28916414/visual-studio-add-pre-build-event-that-always-runs-c-project>

upvoted 4 times

✉  **Vegetta95** 1 month ago

If the solution is built on the local machine, you can add target before build and do operations like copy files, run .bat(which can generate script content). However, if the repository is hosted on GitHub, any target will not work, because GitHub does not build apps

upvoted 1 times

✉  **Arrrqqq** 9 months ago

More direct info <https://docs.microsoft.com/en-us/azure/app-service/deploy-best-practices#net>

"By default, Kudu executes the build steps for your .NET application (dotnet build)" - so pre-build step should work there. There is similar note for node.js

upvoted 1 times

✉  **ZodiaC** 9 months ago

1000000% CORRECT !!!!!

upvoted 2 times

✉  **rolandcha** Highly Voted 1 year, 2 months ago

the answer is :

C,D

upvoted 25 times

✉  **Kitkit** 1 year, 2 months ago

Can you explain why you think c is the answer?

upvoted 2 times

✉  **clarionprogrammer** 1 year ago

'C' makes no sense. Nothing exists on the Azure website in regard to a "run.cmd".

upvoted 4 times

✉  **dreamcoder** 4 months ago

C, D is correct.

To customize your deployment, include a .deployment file in the repository root. For more information, see Customize deployments and Custom deployment script.

<https://docs.microsoft.com/en-us/azure/app-service/deploy-continuous-deployment?tabs=github>

<https://github.com/projectkudu/kudu/wiki/Custom-Deployment-Script>

upvoted 2 times

✉  **Drgn** 1 year, 2 months ago

I agree C and D. The explanation of the Answers point to a Azure Function App, either the question was entered wrong (as they meant Azure Function App) into ExamTopics or the answers they chose were wrong.

upvoted 7 times

✉  **ACCP1** 1 year, 2 months ago

It could be A. It is used here for a web app. <https://docs.microsoft.com/en-us/azure/app-service/deploy-run-package>

upvoted 5 times

✉  **Robert12345Robert** 9 months, 3 weeks ago

Why is this upvoted? When you check the link you can read yourself that this will not run any scripts for you.

upvoted 8 times

✉  **abison007** Most Recent 4 weeks ago

I think CD

upvoted 1 times

✉  **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22

upvoted 3 times

✉  **Freidrich** 2 months ago

Selected Answer: BD

My vote.

upvoted 1 times

✉  **ytingyeu** 2 months ago

Don't think A is correct. "Running app from package" means hosting the app from a zip package. It's not about executing something inside the package before starting the service.

upvoted 2 times

✉  **ytingyeu** 2 months ago

I meant "Running function from package file"

upvoted 1 times

✉  **[Removed]** 2 months ago

Selected Answer: AD

In Azure, you can run your functions directly from a deployment package file in your function app. The other option is to deploy your files in the d:\home\site\wwwroot (Windows) or /home/site/wwwroot (Linux) directory of your function app.

upvoted 1 times

✉  **DiegoManinetti** 2 months, 1 week ago

Selected Answer: BD

Highly voted

upvoted 1 times

✉  **jgvh** 3 months, 2 weeks ago

Selected Answer: BD

Highly Voted

upvoted 2 times

✉  **leonidn** 3 months, 2 weeks ago

Selected Answer: BD

ZIP package itself gets mounted directly as the read-only wwwroot directory (<https://docs.microsoft.com/en-us/azure/app-service/deploy-run-package>). Hence, it cannot generate static files from there. Meantime, using PreBuild is acceptable. Agree on point D.

upvoted 2 times

✉ **yaroo1** 6 months, 3 weeks ago

Can anyone tell me correct answer with reference its very confusing ,
upvoted 8 times

✉ **kblee** 7 months, 2 weeks ago

B & D are correct1
upvoted 6 times

✉ **ewertonews** 7 months, 3 weeks ago

WEBSITE_RUN_FROM_PACKAGE expects either 1 (to upload the zipfile as is) or the path to the Webapp content (zipped), no a script to be ran.
<https://docs.microsoft.com/en-us/azure/app-service/deploy-run-package>

B and D are correct.
upvoted 2 times

✉ **UDevelop** 7 months, 3 weeks ago

CD is correct!
upvoted 3 times

✉ **rustycables** 8 months, 1 week ago

I guessed B and D, and I was surprised to see the answer A and D. Reading the MS article for A [WEBSITE_RUN_FROM_PACKAGE] didn't help. It doesn't answer the question asked here, which is about running scripts to generate static content. The discussion here doesn't help answer this either.

upvoted 2 times

✉ **laodiseus** 8 months, 1 week ago

I think it is A and D, for A there is this doc <https://docs.microsoft.com/en-us/azure/azure-functions/run-functions-from-deployment-package> and for D <https://docs.microsoft.com/en-us/azure/app-service/deploy-continuous-deployment?tabs=github>. Besides same question on different exam with same answers <https://www.examtopics.com/discussions/microsoft/view/21476-exam-az-203-topic-24-question-20-discussion/>

upvoted 1 times

✉ **ning** 8 months, 3 weeks ago

B & D. D is for sure, documented in MS. For B, it is part of the solution, run the static resource generation, then copy to output directory, which will be copied to Azure with deployment automatically, the answer does not say copy to output directory part, I guess that is implied.

upvoted 1 times

DRAG DROP -

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.



Correct Answer:

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.

Create a new template deployment.

Export a Resource Manager template.

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

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



To move a storage account, create a copy of your storage account in another region. Then, move your data to that account by using AzCopy, or another tool of your choice.

The steps are:

- ⇒ Export a template.
- ⇒ Modify the template by adding the target region and storage account name.
- ⇒ Deploy the template to create the new storage account.
- ⇒ Configure the new storage account.
- ⇒ Move data to the new storage account.
- ⇒ Delete the resources in the source region.

Note: You must enable the change feed on your storage account to begin capturing and recording changes. You can enable and disable changes by using Azure

Resource Manager templates on Portal or Powershell.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-account-move> <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-change-feed>

✉️  **MariusN**  1 year, 5 months ago

I think you first have to export the Resource Manager template before you can create a new template deployment. So, swap options 1 and 2 from the solution. In the first link of the solution's text, exporting is also considered as the first step.

upvoted 100 times

✉️  **Kobee** 1 year, 5 months ago

I made a mistake, you're right.

I made a video to see the different steps: <https://imgur.com/gpv3jLW>

upvoted 65 times

✉️  **ndh103** 10 months ago

thank you for the video

upvoted 2 times

✉️  **Juanlu** 1 year, 4 months ago

Agree !

Thanks for the video. Easily to understand the discussion !

upvoted 7 times

✉️  **kblee** 7 months, 2 weeks ago

agree!

upvoted 1 times

✉️  **pablocg** 1 year, 5 months ago

I agree with you. In the first link, in the step to modify the template it first creates the template deployment from the marketplace.

You can see the general steps to deploy an ARM template from the portal in the docs:

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/quickstart-create-templates-use-the-portal#edit-and-deploy-the-template>

upvoted 2 times

✉️  **bharatdilse** 9 months, 4 weeks ago

AzCopy can be called from within the template also. That makes the deployment fully automatic

upvoted 2 times

✉️  **Yumico** 1 year, 5 months ago

Agree with Marius, the answer is wrong.

Should EXPORT a template before Create a resource(type=template deployment), as clearly described in link: "To get started, export, and then modify a Resource Manager template."

<https://docs.microsoft.com/en-us/azure/storage/common/storage-account-move?toc=%2Fazur%2Fstorage%2Fblobs%2Ftoc.json&tabs=azure-portal#prepare>

upvoted 11 times

✉️  **victor**  1 year, 2 months ago

Answer is Wrong. correct Sequence is

Export

Create

Modify

Deploy

AZ copy

upvoted 65 times

✉️  **noro5** 2 months, 2 weeks ago

Yes, confirmation: <https://docs.microsoft.com/en-us/azure/storage/common/storage-account-move?tabs=azure-portal>

upvoted 1 times

✉️  **Robert12345Robert** 9 months, 3 weeks ago

I agree, see:

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/quickstart-create-templates-use-the-portal>

upvoted 3 times

✉️  **rick1010**  2 months, 3 weeks ago

Generate a template using the portal

Modify (Edit template) (Changes Value like region)

Create the template deployment

Deploy the template

Az COpy

upvoted 2 times

✉️  **trickerk** 6 months, 1 week ago

The first step described in the solution is Export a template, so MaruisN is right!

upvoted 1 times

✉  **debanjan10** 6 months, 2 weeks ago

The order must be: Export > Create > Modify > Deploy > Use Az Copy
upvoted 1 times

✉  **debanjan10** 6 months, 3 weeks ago

Order:
Export -> Create -> Modify -> Deploy -> Use AzCopy
upvoted 1 times

✉  **cool_tool** 8 months, 2 weeks ago

First, we need to export the existing resource manager template that was used to create the original storage account.
==> Export a Resource Manager template

Then you can modify the template and change the storage account name and region for the new storage account.
==> Modify the template by changing the storage account and region

Then create a new template in Azure with the help of the MODIFIED template
==> Create a new template deployment.

Then
==> Deploy the template to create a new storage account in the target region

And then
==> Use the AzCopy tool to transfer the data from the source to destination storage account.
upvoted 11 times

✉  **ning** 8 months, 3 weeks ago

This one is very confusing, you can modify the exported file, then create a new storage account with the modified file; or you can modify the exported file as part of the process of creating. As for test purpose, might be export --> create --> modify --> deploy --> move data, but I guess it does not really matter which goes first for create vs modify

upvoted 1 times

✉  **GigaCaster** 9 months ago

Just my opinion but if I go by the wording of the answers the process they are following are as follows:

1. They create the deployment slot for the template.
2. They Export or add the preset template into the deployment slot.
3. They modify it.
4. Deploy it.
5. Copy to new storage.

upvoted 1 times

✉  **mkrizevnik** 9 months, 2 weeks ago

I think it should be:

1. Export
2. Modify
3. Create
4. Deploy
5. AzCopy

Steps 2. and 3. can be switched as you can modify the template also in Azure Portal during deployment, but this supports only basic editing and is not recommended for complex scenarios in which external tools for editing (like VS Code) can be used.

Source: <https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/quickstart-create-templates-use-the-portal>

"The Azure portal can be used to perform some basic template editing. In this quickstart, you use a portal tool called Template Deployment. Template Deployment is used in this tutorial so you can complete the whole tutorial using one interface - the Azure portal. To edit a more complex template, consider using Visual Studio Code, which provides richer edit functionalities"

upvoted 3 times

✉  **Kalaisuran** 9 months, 3 weeks ago

As per the link : <https://docs.microsoft.com/en-us/azure/storage/common/storage-account-move?tabs=azure-portal>
export
create the template deployment
modify the template
deploy
azcopy
upvoted 2 times

✉  **DParekh** 10 months ago

it is 3, 5, 4, 2, 1
upvoted 1 times

✉  **mlantonis** 10 months, 4 weeks ago

Answer:

- 1: Export
- 2: Create
- 3: Modify

4: Deploy
5: AZ copy

Step 1: Go to your storage account and select "Export Template". This lets you download the template or save it to "Templates" service.
Step 2: Create a new template by saving the exported template to Templates.
Step 3: Go to Templates, select the new Template - Modify it by clicking on Edit.
Step 4: Once modified, you can deploy the template.
Step 5: Use AzCopy to move the data.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-account-move?tabs=azure-portal#prerequisites>

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-change-feed>
upvoted 9 times

✉  **tomhansen** 11 months ago

It should be :

- 1.Export a resource manager template
- 2.Create a new template deployment
- 3.Modify the template by changing the storage account name and region
- 4.Deploy the template to create a new storage account in the target region
- 5.Use AZCopy to copy the data to the new storage account

upvoted 2 times

✉  **glam** 11 months, 2 weeks ago

Export
Create
Modify
Deploy
AZ copy

upvoted 2 times

✉  **Frakandel** 11 months, 2 weeks ago

The order of step 1 & 2 doesn't matter. Both orderings are ok... The third step (modify) needs the output of the Export template:

- 1-2) Export Create
- 3) Modify
- 4) Deploy
- 5) User azcopy

upvoted 2 times

✉  **JoeInOregon** 11 months ago

This logic makes sense to me (that 1-2 or 2-1 is the same) but I wonder if the actual test sees it that way.

upvoted 1 times

✉  **jay158** 11 months, 3 weeks ago

Please Note, 'create template deployment' is used for deployment and is not Create Template.

Right Sequence = Export , Modify, Create Deployment, Deploy, AZ Copy

upvoted 4 times

DRAG DROP -

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	Firewall configuration	
Serial console	Supporting services script	
Hybrid Runbook Worker		
Custom Script Extension		

Correct Answer:

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

Reference:

<https://docs.microsoft.com/en-us/azure/automation/automation-hybrid-runbook-worker> <https://docs.microsoft.com/en-us/azure/virtual-machines/windows/run-command>

✉  **agueda** Highly Voted 1 year, 1 month ago

1. Run Command
2. Customer Script Extension

Some question: <https://www.examtopics.com/discussions/microsoft/view/12062-exam-az-203-topic-1-question-11-discussion/>
upvoted 62 times

✉  **if54uran** 10 months, 1 week ago

but it says the firewall configuration has to happen automatically. How does "Run command" do that?
upvoted 4 times

✉  **pmsiva** 1 year, 1 month ago

The Custom Script Extension downloads and executes scripts on Azure virtual machines. This extension is useful for post deployment configuration, software installation, or any other configuration or management tasks. Scripts can be downloaded from Azure storage or GitHub or provided to the Azure portal at extension run time.

upvoted 4 times

✉  **BrettusMaximus** 11 months, 3 weeks ago

Cant use run to configure firewall. The run command uses the VM OS but the VM does not have access at that point.
upvoted 2 times

✉  **fesioche** 8 months ago

The Run Command feature enables virtual machine and application management and troubleshooting using scripts, and is available even when the machine is not reachable, for example if the guest firewall doesn't have the RDP or SSH port open.

Ref: <https://docs.microsoft.com/en-us/azure/virtual-machines/windows/run-scripts-in-vm#run-command>
upvoted 5 times

✉ **titombo** 1 year, 1 month ago

On this link is showing the same as we have now, 1. Run Command and 2. Hybrid Runbook Worker
upvoted 2 times

✉ **mlantonis** Highly Voted 10 months, 4 weeks ago

Box 1: Run Command

This capability is useful in all scenarios where you want to run a script within a VM. It's one of the only ways to troubleshoot and remediate a VM that doesn't have the RDP or SSH port open, because of improper network or administrative user configuration.

Box 2: Customer Script Extension

The Custom Script Extension downloads and executes scripts on Azure virtual machines. This extension is useful for post deployment configuration software installation, or any other configuration or management tasks. Scripts can be downloaded from Azure storage or GitHub, or provided to the Azure portal at extension run time. The Custom Script Extension integrates with Azure Resource Manager templates, and can be run using the Azure CLI, PowerShell, Azure portal, or the Azure Virtual Machine REST API.

upvoted 36 times

✉ **mlantonis** 10 months, 4 weeks ago

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/extensions/custom-script-windows>

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/run-scripts-in-vm>

upvoted 6 times

✉ **meoukg** Most Recent 1 month, 1 week ago

Got it on 03/2022, I chose as Firewall configuration = Run command ; Supporting service scripts = Hybrid Runbook Worker
upvoted 3 times

✉ **Bartimaeus** 2 months ago

Why not Serial console for Firewall? It also doesn't require SSH access and it's easier to use than Run Command.
upvoted 1 times

✉ **leonidn** 3 months, 2 weeks ago

1. Run Command
2. Customer Script Extension

Hybrid runbook worker does not meet the requirement "Supporting services must be installed by using an Azure PowerShell script that is stored in Azure Storage". Meantime Customer Script Extension does.

upvoted 4 times

✉ **jggoaa** 1 week, 4 days ago

agRee it should be the script extension over the Worker
upvoted 1 times

✉ **AzureXin** 4 months, 2 weeks ago

1. Run Command
2. Customer Script Extension
upvoted 1 times

✉ **AJ309** 7 months ago

which one to choose?
upvoted 1 times

✉ **ning** 8 months, 3 weeks ago

No idea that run command can start automatically, no where in MS doc mentions that. Both should be use custom extension. Do not confused with without firewall cannot access azure resources, custom extension can be anywhere, e.g. github, or you can provide custom data when create VM, it becomes a local file.

upvoted 3 times

✉ **somenkr** 9 months, 2 weeks ago

Correct ans: Run Command and Custom Script Extension.
<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/run-scripts-in-vm>
Custom Script Extension

The Custom Script Extension is primarily used for post deployment configuration and software installation.

Download and run scripts in Azure virtual machines.

Can be run using Azure Resource Manager templates, Azure CLI, REST API, PowerShell, or Azure portal.

Script files can be downloaded from Azure storage or GitHub, or provided from your PC when run from the Azure portal.

Run PowerShell script in Windows machines and Bash script in Linux machines.

upvoted 2 times

SlavMar 10 months ago

I don't understand why use hybrid worker if there is no need for accessing on-premise resources? That does not make sense just to run simple script.

upvoted 1 times

glam 11 months, 2 weeks ago

1. Run Command
2. Customer Script Extension

upvoted 2 times

safwan03 12 months ago

Why can't you use Run Command for both?

Or Custom script for both?

upvoted 5 times

Bartimaeus 2 months ago

The Custom script has easy integration with Azure storage - you just select the script from there. And for the 2nd there's a requirement to use script stored in Azure storage - theoretically you could download it and use Run Command to run it on the VM, but just seems stupid if you have an easy way with Custom script.

I think you can't use Custom script for firewall, because of 'access Azure resources' part.

You need to provide some location of the script and it can't be Azure Storage for example.

It's also easier to change / debug firewall rules if these are not working, since you don't have script ready.

Normally you could:

<https://docs.microsoft.com/en-us/troubleshoot/azure/virtual-machines/enable-disable-firewall-rule-guest-os#mitigation-1-custom-script-extension>

upvoted 1 times

[Removed] 10 months, 1 week ago

I am confused aswell..

upvoted 2 times

yobllip 1 year ago

2. Custom Script Extension, since requirement states that ps script stored in azure storage

<https://docs.microsoft.com/en-us/azure/virtual-machines/extensions/custom-script-windows>

upvoted 6 times

Ajaykumar 1 year, 1 month ago

1. Run Command
2. Custom Script Extension

Custom Script Extension is preferred when the script is stored in Azure Storage.

upvoted 5 times

titombo 1 year, 1 month ago

I would say 2. is custom script extension, because it's saying it's an Azure provisioned VM, so the VM is defined inside of Azure, if it was an external VM I would go to Hybrid Runbook Worker

upvoted 4 times

Marusyk 1 year, 1 month ago

1. Run Command
2. Customer Script Extension

upvoted 9 times

HOTSPOT -

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"
```

New-AzWebAppSlot
New-AzWebApp
New-AzAppServicePlan
New-AzResourceGroup

-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
```

Correct Answer:**Answer Area**

```
$gitrepo="https://github.com/TailSpinToys/webapp"
$webappname="TailSpinToysWeb"
$location="WestUS2"
```

New-AzWebAppSlot
New-AzWebApp
New-AzAppServicePlan
New-AzResourceGroup

-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

```
$PropertiesObject = @{repoUrl = "$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
```

Box 1: New-AzResourceGroup -

The New-AzResourceGroup cmdlet creates an Azure resource group.

Box 2: New-AzAppServicePlan -

The New-AzAppServicePlan cmdlet creates an Azure App Service plan in a given location

Box 3: New-AzWebApp -

The New-AzWebApp cmdlet creates an Azure Web App in a given a resource group

Box 4: New-AzWebAppSlot -

The New-AzWebAppSlot cmdlet creates an Azure Web App slot.

Reference:

<https://docs.microsoft.com/en-us/powershell/module/az.resources/new-azresourcegroup?view=azps-2.3.2> <https://docs.microsoft.com/en-us/powershell/module/az.websites/new-azappserviceplan?view=azps-2.3.2> <https://docs.microsoft.com/en-us/powershell/module/az.websites/new-azwebapp?view=azps-2.3.2> <https://docs.microsoft.com/en-us/powershell/module/az.websites/new-azwebappslot?view=azps-2.3.2>

✉  **AndresMza**  1 year, 1 month ago

Answer is correct

upvoted 48 times

✉  **mlantonis**  10 months, 4 weeks ago

Box 1: New-AzResourceGroup

The New-AzResourceGroup cmdlet creates an Azure resource group.

Box 2: New-AzAppServicePlan

The New-AzAppServicePlan cmdlet creates an Azure App Service plan in a given location

Box 3: New-AzWebApp

The New-AzWebApp cmdlet creates an Azure Web App in a given a resource group

Box 4: New-AzWebAppSlot

The New-AzWebAppSlot cmdlet creates an Azure Web App slot.

upvoted 16 times

✉  **mlantonis** 10 months, 4 weeks ago

Reference:

<https://docs.microsoft.com/en-us/powershell/module/az.resources/new-azresourcegroup?view=azps-2.3.2>
<https://docs.microsoft.com/en-us/powershell/module/az.websites/new-azappserviceplan?view=azps-2.3.2>
<https://docs.microsoft.com/en-us/powershell/module/az.websites/new-azwebapp?view=azps-2.3.2>
<https://docs.microsoft.com/en-us/powershell/module/az.websites/new-azwebappslot?view=azps-2.3.2>

upvoted 4 times

✉  **petitbilly**  1 month, 2 weeks ago

Got it in exam 03/22

upvoted 2 times

✉  **debanjan10** 6 months, 3 weeks ago

Always:

Resource Group / Group -> App Service Plan -> Web App -> Web App Slot -> Web App Source

upvoted 6 times

✉  **[Removed]** 10 months, 1 week ago

There is another question similar to this one but with AzureCLI. But share the same structure.

upvoted 3 times

✉  **UnknowMan** 11 months, 1 week ago

Answer is correct

upvoted 2 times

✉  **glam** 11 months, 2 weeks ago

correct.

upvoted 3 times

✉  **hems4all** 11 months, 3 weeks ago

Given answer is correct

upvoted 2 times

✉  **joancar2009** 1 year ago

Correct..

upvoted 3 times



HOTSPOT -

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`

▼	▼
-AssignIdentity:	
-IdentityId:	

▼	▼
\$SystemAssigned	
\$UserAssigned	

Correct Answer:

Answer Area

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

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

▼	▼
-AssignIdentity:	
-IdentityId:	

▼	▼
\$SystemAssigned	
\$UserAssigned	

Box 1: -IdentityType -

Enable system-assigned managed identity on an existing Azure VM:

To enable a system-assigned managed identity, use the -IdentityType switch on the Update-AzVM cmdlet (see below).

Box 2: \$SystemAssigned -

`$vm = Get-AzVM -ResourceGroupName myResourceGroup -Name myVM`

`Update-AzVM -ResourceGroupName myResourceGroup -VM $vm -IdentityType SystemAssigned`

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/qs-configure-powershell-windows-vm>

✉  **agueda**  1 year, 1 month ago

The parameter should be "IdentityType", not "IdentityId" as it's stated in the reference link.

"SystemAssigned" is correct

upvoted 39 times

✉  **Cholo981** 10 months, 2 weeks ago

No, the second value is a variable, not a statement.

It is supposed to contain the User assigned managed identity string for the parameter "IdentityId".

That's why we have IdentityId and NOT IdentityType.

That's why the second dropdownlist is a Variable, not a string.

upvoted 15 times

✉  **TakumaK** 10 months, 2 weeks ago

The question obviously mentions "must be associated with the VM service instance". then how can it be user assigned? and how are you 100% sure the variable is what you guess even it is not in the question???

upvoted 1 times

✉  **Cholo981** 10 months, 1 week ago

It is in the question:

"\$" INDICATES a powershell variable. Is right there.

I'm not "guessing" anything. You guys are guessing BOTH the possible answers are wrong written...
My answer is the only possible if the question is correct.

Someone could point that IdentityId require also the IdentityType parameter but:

1- If you don't specify it, the shell will request it to you (I tried the script, you should do that too, don't count to much on the comments and the upvotes here, many are wrong);

2- Is it really needed if the VM already have a UAMI? this is an update command, you may want to add a UAMI or edit one.

BTW, I just passed the Exam (and I got the question too). So is not my problem anymore. Good luck. :)
upvoted 10 times

✉  **Shadoken** 5 months, 2 weeks ago

I agree agueda. If you see the documentation its mandatory add "-IdentityType" tag.

<https://docs.microsoft.com/en-us/powershell/module/az.compute/update-azvm?view=azps-6.6.0#syntax>
upvoted 2 times

✉  **d0bermannn** 8 months, 1 week ago

as we see here <https://docs.microsoft.com/en-us/powershell/module/az.compute/update-azvm?view=azps-6.2.1>
there are both IdentityType and IdentityId parameters for update-azvm
upvoted 2 times

✉  **shocks** 11 months, 3 weeks ago

The \$ before "SystemAssigned" is superflous.
upvoted 3 times

✉  **Cholo981** 10 months, 2 weeks ago

1- You can think there are two distinct errors in the question.
2- ...or then you can try to answer thinking both IdentityId and the "\$" in the second ddl are ok.
The \$ means that's a variable.
So it must contains a specific User Managed Identity path for the parameter IdentityId. Can't be System Assigned.
I'll go for the second one...
upvoted 7 times

✉  **Bartimaeus** 1 month, 2 weeks ago

It also may have been copy-paste error in the question as in this issue:
<https://github.com/MicrosoftDocs/azure-docs/issues/57129>
upvoted 1 times

✉  **laodiseus** 8 months, 1 week ago

Agree with Cholo981, in <https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/qs-configure-powershell-windows-vm> there is a paragraph When you get to the "Create the VM" section, make a slight modification to the New-AzVMConfig cmdlet syntax. Add the -IdentityType UserAssigned and -IdentityID parameters to provision the VM with a user-assigned identity. Replace <VM NAME>, <SUBSCRIPTION ID>, <RESOURCE GROUP>, and <USER ASSIGNED IDENTITY NAME> with your own values. For example:\$vmConfig = New-AzVMConfig -VMName <VM NAME> -IdentityType UserAssigned -IdentityID "/subscriptions/<SUBSCRIPTION ID>/resourcegroups/<RESOURCE GROUP>/providers/Microsoft.ManagedIdentity/userAssignedIdentities/<USER ASSIGNED IDENTITY NAME>..." the case here in the question is that the string with the id of identity is stored in \$UserAssigned powershell variable
upvoted 8 times

✉  **glam**  11 months, 2 weeks ago

1. IdentityType
2. SystemAssigned
upvoted 19 times

✉  **fesioche** 3 months ago

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/qs-configure-powershell-windows-vm>
\$vmConfig = New-AzVMConfig -VMName <VM NAME> -IdentityType UserAssigned -IdentityID "/subscriptions/<SUBSCRIPTION ID>/resourcegroups/<RESOURCE GROUP>/providers/Microsoft.ManagedIdentity/userAssignedIdentities/<USER ASSIGNED IDENTITY NAME>..."
upvoted 1 times

✉  **TangAnna**  4 days, 9 hours ago

The given answer is correct (IdentityId, \$UserAssigned)
note the last parameter is a variable, so IdentityId is correct.
[https://docs.microsoft.com/en-us/powershell/module/az.compute/update-azvm?view=azps-7.4.0&viewFallbackFrom=azps-6.2.1](https://docs.microsoft.com/en-us/powershell/module/az.compute/update-azvm?view=azps-7.4.0)
upvoted 1 times

✉  **Pandur1** 6 days, 12 hours ago

There is no -AssignIdentity parameter -> see <https://docs.microsoft.com/en-us/powershell/module/az.compute/update-azvm?view=azps-7.4.0&viewFallbackFrom=azps-6.2.1>
upvoted 1 times

✉  **SivajiTheBoss** 1 month, 2 weeks ago

Correct Answer
1. -IdentityType (Question is wrong)
2. SystemAssigned

\$vm = Get-AzVM -ResourceGroupName myResourceGroup -Name myVM
Update-AzVM -ResourceGroupName myResourceGroup -VM \$vm -IdentityType SystemAssigned
upvoted 1 times

✉  **Baskman** 1 month, 2 weeks ago

Got this in the exam 03/22

upvoted 2 times

✉  **john2609** 2 months, 1 week ago

It should be

```
$vm = Get-AzVM -ResourceGroupName myResourceGroup -Name myVM  
Update-AzVM -ResourceGroupName myResourceGroup -VM $vm -IdentityType SystemAssigned
```

upvoted 1 times

✉  **oescm** 2 months, 2 weeks ago

Got this one 02/2022. Went with highly voted answer.

BTW the parameter was also "IdentityId" in the exam.

upvoted 6 times

✉  **Mev4953** 3 months ago

Got this in the exam 01/22

upvoted 4 times

✉  **lugospod** 3 months ago

Got this one 01/2022. Went with IdentityId/systemassigned (and it has \$ in front like in Azure documentation when you google identityId and systemassigned) but this is an OLD way of doing it..so I guess they didnt update. S

upvoted 3 times

✉  **DiegoManinetti** 3 months ago

Should be "-IdentityType: SystemAssigned".

upvoted 1 times

✉  **starlordms** 3 months, 4 weeks ago

Identity ID is possible but for given question scenario , It should be

```
Update-AzVM -ResourceGroupName myResourceGroup -VM $vm -IdentityType SystemAssigned
```

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/qs-configure-powershell-windows-vm>

upvoted 1 times

✉  **MohmmadFayez** 4 months ago

```
1- -Assigndentity  
2-$SystemAssigned
```

see below Ex.

<https://infra.engineer/azure/60-azure-stop-and-deallocate-a-windows-vm-using-a-managed-identity>

upvoted 1 times

✉  **zyxphreez** 10 months ago

please take your time to test some answers/commands, in this case the parameters -AssignIdentity doesn't exists, I just checked in my Ps, so, we only have one valid option: -IdentityId, and for that parameter we must specify and USERIDENTITY as variable not systemidentity, check this url:

<https://docs.microsoft.com/en-us/powershell/module/az.compute/update-azvm?view=azps-6.1.0&viewFallbackFrom=azps-5.6.0>

so we are assuming that we have a variable named \$UserAssigned.....

Being sad that, the answer should be

```
-IdentityId  
$UserAssigned
```

Good Luck

upvoted 6 times

✉  **nonoss** 6 months, 1 week ago

1- It depends which version of the documentation you're looking at, in the 0.10.0 version of Powershell, -AssignIdentity is a valid parameter of Update-AzVM, and is used to "Specify the system assigned identity for the virtual machine."

<https://docs.microsoft.com/en-us/powershell/module/az.compute/update-azvm?view=azps-0.10.0>

2- The key to this question is "The access lifecycle for the application must be associated with the VM service instance", and that is only granted using system assigned managed identity, as you can see in the comparative table, section "life cycle" here: <https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/overview#managed-identity-types>

So IMHO it should be:

- AssignIdentity
- SystemAssigned

upvoted 1 times

✉  **PhillI** 5 months ago

Nice how deep you researched this, but the thing you missed is that -AssignIdentity is/was of type SwitchParameter so it does not need a variable behind it (the system defines the value, not the user :-)

upvoted 2 times

✉  **windflower555** 9 months ago

I did a lab and there it's used -AssignIdentity para there (in the step: set up a managed identity and give your app permission to access it)

Example:

```
Set-AzWebApp -AssignIdentity $true -Name $webappname -ResourceGroupName
```

upvoted 3 times

✉  **Nickab** 10 months, 2 weeks ago

IdentityId is correct, example:

```
$vm = Get-AzVm -ResourceGroupName myResourceGroup -Name myVm
```

```
Update-AzVm -ResourceGroupName myResourceGroup -VirtualMachine $vm -IdentityType UserAssigned -IdentityID <USER ASSIGNED IDENTITY NAME>
```

IdentityType value is an enum but identityid need a variable which \$ emphasize that it is a variable

upvoted 5 times

✉  **mlantonis** 10 months, 4 weeks ago

Box 1: -IdentityType

-IdentityType: The type of identity used for the virtual machine. Valid values are SystemAssigned, UserAssigned, SystemAssignedUserAssigned, and None.

-IdentityId: Specifies the list of user identities associated with the virtual machine. The user identity references will be ARM resource IDs in the form

Box 2: \$SystemAssigned

There are two types of managed identities:

- System-assigned: Some Azure services allow you to enable a managed identity directly on a service instance. When you enable a system-assigned managed identity an identity is created in Azure AD that is tied to the lifecycle of that service instance. So when the resource is deleted, Azure automatically deletes the identity for you. By design, only that Azure resource can use this identity to request tokens from Azure AD.

- User-assigned: You may also create a managed identity as a standalone Azure resource. You can create a user-assigned managed identity and assign it to one or more instances of an Azure service. In the case of user-assigned managed identities, the identity is managed separately from the resources that use it.

upvoted 18 times

✉  **edengoforit** 3 months, 1 week ago

This answer deserves a top comment

upvoted 1 times

✉  **mlantonis** 10 months, 4 weeks ago

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/qs-configure-powershell-windows-vm>

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/overview#managed-identity-types>

upvoted 3 times

✉  **mlantonis** 11 months ago

Box 1: -IdentityType

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There are two types of managed identities:

- System-assigned: Some Azure services allow you to enable a managed identity directly on a service instance. When you enable a system-assigned managed identity an identity is created in Azure AD that is tied to the lifecycle of that service instance. So when the resource is deleted, Azure automatically deletes the identity for you. By design, only that Azure resource can use this identity to request tokens from Azure AD.

upvoted 4 times

✉  **mlantonis** 11 months ago

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/qs-configure-powershell-windows-vm>

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/overview#managed-identity-types>

upvoted 2 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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?

A. Yes

B. No

Correct Answer: A

In the Consumption hosting plan, resources are added dynamically as required by your functions.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-create-storage-blob-triggered-function>

✉  **AndresMza** Highly Voted  1 year, 1 month ago

Answer should be "No". Consumption plan can take up to several minutes to trigger the function. See note from <https://docs.microsoft.com/en-us/azure/azure-functions/functions-create-storage-blob-triggered-function>.

"When your function app runs in the default Consumption plan, there may be a delay of up to several minutes between the blob being added or updated and the function being triggered. If you need low latency in your blob triggered functions, consider running your function app in an App Service plan."

upvoted 103 times

✉  **rdemontis** 1 year, 1 month ago

In my opinion you're right. Often in a consumption plan the function starts immediately but it's not guaranteed and in production environment minimizing latency is very important as required in the question. For further info about cold starts i found an interesting article:
<https://azure.microsoft.com/en-us/blog/understanding-serverless-cold-start/#:~:text=In%20the%20context%20of%20Azure,haven't%20been%20called%20recently>.

upvoted 5 times

✉  **DirkK** Highly Voted  1 year, 1 month ago

Hi all.

I would say, that this has to be "No"...

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

And this is only a feature from the "Premium plan" (Perpetually warm instances to avoid any cold start)....

Consumption plan = up to several minutes...

upvoted 12 times

✉  **Freidrich** Most Recent  2 months ago

Selected Answer: B

The correct answer is B.

upvoted 1 times

✉  **sozturk88** 2 months ago

Selected Answer: B

10 min delay for Consuming

upvoted 1 times

✉  **philsboies** 2 months, 1 week ago

Selected Answer: B

I'd say no

upvoted 1 times

✉  **Zamaletto** 2 months, 2 weeks ago

Selected Answer: B

I would go for B

upvoted 1 times

MFahd 2 months, 3 weeks ago

The answer is NO, as the consumption plan have low latency and It can take some time to add files to blob and trigger function
upvoted 1 times

DiegoManinetti 2 months, 3 weeks ago

Selected Answer: B

Highly Voted
upvoted 1 times

mabusalma 3 months ago

Selected Answer: B

Answer: B
Consumption plan not guaranteed
upvoted 1 times

wsellmair 3 months, 1 week ago

Answer should be "JA"
you can use Event Grid trigger, he guarantee low latency

Minimizing latency:

- If your function app is on the Consumption plan, there can be up to a 10-minute delay in processing new blobs if a function app has gone idle. To avoid this latency, you can switch to an App Service plan with Always On enabled.
- You can also use an Event Grid trigger with your Blob storage account. For an example, see the Event Grid tutorial.

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-trigger?tabs=csharp#alternatives>
upvoted 2 times

heisenberg33 2 months ago

It should be "Nee" - "image must start in less than one minute."

upvoted 1 times

jgvh 3 months, 2 weeks ago

Selected Answer: B

Highly Voted
upvoted 1 times

helpaws 3 months, 2 weeks ago

Selected Answer: B

Answer should be "No".
upvoted 1 times

leonidn 3 months, 2 weeks ago

Selected Answer: B

Even though it's not specified which method is used for triggering (it may be <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-event-overview>), the consumption plan will delay starting processing the image. So, the proposed solution is not good enough.
upvoted 2 times

Lucario95 3 months, 3 weeks ago

Selected Answer: B

I would say B.no as Consumption Plan could require more than 1 minute (up to 10)
upvoted 2 times

iamdamzy 3 months, 3 weeks ago

No is the correct answer
upvoted 1 times

Mev4953 4 months, 3 weeks ago

I think answer is NO
upvoted 1 times

dragonrealm78 4 months, 4 weeks ago

Selected Answer: B

Consumption plan can take up to several minutes to trigger the function.
upvoted 3 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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?

A. No

B. Yes

Correct Answer: A

These are valid warm-up behavior options, but are not helpful in fixing swap problems.

Instead update the web.config file to include the applicationInitialization configuration element. Specify custom initialization actions to run the scripts.

Note: Some apps might require custom warm-up actions before the swap. The applicationInitialization configuration element in web.config lets you specify custom initialization actions. The swap operation waits for this custom warm-up to finish before swapping with the target slot.

Here's a sample web.config fragment.

```
<system.webServer>
<applicationInitialization>
<add initializationPage="/" hostName="[app hostname]" />
<add initializationPage="/Home/About" hostName="[app hostname]" />
</applicationInitialization>
</system.webServer>
```

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots#troubleshoot-swaps>

✉  **Carlous** Highly Voted 1 year ago

Should be YES?

<https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots>

You can also customize the warm-up behavior with one or both of the following app settings:

WEBSITE_SWAP_WARMUP_PING_PATH: The path to ping to warm up your site. Add this app setting by specifying a custom path that begins with a slash as the value. An example is /statuscheck. The default value is /.

WEBSITE_SWAP_WARMUP_PING_STATUSES: Valid HTTP response codes for the warm-up operation. Add this app setting with a comma-separated list of HTTP codes. An example is 200,202 . If the returned status code isn't in the list, the warmup and swap operations are stopped. By default, all response codes are valid.

WEBSITE_WARMUP_PATH: A relative path on the site that should be pinged whenever the site restarts (not only during slot swaps). Example values include /statuscheck or the root path, /.

upvoted 53 times

✉  **altafpatel1984** 5 months ago

Question is not only for warm-up but also to execute custom script. So Answer No is correct.

upvoted 6 times

✉  **mcanic** 3 months, 3 weeks ago

it states that a new method called statuscheck is added to the application that executes these scripts. if you add the path to /statuscheck in WEBSITE_SWAP_WARMUP_PING_PATH the application executes the scripts

upvoted 3 times

✉  **Tom87** 1 year ago

I agree.

For ASP.NET and ASP.NET Core developers, setting app settings in App Service are like setting them in <appSettings> in Web.config or appsettings.json, but the values in App Service override the ones in Web.config or appsettings.json.

<https://docs.microsoft.com/en-us/azure/app-service/configure-common#configure-app-settings>

upvoted 2 times

✉  **Santileo** 1 year ago

This guy is right. Better url: <https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots#specify-custom-warm-up>
upvoted 5 times

✉ **Percy2112** 10 months, 1 week ago

I Agree.

upvoted 3 times

✉ **simonverma** Highly Voted 1 year ago

The answer is right to be marked as 'No' as the warm up is done correctly but the web config part is not mentioned i.e, AppInitialization.
upvoted 18 times

✉ **lugospod** 3 months, 1 week ago

you dont need appinit if you set WEBSITE_SWAP_WARMUP_PING_PATH and response... it is an alternate method to achieve the same thing.
upvoted 2 times

✉ **SivajiTheBoss** Most Recent 1 month, 2 weeks ago

Selected Answer: A

statuscheck method is required to execute the custom scripts.

I go for No.

upvoted 1 times

✉ **Freidrich** 2 months ago

Selected Answer: B

The correct answer is B: Yes.

upvoted 1 times

✉ **lugospod** 3 months ago

Got this one 01/2022. Wen with most voted (to avoid writing answers again) - YES

upvoted 4 times

✉ **qiw** 3 months, 1 week ago

Answer should be NO. WEBSITE_SWAP_WARMUP_PING_PATH and WEBSITE_SWAP_WARMUP_PING_STATUSES are not scripts. They are statuscheck path and return code for Azure to use to decide if the status is up... e.g. when Azure pings example.com:8080/statuscheck, if returns 400, it's not up yet, if returns 200, it's up.

upvoted 4 times

✉ **anshu0795** 3 months, 1 week ago

B should be the correct answer

upvoted 1 times

✉ **noro5** 3 months, 1 week ago

Selected Answer: B

No is correct, status check is not enough as scripts need to be run as well

upvoted 3 times

✉ **asdasdasg2** 2 months, 2 weeks ago

The question specifically states that the statuscheck method has been written to run the scripts

upvoted 3 times

✉ **edengoforit** 3 months, 1 week ago

Instead update the web.config file to include the applicationInitialization configuration element. Specify custom initialization actions to run the scripts.

Note: Some apps might require custom warm-up actions before the swap. The applicationInitialization configuration element in web.config lets you specify custom initialization actions. The swap operation waits for this custom warm-up to finish before swapping with the target slot. Here's a sample web.config fragment.

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</system.webServer>
```

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots#troubleshoot-swaps>

upvoted 1 times

✉ **jvyas** 3 months, 2 weeks ago

"The <applicationInitialization> configuration element is part of each app start-up, whereas the two warm-up behavior app settings apply only to slot swaps." As mentioned in the answer, webconfig <app initialisation> part is also needed.

upvoted 1 times

✉ **leonidn** 3 months, 2 weeks ago

WEBSITE_SWAP_WARMUP_PING_PATH and WEBSITE_SWAP_WARMUP_PING_STATUSES are used exactly for purposes that are expected here. Should be YES.

upvoted 2 times

✉  **Saif93** 5 months ago

Selected Answer: B

B should be the correct answer
upvoted 5 times

✉  **ucsdmiami2020** 5 months ago

Agreed the answer is Yes. Per the provided Reference URL
[**https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots#troubleshoot-swaps**](https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots#troubleshoot-swaps)
upvoted 1 times

✉  **BeshoyRomany** 7 months ago

Hi Everyone,

The answer is correct --> A. No

First

Some apps might require custom warm-up actions before the swap. The applicationInitialization configuration element in web.config

Second:

You can also customize the warm-up behavior with one or both of the following app settings:

WEBSITE_SWAP_WARMUP_PING_PATH: The path to ping to warm up your site. Add this app setting

WEBSITE_SWAP_WARMUP_PING_STATUSES: Valid HTTP response codes for the warm-up operation. Add this app setting with a comma-separated list of HTTP codes

WEBSITE_WARMUP_PATH: A relative path on the site that should be pinged whenever the site restarts (not only during slot swaps). Example values include /statuscheck or the root path, /.

So there's two ways you can use the the first approach

Instead update the web.config file to include the <applicationInitialization> configuration element

upvoted 3 times

✉  **BeshoyRomany** 6 months, 2 weeks ago

Sorry,,

The answer is --> B. Yes :)

upvoted 5 times

✉  **na_nothing** 8 months ago

As mentioned here <https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots#troubleshoot-swaps>
Note

The <applicationInitialization> configuration element is part of each app start-up, whereas the two warm-up behavior app settings apply only to slot swaps.

Should be YES, IMO.

upvoted 1 times

✉  **Karishma06** 8 months, 2 weeks ago

what's the correct answer here? so confused

upvoted 3 times

✉  **ning** 8 months, 3 weeks ago

No, the settings are NOT running the scripts, but just ping to make sure sites are up and running.

upvoted 2 times

✉  **Mcelona** 10 months ago

I think that "WEBSITE_SWAP_WARMUP_PING_PATH" and "WEBSITE_SWAP_WARMUP_PING_STATUSES" could be used as alternative of "ApplicationInitialization" section of Web.config. My doubt is associated to the use of a health path to execute script, because the script will be executed to all instances of the app service. For these reasons, the answer is NO.

upvoted 4 times

HOTSPOT -

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 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 checked="" 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 checked="" type="radio"/>	<input type="radio"/>
The log alert is scheduled to run every two hours.	<input type="radio"/>	<input checked="" type="radio"/>

Box 1: No -

The AzScheduledQueryRuleSource is Heartbeat, not CPU.

Box 2: Yes -

The AzScheduledQueryRuleSource is Heartbeat!

Note: New-AzScheduledQueryRuleTriggerCondition creates an object of type Trigger Condition. This object is to be passed to the command that creates Alerting Action object.

Box 3: No -

The schedule is 60 minutes, not two hours.

-FrequencyInMinutes: The alert frequency.

-TimeWindowInMinutes: The alert time window

The New-AzAscheduledQueryRuleSchedule command creates an object of type Schedule. This object is to be passed to the command that creates Log Alert Rule.

Reference:

<https://docs.microsoft.com/en-us/powershell/module/az.monitor/new-azscheduledqueryrule> <https://docs.microsoft.com/en-us/powershell/module/az.monitor/new-azscheduledqueryruletriggercondition>

✉  **mlantonis** Highly Voted 10 months, 3 weeks ago

I agree.
No
Yes
No
upvoted 40 times

✉  **wolf_lu** Highly Voted 9 months, 3 weeks ago

I agree.
NO
YES
NO
upvoted 5 times

✉  **barretowski** 1 month, 1 week ago

don't confuse the staff, the answer is: no, yes, no
upvoted 1 times

✉  **SivajiTheBoss** Most Recent 1 month, 2 weeks ago

Answer is correct: NO, YES, NO
upvoted 1 times

✉  **yaroo1** 6 months, 3 weeks ago

Answer is correct
upvoted 3 times

✉  **Percy2112** 10 months, 1 week ago

The Answers are Correct:
No
Yes
No
upvoted 3 times

✉  **Arul4** 10 months, 3 weeks ago

No
Yes
No
are the correct answers.
upvoted 4 times

DRAG DROP -

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	Enable developers to write the functions by using the Rust language.	Feature
Trigger	Declaratively connect to an Azure Blob Storage account.	Feature
Runtime		
Policy		
Hosting plan		

Correct Answer:

Features	Answer Area	
Extension bundle	Enable developers to write the functions by using the Rust language.	Custom handler
Runtime	Declaratively connect to an Azure Blob Storage account.	Trigger
Policy		
Hosting plan		

Box 1: Custom handler -

Custom handlers can be used to create functions in any language or runtime by running an HTTP server process, for example Go or Rust.

Box 2: Trigger -

Functions are invoked by a trigger and can have exactly one. In addition to invoking the function, certain triggers also serve as bindings. You may also define multiple bindings in addition to the trigger. Bindings provide a declarative way to connect data to your code.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/create-first-function-vs-code-other> <https://docs.microsoft.com/en-us/dotnet/architecture/serverless/azure-functions>

 **mlantonis** Highly Voted 10 months, 3 weeks ago

Answer is correct.

Box 1: Custom handler

Custom handlers can be used to create functions in any language or runtime by running an HTTP server process, for example Go or Rust.

Box 2: Trigger

Functions are invoked by a trigger and can have exactly one. In addition to invoking the function, certain triggers also serve as bindings. You may also define multiple bindings in addition to the trigger. Bindings provide a declarative way to connect data to your code.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/create-first-function-vs-code-other>

<https://docs.microsoft.com/en-us/dotnet/architecture/serverless/azure-functions>

upvoted 39 times

✉️ **TakumaK** 10 months, 2 weeks ago

incorrect!

upvoted 1 times

✉️ **azurelearner666** 10 months, 1 week ago

your incorrect is incorrect X2.

The answer is correct, Custom Handler for supporting additional languages in azure functions and a trigger for adding a binding to a function.

upvoted 7 times

✉️ **stevenwu** 10 months, 1 week ago

What's your answer? You can just point out incorrect without any updates.

upvoted 8 times

✉️ **abdou1987** Highly Voted 10 months, 3 weeks ago

Box 1: Custom handler

Custom handlers can be used to create functions in any language or runtime by running an HTTP server process, for example Go or Rust.

Box 2: extension bundles

is needed to support the bindings and triggers that you use

https://docs.microsoft.com/en-us/azure/azure-functions/functions-custom-handlers?WT.mc_id=thomasmaurer-blog-thmaure#bindings-support

upvoted 28 times

✉️ **upadhyayavi** Most Recent 1 month, 2 weeks ago

From functions 2.x only http and timer triggers are present as default bindings for other runtime stacks, i.e, languages other than .NET , therefore for any other language like java, python, rust, etc. standard triggers along with input and output bindings are available by referencing extension bundles in your host.json file.

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

upvoted 3 times

✉️ **Baskman** 1 month, 2 weeks ago

Got this in the exam 03/22

upvoted 2 times

✉️ **ScubaDiver123456** 3 months ago

Box 2: Extension Bundle

"Extension bundles allows non-.NET functions apps to use the same bindings without having to deal with the .NET infrastructure."

Since the app is in RUST (ie, non-.Net), then I believe this is the right answer.

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

upvoted 4 times

✉️ **asdadasg2** 3 months, 1 week ago

I think the main reason why the second box should be "Extension bundles" is because if we're talking about triggers, only HTTP and timer are natively supported. The others (Storage account included) need to come from extension bundles, as per the below documentation:

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

upvoted 2 times

✉️ **dpinlaguna** 5 months, 3 weeks ago

1. Custom Handler for Rust or Go
2. Extension bundles for binding support with Custom Handlers

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

Bindings support:

Standard triggers along with input and output bindings are available by referencing extension bundles in your host.json file.

upvoted 2 times

✉️ **Abhiroop** 5 months, 4 weeks ago

2 - trigger or extension bundles or both are correct?

upvoted 2 times

✉️ **jvyas** 6 months ago

Custom handlers are best suited for situations where you want to:

Implement a function app in a language that's not currently offered out-of-the box, such as Go or Rust.

Implement a function app in a runtime that's not currently featured by default, such as Deno.

With custom handlers, you can use triggers and input and output bindings via extension bundles.

upvoted 1 times

✉ **zolty13** 7 months, 2 weeks ago

Extension bundles is a way to add a compatible set of binding extensions to your function app. You enable extension bundles in the app's host.json file.

Binding to a function is a way of declaratively connecting another resource to the function; bindings may be connected as input bindings, output bindings, or both. Data from bindings is provided to the function as parameters.

so i think it is Trigger (trigger is also a binding)

upvoted 3 times

✉ **Bartimaeus** 1 month, 4 weeks ago

Yeah, that's a tough one - from one side, you can't use bindings without 'extensions bundles', from the other side, you can't just connect to Blob Storage by using extension bundles - you need to use bindings, which are facilitated by extension bundles.

What bothers me here is that trigger is a binding, but not all bindings are triggers.

I.e. the question states 'declaratively connect', not just trigger. Trigger doesn't allow you to make any kind of modification.

Therefore I'm in for 'extensions bundles', because you can infer that when you use extensions bundles you can use bindings. You can't use any type of trigger or binding with Rust without extension bundle.

upvoted 1 times

✉ **annageor** 8 months, 3 weeks ago

1) custom handler

2) extension bundles

Stated from here "https://docs.microsoft.com/en-us/azure/azure-functions/functions-custom-handlers?WT.mc_id=thomasmaurer-blog-thmaure#bindings-support":

Custom handlers are best suited for situations where you want to:

Implement a function app in a language that's not currently offered out-of-the box, such as Go or Rust.

Implement a function app in a runtime that's not currently featured by default, such as Deno.

With custom handlers, you can use triggers and input and output bindings via extension bundles.

upvoted 1 times

✉ **RomaPatch** 9 months ago

Please. Which is correct?

Trigger ->Binding to a function is a way of declaratively connecting another resource to the function

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-triggers-bindings?tabs=csharp>

Extension Bundles ->Extension bundles is a way to add a compatible set of binding extensions to your function app

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

upvoted 1 times

✉ **sujitwarrier11** 10 months ago

The answer is incorrect.

1. Custom handler

2.

upvoted 1 times

✉ **sujitwarrier11** 10 months ago

2. extension bundles.

extension bundles allow you to connect to input and output bindings.

for those saying 'trigger' as answer, please notice the wording 'declaratively connect'. This means through input bindings. A trigger would just send the triggered information to the function. Atleast this my deduction.

upvoted 4 times

✉ **Comlaa** 10 months, 1 week ago

Answer is incorrect.

Box 1: Custom handler.

Box 2: Extension bundles

Explanation: For Java, JavaScript, PowerShell, Python, and Custom Handler function apps, we recommended using extension bundles to access bindings. We are using Custom Handler here because of Rust. Also on the same link you can find "Starting with Azure Functions version 2.x, the functions runtime only includes HTTP and timer triggers by default. Other triggers and bindings are available as separate packages."

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

upvoted 9 times

✉ **pragati29** 10 months, 2 weeks ago

anyone help here which one is correct

upvoted 3 times

✉ **TakumaK** 9 months, 3 weeks ago

Box 1: Custom handler.

Box 2: Extension bundles

upvoted 3 times

 **azurelearner666** 10 months, 1 week ago

The response is correct,

Box 1: Custom handler

Custom handlers can be used to create functions in any language or runtime by running an HTTP server process, for example Go or Rust.

Box 2: Trigger

Functions are invoked by a trigger and can have exactly one. In addition to invoking the function, certain triggers also serve as bindings. You may also define multiple bindings in addition to the trigger. Bindings provide a declarative way to connect data to your code.

upvoted 1 times

HOTSPOT -

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	
WEBSITE_LOCALCACHE_ENABLED	
DOTNET_HOSTING_OPTIMIZATION_CACHE	
WEBSITES_ENABLE_APP_SERVICE_STORAGE	
DIAGDATA	true /home /local D:\home D:\local

Correct Answer:

Answer Area

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

Box 1: If WEBSITES_ENABLE_APP_SERVICE_STORAGE

If WEBSITES_ENABLE_APP_SERVICE_STORAGE setting is unspecified or set to true, the /home/ directory will be shared across scale instances, and files written will persist across restarts

Box 2: /home -

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/containers/app-service-linux-faq>

✉  **zinza** Highly Voted  1 year, 3 months ago

I think the printed image is creating confusion. The correct answers (according to the image) are:

WEBSITES_ENABLE_APP_SERVICE_STORAGE=true

DIAGDATA=/home

upvoted 66 times

✉  **lugospod** 3 months, 1 week ago

How do you know it is Linux and not Windows?

upvoted 1 times

ScubaDiver123456 3 months ago

For Windows, it would be C:\Home, which is not a provided option.. but /home is provided.

<https://docs.microsoft.com/en-us/azure/app-service/configure-custom-container?pivots=container-windows>

upvoted 2 times

azurelearner666 10 months, 1 week ago

yep, correct. Same as the "official solution" :)

upvoted 2 times

GCMan Highly Voted 1 year, 5 months ago

Given answer correct.

upvoted 21 times

SivajiTheBoss Most Recent 1 month, 2 weeks ago

Answer is correct:

WEBSITES_ENABLE_APP_SERVICE_STORAGE=true

DIAGDATA=/home

upvoted 1 times

upadhyayavi 1 month, 2 weeks ago

Can't D:/home and /home both be correct in this case??

upvoted 1 times

upadhyayavi 1 month, 2 weeks ago

Answer to both the options: <https://docs.microsoft.com/en-us/azure/app-service/configure-custom-container?pivots=container-windows#use-persistent-shared-storage>

upvoted 1 times

petitbilly 1 month, 2 weeks ago

Here there is the specific documentation for this question: <https://docs.microsoft.com/en-us/azure/app-service/faq-app-service-linux#i-m-using-my-own-custom-container--i-want-the-platform-to-mount-an-smb-share-to-the---home---directory>

upvoted 1 times

qiw 3 months, 1 week ago

WEBSITES_ENABLE_APP_SERVICE_STORAGE=true

By default, persistent storage is disabled on custom containers and the setting is exposed in the app settings. To enable it, set the WEBSITES_ENABLE_APP_SERVICE_STORAGE app setting value to true

<https://docs.microsoft.com/en-us/azure/app-service/configure-custom-container?pivots=container-linux>

DIAGDATA=/home

You can use the /home directory in your custom container file system to persist files across restarts and share them across instances. The /home directory is provided to enable your custom container to access persistent storage.

<https://docs.microsoft.com/en-us/azure/app-service/configure-custom-container?pivots=container-linux>

upvoted 3 times

mlantonis 11 months, 1 week ago

Correct Answer:

If WEBSITES_ENABLE_APP_SERVICE_STORAGE setting is unspecified or set to false, the /home/ directory will not be shared across scale instances, and files written will not persist across restarts. Explicitly setting WEBSITES_ENABLE_APP_SERVICE_STORAGE to true will enable the mount.

Box 1: WEBSITES_ENABLE_APP_SERVICE_STORAGE

Box 2: /home

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/containers/app-service-linux-faq>

upvoted 12 times

glam 11 months, 2 weeks ago

WEBSITES_ENABLE_APP_SERVICE_STORAGE=true

DIAGDATA=/home

upvoted 2 times

JoeInOregon 11 months ago

glam has the answers, y'all.

upvoted 3 times

Tom87 11 months, 2 weeks ago

On Windows the directory would be C:\home. Since this is not mentioned in possible answers, we are on Linux environment and the answer is correct.

<https://docs.microsoft.com/en-us/azure/app-service/configure-custom-container?pivots=container-windows#use-persistent-shared-storage>

upvoted 4 times

✉️  **glam** 11 months, 3 weeks ago

WEBSITES_ENABLE_APP_SERVICE_STORAGE=true

DIAGDATA=/home

upvoted 2 times

✉️  **CAguys** 1 year, 1 month ago

First box is correct but the second box should be 'true'. Please refer the link which is given in the explanation!

upvoted 1 times

✉️  **daporh** 1 year, 2 months ago

From the FAQ link "If WEBSITES_ENABLE_APP_SERVICE_STORAGE setting is unspecified or set to false, the /home/ directory will not be shared across scale instances, and files written will not persist across restarts. Explicitly setting"

Which means that the default value for WEBSITES_ENABLE_APP_SERVICE_STORAGE is false.

upvoted 1 times

✉️  **rajwit** 1 year, 3 months ago

Given answer is correct

<https://github.com/Azure/Azure-Functions/issues/1507>

upvoted 2 times

✉️  **Spark101** 1 year, 3 months ago

I think setting the value to true should be the correct answer. According to the documentation and explanation provided

upvoted 3 times

✉️  **dluk** 1 year, 3 months ago

You are right. Given answer is wrong. This setting gets true/false values, not actual paths.

"If WEBSITES_ENABLE_APP_SERVICE_STORAGE setting is unspecified or set to true, the /home/ directory will be shared across scale instances, and files written will persist across restarts. Explicitly setting WEBSITES_ENABLE_APP_SERVICE_STORAGE to false will disable the mount."

upvoted 2 times

✉️  **KeshavPS** 1 year, 4 months ago

As mentioned in the question 'You are developing an ASP.NET Core web application'. as per my understanding ASP.NET is not a cross platform compatible hence require a window environment to run on. Hence '/home' does not seem a correct answer as it shows a linux path and not a window path.

upvoted 2 times

✉️  **Anuragaz204** 1 year, 3 months ago

.NET core is cross platform complaint... so this is correct.

upvoted 9 times

✉️  **ferut** 1 year, 4 months ago

If I understand the question correctly, we want to store the diagnostics on a location that is persisted. According to the documentation, /home is the place to be. Looking at the code, the data will be stored on the location pointed by DIAGDATA.

In my opinion, you should set DIAGDATA to /home.

upvoted 2 times

✉️  **douglastsc** 1 year, 3 months ago

I agree with you. By default, if WEBSITES_ENABLE_APP_SERVICE_STORAGE setting is unspecified or set to true, the /home/ directory will be shared across scale instances, and files written will persist across restarts

upvoted 2 times

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.

Correct Answer: AD

D: The ability to specify a host override is defined in the HTTP settings and can be applied to any back-end pool during rule creation.

The ability to derive the host name from the IP or FQDN of the back-end pool members. HTTP settings also provide an option to dynamically pick the host name from a back-end pool member's FQDN if configured with the option to derive host name from an individual back-end pool member.

A (not C): SSL termination and end to end SSL with multi-tenant services.

In case of end to end SSL, trusted Azure services such as Azure App service web apps do not require whitelisting the backends in the application gateway.

Therefore, there is no need to add any authentication certificates.

Add HTTP setting

X

saiappgw-appgw

* Protocol

HTTP

HTTPS



Authentication certificates are not required for trusted Azure certificates for end to end ssl to work

* Port ⓘ

443



* Request timeout (seconds)

20

Override backend path ⓘ

Use for App service ⓘ

Use current probe ⓘ

OK

Reference:

<https://docs.microsoft.com/en-us/azure/application-gateway/application-gateway-web-app-overview>

✉ **dirtygooback** Highly Voted 1 year, 5 months ago

A&D are correct. The question was not copied correctly from AZ-203

<https://www.examtopics.com/discussions/microsoft/view/21243-exam-az-203-topic-24-question-22-discussion/>
upvoted 37 times

✉ **Bartimaeus** 1 month, 3 weeks ago

Nope, there isn't anything about App Service - you can't use it with normal web app.

C & D - you need both

upvoted 1 times

✉ **iiiihhhh** 1 year, 4 months ago

There is a difference between AZ-203 and this question. The AZ-203 question talks about contoso22... (and has consto22.... also in the pertinent answer), but this question has constoso... in the question and consto22 in the answer. This discrepancy makes the greatest confusion
upvoted 12 times

✉ **clarionprogrammer** 1 year ago

Agreed A & D are correct.

Note: [T]here is no requirement to add authentication certificates when App service is selected as backend.

<https://docs.microsoft.com/en-us/azure/application-gateway/application-gateway-web-app-overview#tls-termination-and-end-to-end-tls-with-multi-tenant-services>

upvoted 6 times

✉ **JohnWooDeere** Highly Voted 1 year, 2 months ago

A,D is correct; check: <https://docs.microsoft.com/en-us/azure/application-gateway/application-gateway-web-app-overview>
just ignore the 22 in the URL, it's a typo

upvoted 8 times

✉ **Stoffer2105** 1 year, 1 month ago

"However, in case of end to end TLS, trusted Azure services such as Azure App service web apps do not require allowing the backends in the application gateway. Therefore, there is no need to add any authentication certificates."

upvoted 3 times

✉  **systherm** Most Recent ⓘ 3 weeks, 6 days ago

Selected Answer: AD

correct

upvoted 1 times

✉  **avipi** 3 months, 3 weeks ago

Selected Answer: AD

correct

upvoted 1 times

✉  **sawipef270** 4 months, 2 weeks ago

Selected Answer: AD

correct

upvoted 1 times

✉  **karthik2123** 4 months, 3 weeks ago

Selected Answer: AD

A&D are correct.

upvoted 2 times

✉  **MohmmadFayez** 6 months, 3 weeks ago

B & C are the correct answers

D is wrong because is telling override back-end path but we need to override the host header and since no option to override host hear are included at the answer we should select B ASE

A is wrong because we are going to use ASE which need a SLL certificate to be provided to the App gateway.

upvoted 2 times

✉  **Bartimaeus** 1 month, 2 weeks ago

Yeah, that's actually only possible combination.

D - override backend path is used to redirect from 1 path to 2nd, e.g.

app-gateway.com/-> contoso.azurewebsites.net/images

would require to set override path to `images`.

It can't be hostname - it would just result in

contoso.azurewebsites.net/contoso.azurewebsites.net

So if D is invalid, then we choose between A,B,C.

AC -> wrong, if you use Use for App service setting, you don't need the cert

AB -> wrong, you can't use A setting with ASE environment, it requires its own cert.

-> BC.

upvoted 1 times

✉  **MohmmadFayez** 6 months, 3 weeks ago

A & B are the correct answers

D is wrong because is telling override back-end path but we need to override the host header and since no option to override host hear are included at the answer we should select B ASE

upvoted 1 times

✉  **ning** 8 months, 1 week ago

This question is very poorly worded, it should say you are configuring a HTTP settings for the routing rule, what actions should you do

upvoted 1 times

✉  **ning** 8 months, 1 week ago

In addition, it has to mention you are using a well-know certificate CA ... So it is not necessary to upload a certificate

upvoted 1 times

✉  **wolf_lu** 9 months, 3 weeks ago

why is not C&D?

upvoted 1 times

✉  **mlantonis** 10 months, 4 weeks ago

A and D seems valid.

upvoted 6 times

✉  **kimalto452** 11 months, 2 weeks ago

there no such settings in HTTP setting "enable the Use for App service setting."

upvoted 3 times

✉  **glam** 11 months, 2 weeks ago

A & D...

upvoted 3 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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?

A. Yes

B. No

Correct Answer: B

The change feed is a log of changes that are organized into hourly segments but appended to and updated every few minutes. These segments are created only when there are blob change events that occur in that hour.

Instead catch the triggered event, so move the photo processing to an Azure Function triggered from the blob upload.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-change-feed> <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-event-overview>

✉  **finnishr** Highly Voted 8 months, 3 weeks ago

The answer is 100% correct.

Change feed publishes records to the log within few minutes of the change. The process to produce a mobile-friendly version of the image must start in less than one minute.

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-change-feed?tabs=azure-portal>
upvoted 20 times

✉  **Freidrich** Most Recent 2 months ago

Selected Answer: B

The correct answer is B: No.

upvoted 1 times

✉  **edengoforit** 3 months, 1 week ago

same question here and the answer is No according to the question below

<https://www.examtopics.com/discussions/microsoft/view/26699-exam-az-204-topic-1-question-19-discussion/>

upvoted 2 times

✉  **r_k** 5 months ago

Important info related to this question. <https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-trigger?tabs=csharp>

upvoted 1 times

✉  **ucsdmiami2020** 5 months ago

Selected Answer: B

The answer is correct. Per the provided referenced URL

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

"Change feed provides a durable, ordered log model of the changes that occur to a blob. Changes are written and made available in your change feed log within an order of a few minutes of the change. If your application has to react to events much quicker than this, consider using Blob Storage events instead. Blob Storage Events provides real-time one-time events which enable your Azure Functions or applications to quickly react to changes that occur to a blob."

upvoted 2 times

✉  **nhontran** 5 months, 1 week ago

I guess the answer is 'No', requirement is less than one minute, change feed takes more than that.

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

"The change feed publishes records to the log within few minutes of the change and also guarantees the order of change operations per blob. Storage events are pushed in real time and might not be ordered."

upvoted 2 times

 **CodePoet** 8 months ago

The answer is correct
upvoted 3 times

 **Amit_kk** 8 months, 3 weeks ago

It Should be Yes
upvoted 2 times

 **nombuso** 8 months, 3 weeks ago

why yes?
upvoted 1 times

Question #39

Topic 2

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

Correct Answer: A

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/correlation>

HOTSPOT -

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**

Code
Docker Container

Runtime stack

Node.js
Python
PowerShell Core
Custom Handler

Version

14 LTS
7.0
custom

Answer Area

Configuration parameter	Configuration value
Publish	<div style="border: 1px solid black; padding: 5px; width: fit-content;"><div style="background-color: #e0e0e0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #d0d0d0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #c0c0c0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #b0b0b0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #a0a0a0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #909090; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #808080; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #707070; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #606060; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #505050; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #404040; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #303030; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #202020; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #101010; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #000000; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #808080; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #909090; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #a0a0a0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #b0b0b0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #c0c0c0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #d0d0d0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #e0e0e0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #f0f0f0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ffccbc; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ffc107; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ff9800; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ff7f0e; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ff5722; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ff3d2b; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ff9800; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ffccbc; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #f0f0f0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #e0e0e0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #d0d0d0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #c0c0c0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #b0b0b0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #a0a0a0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #909090; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #808080; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #707070; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #606060; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #505050; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #404040; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #303030; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #202020; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #101010; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #000000; height: 15px; margin-bottom: 2px;"></div></div>
Runtime stack	<div style="border: 1px solid black; padding: 5px; width: fit-content;"><div style="background-color: #e0e0e0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #d0d0d0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #c0c0c0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #b0b0b0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #a0a0a0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #909090; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #808080; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #707070; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #606060; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #505050; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #404040; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #303030; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #202020; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #101010; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #000000; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #808080; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #909090; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #a0a0a0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #b0b0b0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #c0c0c0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #d0d0d0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #e0e0e0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ffccbc; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ffc107; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ff9800; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ff7f0e; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ff5722; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ff3d2b; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ff9800; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ffccbc; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #f0f0f0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #e0e0e0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #d0d0d0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #c0c0c0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #b0b0b0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #a0a0a0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #909090; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #808080; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #707070; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #606060; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #505050; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #404040; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #303030; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #202020; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #101010; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #000000; height: 15px; margin-bottom: 2px;"></div></div>
Correct Answer:	
Version	<div style="border: 1px solid black; padding: 5px; width: fit-content;"><div style="background-color: #e0e0e0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #d0d0d0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #c0c0c0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #b0b0b0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #a0a0a0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #909090; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #808080; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #707070; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #606060; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #505050; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #404040; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #303030; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #202020; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #101010; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #000000; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #808080; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #909090; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #a0a0a0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #b0b0b0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #c0c0c0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #d0d0d0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #e0e0e0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ffccbc; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ffc107; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ff9800; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ff7f0e; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ff5722; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ff3d2b; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ff9800; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #ffccbc; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #f0f0f0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #e0e0e0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #d0d0d0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #c0c0c0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #b0b0b0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #a0a0a0; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #909090; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #808080; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #707070; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #606060; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #505050; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #404040; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #303030; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #202020; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #101010; height: 15px; margin-bottom: 2px;"></div><div style="background-color: #000000; height: 15px; margin-bottom: 2px;"></div></div>

Box 1: Docker container -

A custom handler can be deployed to every Azure Functions hosting option. If your handler requires operating system or platform dependencies (such as a language runtime), you may need to use a custom container. You can create and deploy your code to Azure Functions as a custom Docker container.

Box 2: PowerShell core -

When creating a function app in Azure for custom handlers, we recommend you select .NET Core as the stack. A "Custom" stack for custom handlers will be added in the future.

PowerShell Core (PSC) is based on the new .NET Core runtime.

Box 3: 7.0 -

On Windows: The Azure Az PowerShell module is also supported for use with PowerShell 5.1 on Windows.

On Linux: PowerShell 7.0.6 LTS, PowerShell 7.1.3, or higher is the recommended version of PowerShell for use with the Azure Az PowerShell module on all platforms.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-create-function-linux-custom-image> <https://docs.microsoft.com/en-us/powershell/azure/install-az-ps?view=azps-7.1.0>

DRAG DROP -

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

Correct Answer:**Actions****Answer Area**

Run the following command at an elevated command prompt:

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



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

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

Remove the update that causes the problem

1. Take a snapshot of the OS disk of the affected VM as a backup.
2. Attach the OS disk to a recovery VM.
3. Once the OS disk is attached on the recovery VM, run diskmgmt.msc to open Disk Management, and ensure the attached disk is ONLINE.
4. (Step 1) Open an elevated command prompt instance (Run as administrator). Run the following command to get the list of the update packages that are on the attached OS disk: `dism /image:<Attached OS disk>:\ /get-packages > c:\temp\Patch_level`
5. (Step 2) Open the C:\temp\Patch_level.txt file, and then read it from the bottom up. Locate the update that's in Install Pending or Uninstall Pending state.

6. Remove the update that caused the problem:

```
dism /Image:<Attached OS disk>:\ /Remove-Package /PackageName:<PACK
```

7. (Step 4) Detach the OS disk and recreate the VM. Then check whether the issue is resolved.

Reference:

<https://docs.microsoft.com/en-us/troubleshoot/azure/virtual-machines/troubleshoot-stuck-updating-boot-error>

Question #42

Topic 2

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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?

- A. Yes
- B. No

Correct Answer: B

Instead 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.

Note: Large, long-running functions can cause unexpected timeout issues. General best practices include:

Whenever possible, refactor large functions into smaller function sets that work together and return responses fast. For example, a webhook or HTTP trigger function might require an acknowledgment response within a certain time limit; it's common for webhooks to require an immediate response. You can pass the

HTTP trigger payload into a queue to be processed by a queue trigger function. This approach lets you defer the actual work and return an immediate response.

Reference:

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

Topic 3 - Question Set 3

HOTSPOT -

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"/>

Answer Area

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

Box 1: Yes -

AcquireLeaseAsync does not specify leaseTime.

leaseTime is a TimeSpan representing the span of time for which to acquire the lease, which will be rounded down to seconds. If null, an infinite lease will be acquired. If not null, this must be 15 to 60 seconds.

Box 2: No -

The GetBlockBlobReference method just gets a reference to a block blob in this container.

Box 3: Yes -

The BreakLeaseAsync method initiates an asynchronous operation that breaks the current lease on this container.

Reference:

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.cloudblobcontainer.acquireleaseasync>
<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.cloudblobcontainer.getblockblobreference>
<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.cloudblobcontainer.breakleaseasync>

✉️  **Tealon** Highly Voted  1 year, 4 months ago

I think the answer is correct:

Optional. Version 2012-02-12 and newer. For a break operation, this is the proposed duration of seconds that the lease should continue before it is broken, between 0 and 60 seconds. This break period is only used if it is shorter than the time remaining on the lease. If longer, the time remaining on the lease is used. A new lease will not be available before the break period has expired, but the lease may be held for longer than the break period. If this header does not appear with a break operation, a fixed-duration lease breaks after the remaining lease period elapses, and an infinite lease breaks immediately.

From: <https://docs.microsoft.com/en-us/rest/api/storageservices/lease-blob>

upvoted 35 times

✉️  **AzureFailure** 10 months, 1 week ago

It talks about the header values only ReleaseLeaseasync release lease

upvoted 2 times

✉️  **AzureAz204Fan** 11 months, 1 week ago

Last few words "infinite lease breaks immediately" is the key for this context.

upvoted 3 times

✉️  **Figa** Highly Voted  1 year, 5 months ago

I think Box 3 should be no instead of yes. BreakRelease don't release the lease directly.

You use ReleaseLease to do this:

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.cloudblobcontainer.releaselease?view=azure-dotnet-legacy>

upvoted 17 times

✉️  **Figa** 1 year, 4 months ago

Ah I think modele is right:

BreakLeaseAsync (TimeSpan? breakPeriod)

breakPeriod

Nullable<TimeSpan>

A TimeSpan representing the amount of time to allow the lease to remain, which will be rounded down to seconds. If null, the break period is the remainder of the current lease, or zero for infinite leases.

upvoted 4 times

✉️  **sasha_gud** Most Recent  4 weeks ago

Tried to execute the code sample:

1) If acquires lease on the blob with null parameter, means the infinite lease is acquired [1]

2) On line 6 it gets reference to existing source blob, so no new blob is created there

3) It fails on start copy operation, because it tries to copy onto itself and the lease is already acquired

4) Goes to catch and then finally block

5) In finally breaks the lease with (Zero) parameter that means the immediate lease break [2]

[1] [https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.cloudblobcontainer.acquireleaseasync?view=azure-dotnet-legacy#microsoft-azure-storage-blob-cloudblobcontainer-acquireleaseasync\(system-nullable\(\(system-timespan\)\)-system-string\)](https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.cloudblobcontainer.acquireleaseasync?view=azure-dotnet-legacy#microsoft-azure-storage-blob-cloudblobcontainer-acquireleaseasync(system-nullable((system-timespan))-system-string))

[2] [https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.cloudblobcontainer.breakleaseasync?view=azure-dotnet-legacy#microsoft-azure-storage-blob-cloudblobcontainer-breakleaseasync\(system-nullable\(\(system-timespan\)\)\)](https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.cloudblobcontainer.breakleaseasync?view=azure-dotnet-legacy#microsoft-azure-storage-blob-cloudblobcontainer-breakleaseasync(system-nullable((system-timespan))))

upvoted 1 times

✉️  **Manivannan19** 1 month, 3 weeks ago

Answer to the third statement is 'Yes'.

BreakLeaseAsync(mew TimsSpan(0)) will break/release an infinite lease (which is true in this scenario).

Source: <https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.cloudblobcontainer.breakleaseasync?view=azure-dotnet-legacy>

upvoted 1 times

✉️  **lugospod** 3 months, 3 weeks ago

Regarding the third question. The answer is YES.

Here is to link: <https://github.com/Azure/azure-storage-net/blob/master/Test/WindowsRuntime/Blob/LeaseTests.cs>

Inside this file one can see a unit test at line 255 which does the same scenario and the expected result is the ID of the BROKEN infinite lease.

```
/// <summary>
/// Puts the lease on the given blob in a broken state due to a break period of zero.
/// </summary>
/// <param name="blob">The blob with the lease.</param>
/// <returns>The lease ID of the broken lease.</returns>
internal static async Task<string> SetInstantBrokenStateAsync(CloudBlob blob)
{
    string leaseId = await SetLeasedStateAsync(blob, null /* infinite lease */);
    await blob.BreakLeaseAsync(TimeSpan.Zero);
```

```
return leaseId;  
}  
upvoted 2 times
```

✉ **lugospod** 3 months, 3 weeks ago

tdadadadadad
upvoted 3 times

✉ **amanpritkaur** 5 months, 2 weeks ago

"The final block releases the lease" --> should not this be NO?

"BreakLeaseAsync", breaks the lease but "ReleaseLeaseAsync", releases the lease.

Release, to free the lease if it is no longer needed so that another client may immediately acquire a lease against the blob.
Break, to end the lease but ensure that another client cannot acquire a new lease until the current lease period has expired.

upvoted 4 times

✉ **Freidrich** 2 months ago

So then, since the lease period is infinite, no other client may ever acquire a new lease?

upvoted 1 times

✉ **ning** 8 months, 3 weeks ago

The last one should be "NO", this will break the lease immediately. However, you will need a release statement to release the locker, confirmed by running codes.

upvoted 6 times

✉ **wolf_lu** 9 months, 3 weeks ago

I agree with the answer
upvoted 2 times

✉ **zyxphreez** 10 months ago

I would like to share this

"This is the proposed duration of seconds that the lease should continue before it is broken, between 0 and 60 seconds. This break period is only used if it is shorter than the time remaining on the lease. If longer, the time remaining on the lease is used. A new lease will not be available before the break period has expired, but the lease may be held for longer than the break period. If this header does not appear with a break operation, a fixed-duration lease breaks after the remaining lease period elapses, and an infinite lease breaks immediately."

that means, if we are using a break within a infinite lease the breaks will be immediately..... the third answer should be YES.

upvoted 3 times

✉ **sujitwarrier11** 10 months ago

The answer is incorrect. break lease with timespan 0 means an infinite lease. Either use ReleaseLease or specify a positive non-null and non-zero value to break lease. ReleaseLease immediately releases the lease on the blob. BreakLease waits for the amount of time specified.
upvoted 1 times

✉ **Yogendra_examtopic** 10 months ago

Third one is - "NO"

ReleaseLeaseAsync- releases the lease
BreakLeaseAsync - breaks the current lease

References -

ReleaseLeaseAsync -
[https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.cloudblobcontainer.releaseleaseasync?view=azure-dotnet-legacy#:~:text=on%20this%20container.-,ReleaseLeaseAsync\(AccessCondition%2C%20BlobRequestOptions%2C%20OperationContext%2C%20CancellationToken\),Initiates%20an%20asynchronous%20operation%20that%20releases%20the%20lease,-on%20this%20container](https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.cloudblobcontainer.releaseleaseasync?view=azure-dotnet-legacy#:~:text=on%20this%20container.-,ReleaseLeaseAsync(AccessCondition%2C%20BlobRequestOptions%2C%20OperationContext%2C%20CancellationToken),Initiates%20an%20asynchronous%20operation%20that%20releases%20the%20lease,-on%20this%20container)

BreakLeaseAsync - [https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.cloudblobcontainer.breakleaseasync?view=azure-dotnet-legacy#:~:text=on%20this%20container.-,BreakLeaseAsync\(Nullable%3CTimeSpan%3E\),asynchronous%20operation%20that%20breaks%20the%20current%20lease%20on%20this%20container,-C%23](https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.cloudblobcontainer.breakleaseasync?view=azure-dotnet-legacy#:~:text=on%20this%20container.-,BreakLeaseAsync(Nullable%3CTimeSpan%3E),asynchronous%20operation%20that%20breaks%20the%20current%20lease%20on%20this%20container,-C%23)

Difference between ReleaseLeaseAsync and BreakLeaseAsync -

<https://docs.microsoft.com/en-us/rest/api/storageservices/lease-blob#:~:text=Release%2C%20to%20free,period%20has%20expired.>

upvoted 4 times

✉ **Molte** 4 months ago

Tanks it seems you were right!
upvoted 1 times

✉ **Spooky7** 11 months, 1 week ago

Based on that diagram: <https://docs.microsoft.com/en-us/rest/api/storageservices/media/blobleastates.png> if you break the lease its state becomes 'Broken'. You need to perform release action to make it 'Available' again. So I would say correct answer for box 3 is NO.

upvoted 5 times

✉ **glam** 11 months, 2 weeks ago

correct.

upvoted 1 times

✉  **safili9919** 1 year ago

3 box is YES.

BreakLeaseAsync

Parameters

breakPeriod

Nullable<TimeSpan>

A TimeSpan representing the amount of time to allow the lease to remain, which will be rounded down to seconds. If null, the break period is the remainder of the current lease, or zero for infinite leases.

upvoted 3 times

✉  **sasisang** 1 year, 4 months ago

Box 3 is NO

Here is the link...Timespan 0 means infinite loop

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.cloudblobcontainer.breakleaseasync>

upvoted 3 times

✉  **Cornholioz** 1 year, 4 months ago

TimeSpan 0 doesn't mean infinite loop. It means infinite leases. Since this created infinite leases, isn't this the right code to release infinite leases? I think the answer is YES.

upvoted 11 times

✉  **ahadjithoma** 1 year, 4 months ago

A TimeSpan representing the amount of time to allow the lease to remain, which will be rounded down to seconds. If null, the break period is the remainder of the current lease, or zero for infinite leases

upvoted 4 times

✉  **ALittleBunny** 1 year, 4 months ago

You're definitely right. Infinite lease also means the lease is broken, it's ready for acquire, release and break. <https://docs.microsoft.com/en-us/rest/api/storageservices/lease-blob>

upvoted 2 times

✉  **dol** 1 year, 5 months ago

As stated in <https://docs.microsoft.com/en-us/rest/api/storageservices/lease-blob> break will not make it available for others until lease time expire (in this example never)

upvoted 3 times

✉  **modele** 1 year, 5 months ago

The break lease has been set to a Time Span of 0 which means it releases it instantly

upvoted 27 times

✉  **vtomy** 10 months ago

Time Span of 0 means infinite leases

upvoted 2 times

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

Correct Answer: B

The archive access tier has the lowest storage cost. But it has higher data retrieval costs compared to the hot and cool tiers. Data in the archive tier can take several hours to retrieve depending on the priority of the rehydration. For small objects, a high priority rehydrate may retrieve the object from archive in under 1 hour.

Reference:

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

✉  **homimi6115** Highly Voted 1 year, 5 months ago

Answer is correct
upvoted 38 times

✉  **mlantonis** Highly Voted 11 months ago

Correct Answer: B

- Standard priority: The rehydration request will be processed in the order it was received and may take up to 15 hours.
- High priority: The rehydration request will be prioritized over Standard requests and may finish in under 1 hour for objects under ten GB in size.

Reference:

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

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-rehydration?tabs=azure-portal>
upvoted 14 times

✉  **meoukg** Most Recent 1 month, 1 week ago

Got it on 03/2022, I chose B. between one and 15 hours
upvoted 1 times

✉  **KiranAtShinde** 2 months, 3 weeks ago

Selected Answer: B
Correct Answer is between 1-15 hours
upvoted 1 times

✉  **sertes** 3 months ago

Selected Answer: B
Answer is correct
upvoted 1 times

✉  **ucsdmiami2020** 5 months ago

Selected Answer: B
The answer is correct. Per the provided reference URL <https://docs.microsoft.com/en-us/azure/storage/blobs/access-tiers-overview?tabs=azure-portal>

Archive tier-An offline tier optimized for storing data that is rarely accessed, and that has flexible latency requirements, on the order of hours. Data in the Archive tier should be stored for a minimum of 108 days.
upvoted 1 times

✉  **UnknowMan** 11 months, 1 week ago

Answer is correct
upvoted 1 times

✉  **glam** 11 months, 2 weeks ago

correct.

upvoted 3 times

✉  **Brak** 1 year, 2 months ago

The question asks for "minimum SLA", which is <1 hour using high priority rehydrate. Answer is wrong.

upvoted 2 times

✉  **TakumaK** 11 months, 2 weeks ago

So.. are you confused by that the "minimum SLA" should mean the high rehydrate-priority? If then, can you explain what SLA would be for "Standard rehydrate-priority"?

upvoted 1 times

✉  **altafpatel1984** 5 months ago

and Standard priority is the default rehydration option. so B is correct

upvoted 1 times

✉  **Amrit862** 1 year, 2 months ago

given answer is correct.

ref: <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-rehydration?tabs=azure-portal#rehydrate-an-archived-blob-to-an-online-tier>

upvoted 1 times

✉  **Archimedes** 1 year, 2 months ago

Minimum SLA is the SLA you promise as a developer to your end user of the application. Standard priority is the default rehydration option for archive. High priority will cost more and is usually reserved for use in emergency data restoration situations. For regular use the SLA has to go with Standard priority.

upvoted 4 times

✉  **rdemontis** 1 year, 1 month ago

Exactly. In addition the official docs states: "High priority may take longer than 1 hour, depending on blob size and current demand. High priority requests are guaranteed to be prioritized over Standard priority requests." We don't know the blob size and the current demand so we can't exclude it can be over 1 hour even in the case of high priority

upvoted 2 times

✉  **RaviKS** 1 year, 3 months ago

Correct Answer is between 1-15 hours

upvoted 4 times

✉  **Tealon** 1 year, 4 months ago

The given answer is correct.

upvoted 1 times

✉  **homimi6115** 1 year, 5 months ago

<https://azure.microsoft.com/en-gb/blog/azure-archive-storage-expanded-capabilities-faster-simpler-better/>

upvoted 2 times

✉  **Cornholioz** 1 year, 4 months ago

Where does it provide the SLA as 1-15 hours? Standard rehydrate-priority takes up to 15. High rehydrate-priority takes <1 hour. I'll go with given answer but unclear where it specifically lists 1-15 in the documentation or blogs.

upvoted 3 times

✉  **Cornholioz** 1 year, 4 months ago

You're right, it doesn't explicitly state an SLA per se; but it does say- Standard rehydrate-priority... ... retrievals taking up to 15 hours. It also says it's the new name for what Archive was provided over the past 2 years (default option) for CopyBlob requests.

Assuming that this case (although doesn't state it) uses the Standard rehydrate-priority and not the High rehydrate-priority, I'll go with 1-15 hours instead of <1hr.

upvoted 2 times

HOTSPOT -

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
```

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 \  

```

Correct Answer:

```
--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
```

Box 1: BoundedStaleness -

Bounded staleness: The reads are guaranteed to honor the consistent-prefix guarantee. The reads might lag behind writes by at most "K" versions (that is,

"updates") of an item or by "T" time interval. In other words, when you choose bounded staleness, the "staleness" can be configured in two ways:

The number of versions (K) of the item

The time interval (T) by which the reads might lag behind the writes

Incorrect Answers:

Strong -

Strong consistency offers a linearizability guarantee. Linearizability refers to serving requests concurrently. The reads are guaranteed to return the most recent committed version of an item. A client never sees an uncommitted or partial write. Users are always guaranteed to read the latest committed write.

Box 2: --enable-automatic-failover true\

For multi-region Cosmos accounts that are configured with a single-write region, enable automatic-failover by using Azure CLI or Azure portal.

After you enable automatic failover, whenever there is a regional disaster, Cosmos DB will automatically failover your account.

Question: Accept reservations event when localized network outages or other unforeseen failures occur.

Box 3: --locations'southcentralus=0 eastus=1 westus=2

Need multi-region.

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/consistency-levels> <https://github.com/MicrosoftDocs/azure-docs/blob/master/articles/cosmos-db/manage-with-cli.md>

✉️  **sasisang**  1 year, 4 months ago

Answer is correct.

upvoted 51 times

✉️  **cbn** 1 year, 2 months ago

Last option is correct as well

<https://stackoverflow.com/questions/51197375/creating-cosmosdb-with-azure-cli-in-powershell>

upvoted 4 times

✉️  **cbn** 1 year, 2 months ago

I guess there is a typo on quotes though.

upvoted 3 times

✉  **ning**  8 months, 3 weeks ago

No need to overthink here, max-interval, indicates this must be bounded-slateness, enable-automatic-failover, indicated this must be multi-region
upvoted 16 times

✉  **leandrocantiero**  1 month, 1 week ago

esse aqui ta tudo errado
upvoted 2 times

✉  **glam** 11 months, 2 weeks ago

correct
upvoted 2 times

✉  **crepatata** 12 months ago

The strong consistency doesn't work here:
1) there is a --max-interval property which is being used with bounded staleness only
2) there is a requirement "Accept reservations event when localized network outages or other unforeseen failures occur." which points us to multiple writes for multiple regions which is not being supported by the Strong consistency.
--locations syntax looks like obsolete as for late march 2021
upvoted 6 times

upvoted 1 times

✉  **Spooky7** 11 months, 1 week ago

Ad. 2 - it is not true that it implies writes to multiple regions. In this case there is single write region with automatic failover configured (which provides write availability). Besides with write to multiple regions BoundedStaleness minimum time is 300 seconds, while requirement is 5 seconds (which is actually a minimum for BoundedStaleness with single write region)

upvoted 1 times

✉  **Ralph** 1 year ago

Answer is wrong .. "strong" instead of "boundedStaleness"
upvoted 4 times

✉  **TakumaK** 11 months, 2 weeks ago

Are you sure? If then, elaborate why. Does this option --max-interval work for strong?
upvoted 4 times

✉  **melli** 1 year, 3 months ago

I think this should be "locations southcentralus". The requirement for 99.99% availability is covered by a single region and the syntax for providing multiple regions is wrong.
<https://docs.microsoft.com/en-us/azure/cosmos-db/high-availability>
https://docs.microsoft.com/en-us/cli/azure/cosmosdb?view=azure-cli-latest#az_cosmosdb_check_name_exists-optional-parameters
upvoted 3 times

✉  **agcertif** 1 year, 3 months ago

I agree with you.... 99,99 can be reached with only one region.
Why it's not the right solution (someone can helps please)?
upvoted 3 times

✉  **Brak** 1 year, 2 months ago

Because of the need for high availability during local network outages. Hence the auto failover selection.
upvoted 4 times

✉  **NikB** 1 year, 1 month ago

Agreed, also according to the documentation, multiple regions have a min T of 300s:
"For a single region account, the minimum value of K and T is 10 write operations or 5 seconds. For multi-region accounts the minimum value of K and T is 100,000 write operations or 300 seconds."
upvoted 2 times

✉  **RaviKS** 1 year, 3 months ago

Given Answer is Correct
upvoted 4 times

✉  **tomis** 1 year, 3 months ago

--locations : Add a location to the Cosmos DB database account.
Usage: --locations KEY=VALUE [KEY=VALUE ...]
Required Keys: regionName, failoverPriority
Optional Key: isZoneRedundant
Default: single region account in the location of the specified resource group.
Failover priority values are 0 for write regions and greater than 0 for read regions. A failover priority value must be unique and less than the total number of regions.
Multiple locations can be specified by using more than one `--locations` argument.
upvoted 7 times

✉  **diligent176** 1 year, 3 months ago

You are correct about this - none of the given options will work (all wrong syntax).
But I think they "meant" to use the 3 regions answer.

upvoted 4 times

✉️ **Cornholioz** 1 year, 4 months ago

Tried the CLI in the portal's Cloud Shell:

--locations has wrong syntax in the options.

```
az cosmosdb create -n myaccount4 --enable-automatic-failover true --max-interval 5 -g myRG --locations regionname=eastus --default-consistency-level=BoundedStaleness
```

--locations needs regionname. Because it also takes in failoverPriority and isZoneRedundant params.

So either the option with just the SouthCentralUS should work or if the rest of the regions need to be mentioned, then it's a deprecated syntax which makes no sense to answer now.

upvoted 2 times

✉️ **Tealon** 1 year, 4 months ago

If the last answer is correct (multi-region) than the consistency level cannot be strong (not possible for multi-region), and not Bounded Staleness because multi-region minimal values are 100.000 writes or 300 seconds. But then again, Bounded Staleness is the best option you can select, because the other options are worse (given that strong is not possible).

upvoted 1 times

✉️ **diligent176** 1 year, 3 months ago

the CLI command did not use "--enable-multiple-write-locations", therefore this will configure a single write region for this CosmosDB. Others will be read regions.

upvoted 3 times

✉️ **Zakh** 1 year, 5 months ago

Because of this condition:

Allow simultaneous and out-of-order reservations with a maximum five-second tolerance window

upvoted 3 times

✉️ **User11** 1 year, 5 months ago

Why isn't the consistency level 'Strong'? In question, it is mentioned that 'Process reservations in the exact sequence as reservations are submitted to minimize overbooking or selling the same seat to multiple travelers'

upvoted 5 times

✉️ **Leandromellor** 1 year, 5 months ago

<https://docs.microsoft.com/en-us/azure/cosmos-db/consistency-levels#strong-consistency-and-multiple-write-regions>

"Cosmos accounts configured with multiple write regions cannot be configured for strong consistency as it is not possible for a distributed system to provide an RPO of zero and an RTO of zero."

upvoted 8 times

✉️ **LoGA80** 1 year, 5 months ago

Agreed with bixafo, another hint is --max-interval parameter which is used by the Bounded Staleness consistency level only.

https://docs.microsoft.com/en-us/cli/azure/cosmosdb?view=azure-cli-latest#az_cosmosdb_create

upvoted 10 times

✉️ **cbn** 1 year, 2 months ago

Good catch!

upvoted 3 times

✉️ **bixafo** 1 year, 5 months ago

Because of a maximum five-second tolerance

upvoted 12 times

✉️ **titombo** 1 year ago

Why Bounded-Staleness?

It requests to:

↳ Allow simultaneous and out-of-order reservations with a maximum five-second tolerance window.

But in the documentation it says:

For a single region account, the minimum value of K and T is 10 write operations or 5 seconds.

For multi-region accounts the minimum value of K and T is 100,000 write operations or 300 seconds.

South Central Us, East Us and West Us are in different regions, right? Making the minimum time 300 seconds, instead of maximum of 5 seconds as requested in the question.

upvoted 2 times

HOTSPOT -

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

Correct Answer:

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

Box 1: --SKU B1 --hyper-v -

--hyper-v

Host web app on Windows container.

Box 2: --deployment-source-url images.azurecr.io/website:v1.0.0

--deployment-source-url -u

Git repository URL to link with manual integration.

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

Incorrect:

--deployment-container-image-name -i

Linux only. Container image name from Docker Hub, e.g. publisher/image-name:tag.

Box 3: az webapp config container set -url https://images.azurecr.io -u admin -p admin az webapp config container set

Set a web app container's settings.

Parameter: --docker-registry-server-url -r

The container registry server url.

The Azure Container Registry instance named images is a private registry.

Example:

```
az webapp config container set --docker-registry-server-url https://{{azure-container-registry-name}}.azurecr.io
```

Reference:

<https://docs.microsoft.com/en-us/cli/azure/appservice/plan>

✉  **glam**  11 months, 2 weeks ago

```
--sku B1 --is-linux  
--deployment-container-image-name images.azurecr.io/website:v1.0.0  
-- container set --docker-registry-server-url https://images.azurecr.io -u admin -p admin
```

upvoted 69 times

✉  **aperez1979**  1 year ago

"use multiple containers in the same container group" this not is possible in windows.

Solution is:

```
--is-linux  
--deployment-container-image-name
```

upvoted 22 times

✉  **azurelearner666** 10 months, 1 week ago

True! also last response is correct with

```
-- container set --docker-registry-server-url https://images.azurecr.io -u admin -p admin
```

upvoted 4 times

✉  **Tom87** 1 year ago

That's true.

"Multi-container groups are currently restricted to Linux containers."

<https://docs.microsoft.com/en-us/azure/container-instances/container-instances-multi-container-group>
upvoted 5 times

✉  **yevgen91** Most Recent 3 months, 3 weeks ago

The suggested answer is for Windows, but Python is deprecated for Windows, as well as multiple containers are not possible in Windows. So it must be Linux, and based on this article <https://docs.microsoft.com/en-us/azure/app-service/tutorial-custom-container?pivots=container-linux>

the answer must be:

1. --sku B1 --is-linux
2. --deployment-container-image-name ... :v1.0.0
3. container set ... https://images.azurecr.io ...

upvoted 2 times

✉  **Molte** 4 months ago

for answer 3: Can somebody tell me why its images.azurecr.io and not images.azurecr.io/website?

upvoted 1 times

✉  **ScubaDiver123456** 3 months ago

The command requires the URL of the registry, not the image name. That is appended later.

--docker-registry-server-url

The container registry server url."

upvoted 2 times

✉  **BeshoyRomany** 7 months ago

Hi All the Correct answer is

```
--sku B1 --is-linux  
--deployment-container-image-name images.azurecr.io/website:v1.0.0  
-- container set --docker-registry-server-url https://images.azurecr.io -u admin -p admin
```

Multi-container groups currently support only Linux containers. For Windows containers, Azure Container Instances only supports deployment of a single container instance. While we are working to bring all features to Windows containers, you can find current platform differences in the service

<https://docs.microsoft.com/en-us/azure/container-instances/container-instances-container-groups>

upvoted 3 times

✉  **shai0946** 9 months, 1 week ago

Multi-container groups currently support only Linux containers. For Windows containers, Azure Container Instances only supports deployment of a single container instance.

<https://docs.microsoft.com/en-us/azure/container-instances/container-instances-container-groups>

upvoted 2 times

✉  **bssehra** 9 months, 2 weeks ago

I know that Multi-container groups are currently restricted to Linux containers but here we are talking about multiple containers in same container group. I think it is possible in windows. Is there any helpful link which says its not possible on Windows?

upvoted 2 times

✉  **THAMORAY** 11 months, 1 week ago

1. the choice of the operating system depends on the following requirement: "The solution will use multiple containers in the same container group." If you read this article (<https://azure.microsoft.com/es-es/updates/app-service-multi-container-and-linux-support-for-ase-preview/>) you can see that only Linux support app services with multiple containers. It's true also that Python is supported only on linux... yes, but in the recent past it was supported on windows too. Now it is deprecated (<https://docs.microsoft.com/en-us/visualstudio/python/managing-python-on-azure-app-service?view=vs-2019>).

2. The option could only be --deployment-container-image-name because, as even the answer explanation says, --deployment-source-url is the url of the git repository. But we have to reference an ACR image. It's another thing.

3. The answer is correct

upvoted 5 times

✉  **yuyi4145** 12 months ago

I think I need to add "--name <webapp name>" in the command of "az webapp create"

upvoted 1 times

✉  **jokergester** 1 year ago

Any particular reason why Linux is not a preferred hosting environment?

upvoted 1 times

✉  **koumki** 1 year ago

Maybe because it's windows and they want to force us to use windows container

upvoted 4 times

✉  **arnabdt** 1 year ago

follow the discussion here <https://www.examtopics.com/discussions/microsoft/view/47047-exam-az-204-topic-2-question-12-discussion/>

upvoted 6 times

✉  **clarionprogrammer** 1 year ago

Agreed. A better answer is there.

HOTSPOT -

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

- ▼

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

Correct Answer:

Criteria

* Metric name

Message Count
Active Message Count

1 minute time grain

* Time grain statistic

Total
Maximum
Average
Count

* Operator

Box 1: Service bus queue -

You are developing a back-end Azure App Service that scales based on the number of messages contained in a Service Bus queue.

Box 2: ActiveMessage Count -

ActiveMessageCount: Messages in the queue or subscription that are in the active state and ready for delivery.

Box 3: Count -

Box 4: Less than or equal to -

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.

Box 5: Decrease count by

 **VijiVivek** Highly Voted  1 year ago

The correct answers are

- 1) Service bus queue
- 2) Active message count
- 3) Average
- 4) Less than or equal to
- 5) Decrease count by

upvoted 58 times

 **azurelearner666** 10 months, 1 week ago

this is correct (the "official" solution is wrong)

Also check the proper image https://vceguide.com/wp-content/uploads/2019/10/Microsoft-AZ-203-date-01-06-2019-00001_Page_062_Image_0001.jpg

upvoted 13 times

 **mlantonis** Highly Voted  11 months ago

Full image: https://vceguide.com/wp-content/uploads/2019/10/Microsoft-AZ-203-date-01-06-2019-00001_Page_062_Image_0001.jpg
upvoted 37 times

 **mlantonis** 11 months ago

Box 1: Service bus queue

You are developing a back-end Azure App Service that scales based on the number of messages contained in a Service Bus queue.

Box 2: ActiveMessage Count

ActiveMessageCount: Number of messages in the queue or subscription that are in the active state and ready for delivery.

Box 3: Average

For special metrics such as Storage or Service Bus Queue length metric, the threshold is the average number of messages available per current number of instances.

Box 4: Less than or equal to

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.

Box 5: Decrease count by

upvoted 20 times

 **mlantonis** 11 months ago

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/autoscale/autoscale-best-practices#considerations-for-scaling-threshold-values-for-special-metrics>

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/message-counters>

upvoted 5 times

 **jay158** 10 months, 3 weeks ago

You are providing invaluable help, by clarifying the questions,

upvoted 9 times

 **meoukg** Most Recent 1 month, 1 week ago

Got it on 03/2022, I chose as below:

Box 1: Service bus queue

Box 2: ActiveMessage Count

Box 3: Average

Box 4: Less than or equal to

Box 5: Decrease count by

upvoted 1 times

 **GigaCaster** 9 months ago

Just a question but how are you going to reduce the count if there is now count to reduce?

upvoted 2 times

 **glam** 11 months, 2 weeks ago

The correct answers are

1) Service bus queue

2) Active message count

3) Average

4) Less than or equal to

5) Decrease count by

upvoted 3 times

 **Phenr** 1 year, 1 month ago

I believe the answers are:

1st box: as given, since we're analyzing the state of messages in the Service Bus Queue

2nd box: as given, because Active Message Count will show us just the count of messages that are in the active state and ready for delivery, while Message Count would show us all the messages.

3rd box: Average, since we should stay consistent with the Scale Up time grain, which is also "Average" - this way, when we use "average" on both, we have consistent and clear conditions when to go up and when to go down

upvoted 14 times

 **hobob** 1 year, 1 month ago

I think the 3rd option should be "Average" since the scale up rule is based off average, it makes sense to make the scale down rule work on the same principal.

upvoted 5 times

 **Mike_St** 1 year, 1 month ago

The image is cut so i cant see the bottom 2 dropdowns but they sound alright in the answer explanation bellow.

Also the 2nd box should be Message Count.

Reason:

In the question it is said:

"when the average queue length of unprocessed AND valid queue messages"

If it was just valid Queue messages it would have been enough to set it on Active Message Count... but they want Valid AND Unprocessed messages... so i think it should be Message Count.

(i am not 100% sure but unprocessed message should not count as an active message)

upvoted 3 times

 **qerem** 1 year ago

Messagecount is false because it also contains deadlettered messages among others. Unprocessed messages are active because they are "read to delivery". So i think "Active Message Count" is correct

upvoted 3 times

DRAG DROP -

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**Answer Area**

`Metadata.Add`
`SetMetadataAsync`
`SetPropertiesAsync`

Correct Answer:

Methods

`FetchAttributesAsync`
`UploadFileStream`

Metadata.Add example:

```
// Add metadata to the dictionary by calling the Add method
metadata.Add("docType", "textDocuments");
```

SetMetadataAsync example:

```
// Set the blob's metadata.
await blob.SetMetadataAsync(metadata);
// Set the blob's properties.
await blob.SetPropertiesAsync();
```

Reference:

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-properties-metadata>

  **Phenr**  1 year, 1 month ago

Since we're talking about updating the metadata,

- first we need to fetch it, to populate blob's properties and metadata (we want to update it - without fetching we would just set the new metadata):

`FetchAttributesAsync`

- second, we need to manipulate the metadatas to update them and the best fitting is

`Metadata.Add`

- third, we have to persist our changes. We can use a method that initiates an asynchronous operation to update the blob's metadata, which is

`SetMetadataAsync`

upvoted 135 times

  **ztt** 9 months ago

Based on MS documentation referenced it should be:

```
// Get the blob's properties and metadata.
BlobProperties properties = await blob.GetPropertiesAsync();

// Add metadata to the dictionary by calling the Add method
properties.metadata.Add("docType", "textDocuments");

// Add metadata to the dictionary by using key/value syntax
properties.metadata["category"] = "guidance";
```

```
// Set the blob's metadata.  
await blob.SetMetadataAsync(properties.metadata);  
upvoted 17 times
```

✉  **altafpatel1984** 5 months ago

But there is no option for GetProperties !
upvoted 2 times

✉  **altafpatel1984** 5 months ago

This is correct answer. Others answers suggesting GetProperties/SetProperties are wrong, because GetProperties is no in options at all, and there is no SetProperties method.
upvoted 2 times

✉  **azurelearner666** 10 months, 1 week ago

This is the best response (the "official" response is wrong)
upvoted 2 times

✉  **TakumaK** 11 months, 1 week ago

nicely explained!
upvoted 3 times

✉  **Tom87** Highly Voted  1 year ago

I suppose there are two correct answers, depending on the version of Azure.Storage.Blobs. For v11: FetchAttributesAsync, Metadata.Add, SetMetadataAsync.
For v12: GetPropertiesAsync, Metadata.Add, SetMetadataAsync.
Just look here, there are two tabs with source code. One for v11, one for v12:
<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-properties-metadata?tabs=dotnet#set-and-retrieve-metadata>
upvoted 42 times

✉  **vtomy** 9 months, 4 weeks ago

Correct. But GetPropertiesAsync not mentioned in answer options. We can go with FetchAttributesAsync
upvoted 8 times

✉  **meoukg** Most Recent  1 month, 1 week ago

Got it on 03/2022, chose as FetchAttributesAsync => Metadata.Add => SetMetadataAsync
upvoted 2 times

✉  **xRiot007** 1 month, 2 weeks ago

For both .NET v11 and v12 you will add to the blob metadata either using the add method or key/value then call SetMetadataAsync

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-properties-metadata?tabs=dotnet11>
upvoted 1 times

✉  **ytingyeu** 2 months ago

I suppose "FetchAttributesAsync" is from "Microsoft.Azure.Storage.Blob" which has been deprecated.

The latest library Azure.Storage.Blobs doesn't have method FetchAttributesAsync.
upvoted 1 times

✉  **troy89** 2 months, 1 week ago

With .NET v12 SDK it is now blob.GetPropertiesAsync() instead of FetchAttributesAsync()
upvoted 1 times

✉  **edengoforit** 2 months, 4 weeks ago

FetchAttributesAsync
Metadata.Add
SetMetadataAsync
upvoted 1 times

✉  **SummerWarrior** 3 months, 2 weeks ago

I think the answer provided (Metadata.Add, SetMetadataAsync, SetPropertiesAsync) are right.
The question asks us to provide the methods that can enable to add properties, and not the steps in which updating a metadata should be done.
upvoted 1 times

✉  **leonidn** 3 months, 2 weeks ago

FetchAttributesAsync is a container-level operation and not relevant. We do not upload files, so, uploadfilestream is not relevant. Other operations are possible, hence, the answer is correct.
upvoted 2 times

✉  **avipi** 3 months, 3 weeks ago

we just need to add new metadata using
metadata.add("", "")
SetMetadataAsync option.
upvoted 1 times

✉  **avipi** 3 months, 3 weeks ago

I am sorry question is specifically talking about updating metadata ..option would be
fetch, add and set
upvoted 1 times

✉  **nkphuc700** 4 months, 2 weeks ago

hmm, so many given answers in the post are wrong. I have no idea why moderators/admin does publish questions with incorrect answers.
upvoted 1 times

✉  **Saurabh_Kulkarni** 7 months ago

I have tried developing a code (at below path) to update metadata of Azure blob storage (blob), it is working fine.
<https://gist.github.com/kulkarnis009/5abfb2b22da6b3f658feb1451ca48f59#file-gistfile1-txt>

I used only Metadata.add and blobclient.setmetadata. NOT used setproperty or fetchattribute. (i think those are needed when using Azure Storage client library for .NET)

upvoted 2 times

✉  **mc0re** 8 months, 3 weeks ago

There is no "SetPropertiesAsync" method.

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.cloudblobcontainer?view=azure-dotnet-legacy&viewFallbackFrom=azure-dotnet>

upvoted 1 times

✉  **ning** 8 months, 3 weeks ago

This answer is to add new custom metadata point, cannot update any existing data point, you will get an error in dictionary object, but only logically the proposed answer is the correct one

upvoted 2 times

✉  **cthall** 11 months, 1 week ago

FetchAttributesAsync
Metadata.Add
SetMetadataAsync

Are the correct answers.

upvoted 9 times

✉  **glam** 11 months, 2 weeks ago

FetchAttributesAsync
Metadata.Add
SetMetadataAsync
upvoted 7 times

✉  **Ad001** 1 year ago

Its mentioned in the Microsoft docs that to set metadata 'SetMetaData' or 'SetMetaDataAsync' can be used.

ref - <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-properties-metadata?tabs=dotnet#set-and-retrieve-metadata>
upvoted 1 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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?

A. Yes

B. No

Correct Answer: A

Reference:

<https://docs.microsoft.com/en-us/azure/event-grid/compare-messaging-services>

✉️  **bbijls** Highly Voted 1 year, 1 month ago

I don't know who gave all the answer, but that person definitely failed the exam..
upvoted 86 times

✉️  **AnuSubramaniam** 8 months, 2 weeks ago

Its Event Hub not, Grid.
upvoted 11 times

✉️  **kondapaturi** 10 months ago

what is the answer?
upvoted 1 times

✉️  **Anil4Az** 11 months ago

Good one... :)
upvoted 1 times

✉️  **Dinima** Highly Voted 1 year, 1 month ago

I think event hub. Azure Event Hub can be used to get the messages from the various devices. Azure Event Hub capture can then be used to persist the events to Azure Blob storage.
upvoted 39 times

✉️  **Tom87** 1 year ago

I agree. The solution says "enable capture". I have found capture only for Event Hub, not for Event Grid.
<https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-capture-overview>
upvoted 5 times

✉️  **Evo_Morales** Most Recent 2 weeks, 2 days ago

Estoy de acuerdo - es "No"
upvoted 1 times

✉️  **srikrishnan22** 3 weeks, 6 days ago

Selected Answer: B
answer B
upvoted 1 times

✉️  **Freidrich** 2 months ago

Selected Answer: B
The correct answer is B: No.
upvoted 2 times

✉️  **oescm** 2 months, 2 weeks ago

Got this one 02/2022. Went with highly voted answer.
upvoted 3 times

✉  **Ameet9** 2 months ago

Hi,
roughly what was the %age of questions from this dump/question bank appeared on your exam.
upvoted 1 times

✉  **rkumar307** 2 months, 3 weeks ago

Azure Event Hub
upvoted 1 times

✉  **Mev4953** 3 months ago

"Configure the machine identifier as the partition key and enable capture"
How to configure the machine identifier as the PARTITION KEY?
It seems that it is "Table storage" issue not blob storage.
upvoted 1 times

✉  **sertes** 3 months ago

Selected Answer: B
The Correct answer is: B.No
upvoted 1 times

✉  **Arnab101** 3 months, 1 week ago

Selected Answer: B
Partition and event capture is possible with Event hub and not Event grid.
upvoted 3 times

✉  **nonoss** 6 months, 3 weeks ago

The answer should be "No". Answer should be event hub
1- The solution mentions Capturing and Partitioning, these are features of event hub and are not available in event grid, so it makes no sense talking about "partition key and enable capture" for event grid.
Capture: <https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-features#capture>
Partition: <https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-features#partitions>
2- Also data need to be stored in azure blob storage, which is done using the Capture feature in event hub.
Enable capturing of events streaming through Azure Event Hubs: <https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-capture-enable-through-portal>
3- Event grids deliver events from event sources (senders) to event handlers (receivers), none of the handlers is azure blob storage (<https://docs.microsoft.com/en-us/azure/event-grid/overview>)
Further reading:
Here you can find an architecture example, where an event hub captures telematics data from several devices and stores the data to a blob storage and in parallel emits an event to an event grid, etc...
upvoted 17 times

✉  **Bijug** 6 months, 3 weeks ago

The event message has the information you need to react to changes in services and applications. Event Grid isn't a data pipeline, and doesn't deliver the actual object that was updated.
the answer should be No
upvoted 3 times

✉  **BeshoyRomany** 7 months ago

Hi All,
The Correct answer is: B.No

Instead use an Azure Service Bus, which is used for order processing and financial transactions.

Note: An event is a lightweight notification of a condition or a state change. Event hubs are usually used reacting to status changes.
upvoted 4 times

✉  **lugospod** 3 months, 1 week ago

I think that the point is that it only says DEVICE data... not transaction data or financial data... so it is just technical info. And as such, are more likely to be processed by Hub
upvoted 1 times

✉  **bssehra** 9 months, 2 weeks ago

Answer provided is incorrect. Correct answer should be Event Hub (NOT Event Grid). Event Grid only reacts to status changes, not data streaming.
upvoted 3 times

✉  **j888** 9 months, 2 weeks ago

I would say no, reason:
1) partition key- using the device identifier may not be a good choice, every device will be unique and endless creation. Location or Stores may be a better choice.
2) If this is to collect the data from the point of sales, a reliable mechanism like a Service bus will be recommended choice.
upvoted 3 times

✉  **PhilI** 4 months, 3 weeks ago

I agree, besides that there are max 32 partitions possible in Event Hub, so how to store the data per device?
upvoted 1 times

✉️  **Pratik1216** 10 months, 2 weeks ago

The given answer is correct. Please check the link
<https://docs.microsoft.com/en-us/azure/event-grid/event-grid-event-hubs-integration>
upvoted 3 times

✉️  **mlantonis** 10 months, 4 weeks ago

I would say NO. The solution says "enable capture". This feature is available for Event Hub, not for Event Grid.
upvoted 10 times

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

Correct Answer: D

A queue allows processing of a message by a single consumer. Need a CloudQueueClient to access the Azure VM.

Incorrect Answers:

B, C: In contrast to queues, topics and subscriptions provide a one-to-many form of communication in a publish and subscribe pattern. It's useful for scaling to large numbers of recipients.

Reference:

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-queues-topics-subscriptions>

✉  **mlantonis** Highly Voted 11 months ago

Correct Answer: A

Azure.Storage.Queues.QueueClient: .NET v12

Azure.Storage.Queues.CloudQueueClient: .NET v11 (Legacy)

So, the question is really about what kind of queue message tool you should use. And the key word here is that "message must NOT persist after being processed".

Azure.Storage.Queues.QueueClient supports "At-Most-Once" deliver mode, while Azure.Storage.Queues.CloudQueueClient doesn't.

Reference:

<https://docs.microsoft.com/en-us/dotnet/api/azure.storage.queues.queueclient?view=azure-dotnet>

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.queue.cloudqueueclient?view=azure-dotnet-legacy>
upvoted 49 times

✉  **MiraA** 6 months, 3 weeks ago

It seems the CloudQueueClient is a legacy class and is used for creation of QueueClient instances.

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.queue.cloudqueueclient.getqueuereference>

upvoted 1 times

✉  **Spooky7** Highly Voted 11 months, 1 week ago

First of all - question is not precise as we don't know which QueueClient they are asking about. There are two options:

- Microsoft.AzureService.Bus.QueueClient?
- Azure.Storage.Queues.QueueClient?

I would say it is about Microsoft.AzureService.Bus.QueueClient as the difference between Azure.Storage.Queues.CloudQueueClient (v12) is just a legacy version of the Azure.Storage.Queues.QueueClient (v11)

So the question is really about what kind of queue message tool you should use. And the key word here is that "message must NOT persist after being processed". So correct answer would be Microsoft.AzureService.Bus.QueueClient (A) as it supports "At-Most-Once" deliver mode while Azure.Storage.Queues.CloudQueueClient doesn't.

upvoted 9 times

✉  **idroj** Most Recent 2 months ago

Selected Answer: A

A is the correct answer

upvoted 2 times

✉  **Ccastan1** 2 months, 2 weeks ago

So the explanation for why A is wrong is incorrect? It states you cannot access the VM using A

upvoted 1 times

✉  **prabhjot** 11 months ago

yes A is correct
upvoted 1 times

✉  **glam** 11 months, 2 weeks ago

A. QueueClient
upvoted 2 times

✉  **aperez1979** 1 year, 1 month ago

Why not A?
upvoted 4 times

✉  **MrZoom** 1 year, 1 month ago

Agreed, A is the new-style API, and D is the old-style API, so IMHO, A is better.

Link (A): <https://docs.microsoft.com/en-us/dotnet/api/azure.storage.queues.queueclient?view=azure-dotnet>

Link (D): <https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.queue.cloudqueueclient?view=azure-dotnet-legacy>

upvoted 18 times

✉  **vladans** 1 year ago

You're right.
new version --> .NET v12 --> QueueClient
old version --> .NET v11 --> CloudQueueClient
Link --> <https://docs.microsoft.com/en-us/azure/storage/queues/storage-dotnet-how-to-use-queues?tabs=dotnet#create-the-queue-storage-client>
Therefore, the answer is QueueClient.
upvoted 7 times

✉  **Shion2009** 1 year, 1 month ago

See the answer information:
A queue allows processing of a message by a single consumer. Need a CloudQueueClient to access the Azure VM.
upvoted 3 times

DRAG DROP -

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	↑ ↓

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

Step 1: Upgrade the storage account to GPv2

Object storage data tiering between hot, cool, and archive is supported in Blob Storage and General Purpose v2 (GPv2) accounts. General Purpose v1 (GPv1) accounts don't support tiering.

You can easily convert your existing GPv1 or Blob Storage accounts to GPv2 accounts through the Azure portal.

Step 2: Copy the data to be archived to a Standard GPv2 storage account and then delete the data from the original storage account

Step 3: Change the storage account access tier from hot to cool

Note: Hot - Optimized for storing data that is accessed frequently.

Cool - Optimized for storing data that is infrequently accessed and stored for at least 30 days.

Archive - Optimized for storing data that is rarely accessed and stored for at least 180 days with flexible latency requirements, on the order of hours.

Only the hot and cool access tiers can be set at the account level. The archive access tier can only be set at the blob level.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-storage-tiers>

 **sien** Highly Voted 1 year ago

Since we already have a premium P1 account with gpv1. Why not:

- Upgrade the existing one to GPv2
- Create a new GPv2 standard account with default access level to cool

- And then copy archive data to the GPV2 and delete the data from original storage account.

That makes sense to me.

upvoted 62 times

✉ **unilldreams** 5 months, 1 week ago

Both provided answer and the answer in the fist comment looks correct, I have decided to go with provided solution.

1. Upgrade the existing one to GPv2

2. copy the data to be achieved to a standard GPv2 storage account and then delete the data from the original solution (assuming that storage account with achieve tier we want to copy to already exists).

Why would create new account with cool tier when we want it to store archived data, true that achieve tier is not available by default, but then we will need extra step to set to to achieve from cool)

3. Change the storage account access tier from hot to cool. (Question does not mention how frequent we access data in 1st 3 months, but duration seems a bit more (3 months) and changing it to cool will save cost.

We will have two storage account-

1. cool storage account for newer data - to access data

2. Achieved storage account for older copied data- (to be changed to archive)

upvoted 2 times

✉ **john4p** 4 months, 2 weeks ago

Changing the "storage account access tier from hot to cool" is wrong. You'll end up with two cool accounts, but you need a hot one because newer data "must be available immediately".

upvoted 1 times

✉ **unilldreams** 5 months, 1 week ago

please ignore last line - (to be changed to archive)

upvoted 1 times

✉ **MiraA** 7 months, 1 week ago

My explanation...

The "archive" tier cannot be set at the account level, it can only be set at the blob level.

So we need two storage accounts only - one "hot" to store new data and one "cold" to store both older and archive data. Setting the "archive" tier is matter of blob copy/move operation within the application code.

1. Upgrade the storage account to GPv2 (it becomes "hot" by default)

2. Create a new GPv2 Standard account and set its default access tier level to "cool" (creates empty storage for older and archive data)

3. Copy the data to be archived to a Standard GPv2 storage account and the delete the data from the original storage account (individual blobs get marked as "archive" during move operation, the newly create GPv2 is mentioned as the target)

Now we have two storage accounts:

The first "hot" with new data only.

The second "cold" with archive (and older) data only.

upvoted 20 times

✉ **MiraA** 7 months, 1 week ago

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-storage-tiers>

"Only the hot and cool access tiers can be set at the account level. The archive access tier can only be set at the blob level."

<https://docs.microsoft.com/en-us/azure/storage/common/storage-account-upgrade>

"If an account access tier is not specified on upgrade, it will be upgraded to hot by default."

<https://docs.microsoft.com/en-us/dotnet/api/azure.storage.blobs.specialized.blobbatch.setblobaccesstier>

Function BlobBatch.SetBlobAccessTier

upvoted 5 times

✉ **Chked** 8 months, 4 weeks ago

I agree. But can the first step be the last?

- Create a new GPV2 standard account with default access level to cool

- And then copy archive data to the GPV2 and delete the data from original storage account.

- Upgrade the existing one to GPv2

upvoted 1 times

✉ **Ram0202** 9 months ago

Why we need to Upgrade the existing one to GPv2 as we are creating a new one?

upvoted 4 times

✉ **Spooky7** Highly Voted 11 months, 1 week ago

Shouldn't the question be about which TWO actions you need to perform? And then:

- upgrade account

- change tier to cool (however it can be done in 1 step during upgrading)

Any answer with 3 actions doesn't make sense. For instance what is the point of upgrading storage account and after creating new one? You can have default cool tier and rule which will move some old blobs to archive tier. There is no need to have 2 separate storage accounts.

upvoted 9 times

✉ **Peter304403** 10 months, 3 weeks ago

I don't even see the reason why to change the default tier, so only the upgrade of the given answers would be right? New data should be hot (which is default) and you need rules to put older data to cool or archive. To me there is also no need for two accounts and also not for

changing the default tier. What part am I missing?

upvoted 3 times

✉  **Evo_Morales** Most Recent ⓘ 2 weeks, 2 days ago

Agree with voting/answer, but the question itself seems flawed. Need to learn not to read anything else into the questions and not add steps/requirements that yes, would make sense.

upvoted 1 times

✉  **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22

upvoted 2 times

✉  **massnonn** 2 months, 2 weeks ago

for me not have sense - Upgrade the existing one to GPv2

So:

- create ..
- change..
- copy

upvoted 1 times

✉  **edengoforit** 3 months, 1 week ago

Azure offers three types of storage accounts: General Purpose v2 (GPv2), General Purpose v1 (GPv1), and a dedicated object storage service—Blob Storage. GPv1 and GPv2 support the same storage types, but GPv2 supports Hot, Cool, and Archive tiers. Adopt GPv2 or Blob Storage to leverage tiering.

GPv2 offers up a variety of storage options (blob, files, queues, tables, and disks), performance tiers, and replication options not available with dedicated blob storage account types. Azure uses GPv2 to roll out new product enhancements (e.g., new redundancy options). GPv2 is the preferred storage account type if you want early access to new services. Azure storage account options are:

GPv2: Basic storage account type for blobs, files, queues, and tables. Recommended for most scenarios using Azure Storage.

GPv1: Legacy account type for blobs, files, queues, and tables. Use GPv2 accounts instead when possible.

upvoted 1 times

✉  **Yazhu** 3 months, 2 weeks ago

Confusing here

What's the right answer??

upvoted 3 times

✉  **ning** 8 months, 2 weeks ago

The goal should be

1. 0-90 days old --> hot
2. 91-365 days old --> cool
3. 366 or more --> archive

But I cannot see anything satisfy that

upvoted 7 times

✉  **j888** 8 months ago

The given answer is correct. I can only assume the second storage is in GPv2 Archived but wasn't been advised in the question.
It makes sense when you put this together.

1) So when you upgrade from GPv1 to Gpv2, it is defaulting to hot.

2) Take advantage of the hot tier pricing by moving your archive data to another Gpv2 storage that wasn't been advised in the question

3) No change this storage to cool tier to satisfy the requirement

upvoted 2 times

✉  **Ims001** 9 months ago

since the solution is insisting on having three processes,,

1. Create a new gpv2 account
2. Copy archive data to the new gpv2 account and delete the data from the original account
3. Change the access tier from hot to cool

upvoted 4 times

✉  **j888** 9 months, 2 weeks ago

"Copy the data to be archived to standard GPv2 storage account and then delete the data from original storage account" - Clearly this indicating a second storage account was created- New storage GPv2.

I would choose to create a new storage gpv2. Then change from hot to cool and lastly move the data across as a more appropriate choice. If they are enforcing 3 answers

The answer doesn't make sense and if you want to enforce choices then the above is more appropriate.

upvoted 1 times

✉  **j888** 8 months, 2 weeks ago

Ignore the above. I believe below step is more appropriate:

- 1) upgrade from GPV1 to GPV2, so the default will be in hot tier
- 2) Take the advantage of pricing by moving the data, so copy the archive data to another Gpv2
- 3) Now last step is to change the status from the current Hot tier to Cool.

I think this is more sensible..

upvoted 4 times

✉ **SlavMar** 9 months, 4 weeks ago

Why upgrade - if v1 works always as HOT than we don't need to touch it. Just creat3 v2, copy data from v1 and set v2 to cool - 2 steps
upvoted 3 times

✉ **[Removed]** 10 months, 1 week ago

The answer is correct.

- 1) you upgrade your existing one.
- 2) you copy the archive data to a new gpv2 account.
- 3) now you can change the access level from hot to cold.

upvoted 1 times

✉ **gunz123** 9 months, 3 weeks ago

Once upgraded, there is still one storage. Where do you copy archive data to in step 2?

upvoted 2 times

✉ **jay158** 10 months, 2 weeks ago

I think answer is just one action

- Upgrade the existing one to GPv2

Why everyone trying to set default access level to COOL? this is not a requirement

upvoted 2 times

✉ **timwarp** 10 months, 2 weeks ago

Because of this part: "Data older than three months is rarely used" so it can be in cool storage.

upvoted 2 times

✉ **zolty13** 7 months, 2 weeks ago

yes but you still needs HOT for younger files...

upvoted 2 times

✉ **mlantonis** 11 months ago

Step 1: Upgrade the storage account to GPv2

Object storage data tiering between hot, cool, and archive is supported in Blob Storage and General Purpose v2 (GPv2) accounts. General Purpose v1 (GPv1) accounts don't support tiering. You can easily convert your existing GPv1 or Blob Storage accounts to GPv2 accounts through the Azure portal.

Step 2: Create a new GPV2 standard account with default access level to cool

Step 3: Copy the data to be archived to a Standard GPv2 storage account and then delete the data from the original storage account

upvoted 6 times

✉ **mlantonis** 10 months, 4 weeks ago

Although Step 3 seems unusual and not necessary.

upvoted 4 times

✉ **ensa** 6 months, 1 week ago

every time with good explanation but step 3 needed because why not transfer the old data that needed to new one and delete the old one for saving cost

upvoted 1 times

✉ **mlantonis** 10 months, 4 weeks ago

Reference:

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-storage-tiers>

<https://docs.microsoft.com/en-us/azure/storage/common/storage-account-upgrade?tabs=azure-portal>

upvoted 1 times

✉ **r1999** 11 months, 2 weeks ago

My guess as to why the answer is correct:

- 1) Upgrade the account to v2 because of the archive feature
- 2) Copy the data, to a new storage account (while it is only implicitly suggested that this step also involves creating a new storage account).
- 3) Set the access level to cool AFTER having copied the data. Read/write data from/to a storage account that is set to 'cool' is expensive, thus best not to set the account to 'cool' while still having to write a lot of data during the first initial archive action.

(This based on my interpretation of the pieces of the answers provided)

upvoted 5 times

✉ **glam** 11 months, 2 weeks ago

- 1) Upgrade existing GPv1 to GPv2
- 2) Create new one Standard GPv2
- 3) Copy data to Standard GPv2

upvoted 2 times

JoeInOregon 11 months ago

glam, this is the first time I've disagreed with you! Thanks for all the simple, solid answers you contributed up to this point. You've been very helpful. Actually, I think you have this one correct as well, but you didn't give the full answer on step 2. "Create new one Standard GPv2, and set default to cool", right?

upvoted 2 times

kimalto452 11 months, 2 weeks ago

how we can archive data with gpv2 cool access? that doesn't have any sense...

upvoted 1 times

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);

Correct Answer: C

Example:

```
// Create a new instance of the Cosmos Client  
this.cosmosClient = new CosmosClient(EndpointUri, PrimaryKey)  
//ADD THIS PART TO YOUR CODE  
await this.CreateDatabaseAsync();
```

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/sql-api-get-started>

✉  **Mr2302682** Highly Voted 1 year, 8 months ago

The Answer is correct!

upvoted 38 times

✉  **mlantonis** Highly Voted 11 months ago

Correct Answer: C

Azure Cosmos DB is a fully managed NoSQL database for modern app development. Single-digit millisecond response times, and automatic and instant scalability, guarantee speed at any scale.

```
// Create a new instance of the Cosmos Client  
this.cosmosClient = new CosmosClient(EndpointUri, PrimaryKey)  
//ADD THIS PART TO YOUR CODE  
await this.CreateDatabaseAsync();
```

Reference:

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.cosmos.cosmosclient?view=azure-dotnet>

<https://docs.microsoft.com/en-us/azure/cosmos-db/sql-api-get-started>
upvoted 14 times

✉  **petitbilly** Most Recent 1 month, 2 weeks ago

Got it in exam 03/22

upvoted 1 times

✉  **Freidrich** 2 months ago

Selected Answer: C

The correct answer is C.

upvoted 1 times

✉  **oescm** 2 months, 2 weeks ago

Got this one 02/2022. Went with highly voted answer.
upvoted 4 times

✉  **Mev4953** 3 months ago

Got this in the exam 01/22
upvoted 4 times

✉  **lugospod** 3 months ago

Got this one 01/2022. Went with most voted (to avoid writing answers again)
upvoted 4 times

✉  **sanjayrawat** 6 months, 2 weeks ago

Answer : C

upvoted 1 times

✉  **debanjan10** 6 months, 3 weeks ago

Order:
Cosmos Client > Database > Container > Item
upvoted 3 times

✉  **SlavMar** 9 months, 4 weeks ago

But why we assume it is Cosmos?
App needs to access some No-SQL database that may already exist - maybe it is Cosmos, maybe not
upvoted 2 times

✉  **DParekh** 10 months, 4 weeks ago

There are two ways by which we can created cosmosclient instance.
1. CosmosClient cosmosClient = new CosmosClient(connectionString);
2. CosmosClient cosmosClient = new CosmosClient(EndpointUri, PrimaryKey)

So answer C is correct.

upvoted 1 times

✉  **glam** 11 months, 2 weeks ago

correct.
upvoted 4 times

✉  **Tom87** 1 year ago

Correct answer.
CosmosClient is the only one with the appropriate constructor.
<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.cosmos.cosmosclient.-ctor?view=azure-dotnet>
<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.cosmos.database.-ctor?view=azure-dotnet>
<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.cosmos.container.-ctor?view=azure-dotnet>
upvoted 3 times

✉  **27close** 1 year, 5 months ago

<https://docs.microsoft.com/en-us/azure/cosmos-db/sql-api-get-started>

```
public static async Task Main(string[] args)
{
}
```

```
// ADD THIS PART TO YOUR CODE
/*
Entry point to call methods that operate on Azure Cosmos DB resources in this sample
*/
```

```
public async Task GetStartedDemoAsync()
{
    // Create a new instance of the Cosmos Client
    this.cosmosClient = new CosmosClient(EndpointUri, PrimaryKey);
    answer is correct
}
```

upvoted 2 times

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

Correct Answer: A

You can copy blobs, directories, and containers between storage accounts by using the AzCopy v10 command-line utility.

The copy operation is synchronous so when the command returns, that indicates that all files have been copied.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-use-azcopy-blobs-copy>

✉  **kondapaturi** Highly Voted 10 months ago

Answer – AzCopy, The Azcopy tool can be used to copy data from one storage account to another. You can use the tool within automation scripts to ensure the data can be copied automatically.

upvoted 24 times

✉  **mlantonis** Highly Voted 11 months ago

Correct Answer: C

Azure Storage Explorer uses AzCopy to perform all of its data transfer operations. But in this questions, there is a requirement to minimize user interaction which is why AzCopy is more appropriate.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-use-azcopy-v10>

<https://docs.microsoft.com/en-us/azure/storage/common/storage-use-azcopy-blobs-copy>

upvoted 6 times

✉  **azurelearner666** 10 months, 1 week ago

AzCopy is A... please do not write confusing responses...
response is already correct, A - AzCopy

upvoted 38 times

✉  **altafpatel1984** 5 months ago

But read very first requirement. It needs to be Automated. I agree with alperc, you are misanswering, even such a silly question.
upvoted 1 times

✉  **alperc** 5 months, 3 weeks ago

please stop commenting..you are always misanswering.
upvoted 2 times

✉  **meoukg** Most Recent 1 month, 1 week ago

Got it on 03/2022, I chose the A. AzCopy
upvoted 1 times

✉  **idroj** 2 months ago

Selected Answer: A
AzCopy is the correct answer
upvoted 2 times

✉  **Exocsinstr** 4 months, 2 weeks ago

<https://docs.microsoft.com/en-us/azure/storage/common/storage-use-azcopy-configure>
Ans: should be AzCopy. This link show you can recover the AzCopy from where it failed.

azcopy jobs resume <job-id> --source-sas="<sas-token>" --destination-sas="<sas-token>"
Azure Data Factory in the Azure portal may need much configuration by user to setup the pipeline to perform copy.

upvoted 1 times

✉  **francis6170** 10 months, 3 weeks ago

got this in the exam :)

upvoted 5 times

✉  **debanjan10** 6 months, 3 weeks ago

A lot of these questions are common in the exam it seems.

upvoted 1 times

✉  **jeet1985** 10 months, 2 weeks ago

Then ? please suggest the correct answer?

upvoted 4 times

✉  **UnknowMan** 11 months, 1 week ago

The Answer is correct!

upvoted 4 times

✉  **glam** 11 months, 1 week ago

correct

upvoted 3 times

✉  **AzureAz204Fan** 11 months, 1 week ago

Please note that Azure Storage Explorer uses AzCopy to perform all of its data transfer operations. But in this questions, there is a requirement to minimize user interaction which is why AzCopy is more appropriate.

<https://docs.microsoft.com/en-us/azure/storage/common/storage-use-azcopy-v10>

upvoted 4 times

✉  **kimalto452** 11 months, 2 weeks ago

how is recoverable with azcopy ?

upvoted 1 times

✉  **TakumaK** 11 months, 1 week ago

azcopy jobs resume for to resume a failed/cancelled job. sounds like a recoverable process.

upvoted 7 times

✉  **st003** 11 months, 3 weeks ago

The 1st requirement is : Automate data movement.

So AzCopy is the correct answer.

upvoted 3 times

✉  **clarionprogrammer** 1 year ago

C. Azure portal

AzCopy doesn't ensure a "data movement process is recoverable."

upvoted 2 times

✉  **WillPassExam** 1 year ago

Using AzCopy command can "Minimize user input required to perform the operation." comparing to using Azure Portal

upvoted 3 times

✉  **Tom87** 1 year ago

In my opinion, the .NET Storage Client Libraries are much more powerful:

<https://docs.microsoft.com/en-us/dotnet/api/overview/azure/storage>

upvoted 2 times

✉  **TomasDeze** 1 year ago

I guess you are overthinking this... AzCopy is enough to do the job, why build a custom app with .NET then?

upvoted 13 times

✉  **rordaz** 2 months, 2 weeks ago

When I think, no user interaction and automated, I think of a an .Net App if libraries exist. You got a good point, AzCopy can also do the job if this command is used in a script.

upvoted 1 times

DRAG DROP -

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);`

Correct Answer:**Code segment 1**

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

Answer Area

```
var url = " http://169.254.169.254/metadata/identity/oauth2/token " ;  

var queryString = "...";  

var client = new HttpClient();  

var response = await client.GetAsync(url + queryString);  

var payload = await response.Content.ReadAsStringAsync();  

return JsonConvert.DeserializeObject<Dictionary<string, string>>(payload);
```

Code segment 2

`XDocument.Parse(payload);`
`new MultipartContent(payload);`
`new NetworkCredential("Azure", payload);`

Azure Instance Metadata Service endpoints "/oauth2/token"

Box 1: `http://169.254.169.254/metadata/identity/oauth2/token`

Sample request using the Azure Instance Metadata Service (IMDS) endpoint (recommended):

GET '`http://169.254.169.254/metadata/identity/oauth2/token?api-version=2018-02-01&resource=https://management.azure.com/`' HTTP/1.1

Metadata: true

Box 2: `JsonConvert.DeserializeObject<Dictionary<string, string>>(payload);`

Deserialized token response; returning access code.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/how-to-use-vm-token>

<https://docs.microsoft.com/en-us/azure/service-fabric/how-to-managed-identity-service-fabric-app-code>

Box 1: <http://169.254.169.254/metadata/identity/oauth2/token>

Sample request using the Azure Instance Metadata Service (IMDS) endpoint (recommended):

GET 'http://169.254.169.254/metadata/identity/oauth2/token?api-version=2018-02-01&resource=https://management.azure.com/' HTTP/1.1

Metadata: true

Box 2: JsonConvert.DeserializeObject<Dictionary<string,string>>(payload);

Deserialized token response; returning access code.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/how-to-use-vm-token>

<https://docs.microsoft.com/en-us/azure/service-fabric/how-to-managed-identity-service-fabric-app-code>

upvoted 32 times

✉  **clarionprogrammer** Highly Voted 1 year ago

It is correct.

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/how-to-use-vm-token>

upvoted 10 times

✉  **kondapaturi** Most Recent 10 months ago

BOX1 - <http://169.254.169.254/metadata/identity/oauth2/token> ,To get the metadata from the local service on the machine, the right URL is <http://169.254.169.254/metadata/identity/oauth2/token>

BOX2 – JsonConvert.DeserializeObject<string,string>(payload)

You can deserialize the response using the JsonConvert.DeserializeObject method. You can then get a dictionary collection and then get the access key from there.

upvoted 3 times

✉  **goatlord** 10 months ago

Correct

upvoted 2 times

✉  **UnknowMan** 11 months, 1 week ago

Correct ! => <https://docs.microsoft.com/fr-fr/azure/active-directory/managed-identities-azure-resources/how-to-use-vm-token>

upvoted 2 times

✉  **glam** 11 months, 1 week ago

correct

upvoted 2 times

✉  **Santileo** 1 year ago

Agree with the given solution

upvoted 2 times

DRAG DROP -

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	{
sortOrder	"automatic": true, "ngMode": "Consistent", "includedPaths": [
ascending	{ "path": "/**"
descending	}], "excludedPaths": [], " [
compositeIndexes	{ "path": "/name", "order": "descending" }, { "path": "/city", "order": " [

Correct Answer:

JSON segments

orderBy
sortOrder
ascending
descending
compositeIndexes

Answer Area

```
{  
  "automatic": true,  
  "ngMode": "Consistent",  
  "includedPaths": [  
    {  
      "path": "/"  
    }  
  ], "excludedPaths": [],  
  "compositeIndexes": [  
    [  
      {  
        "path": "/name", "order": "descending"  
      },  
      {  
        "path": "/city", "order": "descending"  
      }  
    ]  
  ]  
}
```

Box 1: compositeIndexes -

You can order by multiple properties. A query that orders by multiple properties requires a composite index.

Box 2: descending -

Example: Composite index defined for (name ASC, age ASC):

It is optional to specify the order. If not specified, the order is ascending.

```
{  
  "automatic":true,  
  "indexingMode":"Consistent",  
  "includedPaths": [  
    {  
      "path": "/"  
    }  
  ],  
  "excludedPaths":[],  
  "compositeIndexes": [  
    [  
      {  
        "path": "/name",  
      },  
      {  
        "path": "/age",  
      }  
    ]  
  ]  
}
```

✉  **kayleena93** Highly Voted 1 year, 5 months ago

ORDER BY queries on multiple properties:

The composite index also supports an ORDER BY clause with the opposite order on all paths.

So I think it's about reversed index to the query. Answer should be 'ascending'. You cannot support ASC (default), DESC query with DESC, DESC index.

upvoted 62 times

✉  **john4p** 4 months, 2 weeks ago

The problem here is the SQL that makes many people think that
"ORDER BY p.name, p.city DESC"

means it's ordered by name and city both descending.
But the DESC only applies to city. name is ASC - this would be less confusing:
"ORDER BY p.name ASC, p.city DESC"

Thus in the JSON you can only state ascending+descending or the opposite: descending+ascending.
Since descending for name is already set the answer is "ascending".

At first I had misread the SQL wrong myself and didn't understand kayleena's comment right away.
upvoted 8 times

✉️  **GCMan** Highly Voted 1 year, 5 months ago

"name" field should be marked ascending (default if not specified). It's mislabeled
upvoted 29 times

✉️  **scottmct** 1 year, 2 months ago

NO. Box 2 is "ascending"
See explanation here:
<https://docs.microsoft.com/en-us/azure/cosmos-db/index-policy#order-by-queries-on-multiple-properties>
"The composite index also supports an ORDER BY clause with the __opposite order on all paths__."
The table in the section also shows an example similar to this question.
upvoted 22 times

✉️  **Rockm0uld** 1 month ago

the table also seems to suggest DESC followed by ASC is not supported by composite index? Confused
upvoted 1 times

✉️  **Rockm0uld** 1 month ago

Looking again i think it refers to " What it will not support is non-matching clauses. if ASC, ASC or DESC, DESC will not match our question." as mentioned by edengoforit.
Has to be opposites to make any sense.
upvoted 1 times

✉️  **cloud_exam1** 1 year, 5 months ago

I think so. The answer is correct, but the name field should be marked ascending(default).
We can find an example in the following link.
<https://docs.microsoft.com/en-us/azure/cosmos-db/how-to-manage-indexing-policy?tabs=dotnetv2%2Cpythonv3>
<https://docs.microsoft.com/en-us/azure/cosmos-db/how-to-manage-indexing-policy?tabs=dotnetv2%2Cpythonv3>
upvoted 12 times

✉️  **robin1337** Most Recent 2 weeks, 6 days ago

Actually, both answers should work.

ASCENDING and DESCENDING

"The composite index also supports an ORDER BY clause with the opposite order on all paths."
Stupid question because in production you would do the more intuitive index:

"The order of composite index paths (ascending or descending) should also match the order in the ORDER BY clause."
I argue that in both cases the database engine is able to pick up the index (with ASC and DESC, doesn't matter) and is able to retrieve the data with the benefits of an index.

I would go with the answered DESC though because that's exactly what the guy who designed this question wants to know without probably even realizing that both options would have the same effect.

<https://docs.microsoft.com/en-us/azure/cosmos-db/index-policy#order-by-queries-on-multiple-properties>
upvoted 2 times

✉️  **impratik7** 1 month ago

Good tricky question
upvoted 1 times

✉️  **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22
upvoted 1 times

✉️  **oescm** 2 months, 2 weeks ago

Got this one 02/2022. Went with highly voted answer.
upvoted 3 times

✉️  **edengoforit** 2 months, 4 weeks ago

Composite Index
Ascending
upvoted 5 times

✉️  **Mev4953** 3 months ago

Got this in the exam 01/22
upvoted 4 times

✉  **DemoSharma** 2 months, 2 weeks ago

how much questions you got from the dumps
upvoted 2 times

✉  **lugospod** 3 months ago

Got this one 01/2022. Went with most voted (to avoid writing answers again)
upvoted 5 times

✉  **pandaz** 3 months ago

what did you put order by and ascending?
upvoted 1 times

✉  **edengoforit** 3 months, 1 week ago

The guy below explained well about the opposite order:

The composite index also supports an ORDER BY clause with the opposite order on all paths. --> opposite order are also supported, so if ORDER BY clause is ASC, ASC, composite can be DESC, DESC, or if ORDER BY clause is DESC, DESC, then composite can be ASC, ASC... in the case of ASC, DESC composite could be opposite DESC, ASC or ASC, DESC to support it.

So for our question (name ASC, city DESC) the supported composite index would be ASC, DESC or DESC, ASC (opposite order is supported). What it will not support is non-matching clauses. if ASC, ASC or DESC, DESC will not match our question.

upvoted 3 times

✉  **naistam** 3 months, 3 weeks ago

```
{  
  "automatic":true,  
  "indexingMode":"Consistent",  
  "includedPaths": [  
    {  
      "path": "/*"  
    }  
  ],  
  "excludedPaths": [],  
  "compositeIndexes": [  
    [  
      {  
        "path": "/name",  
        "order": "ascending"  
      },  
      {  
        "path": "/age",  
        "order": "descending"  
      }  
    ]  
  ]  
}
```

//composite indexes will have a performance benefit for queries that have a multiple filters or both a filter and an ORDER BY clause.

So, Answers are Composite index and Descending

upvoted 2 times

✉  **clownzilla** 6 months, 1 week ago

In my opinion the first answer and second given answer is correct because it makes no sense to have different order on the paths in this scenario.

Therefore it is descending. You can do OPPOSITE ON ALL PATHS in the query but here they have done it normally. If it were ascending/descending then the query itself would need to reflect this and it doesn't - both properties are marked descsending.

e.g. like this syntax (not from question)

```
SELECT *  
FROM c  
ORDER BY c.name ASC, c.age DESC
```

From docs:

<https://docs.microsoft.com/en-us/azure/cosmos-db/index-policy>

"The following considerations are used when using composite indexes for queries with an ORDER BY clause with two or more properties:

If the composite index paths do not match the sequence of the properties in the ORDER BY clause, then the composite index can't support the query.

The order of composite index paths (ascending or descending) should also match the order in the ORDER BY clause.

The composite index also supports an ORDER BY clause with the opposite order on all paths."

upvoted 6 times

✉  **syfool** 8 months, 1 week ago

The most strange thing is: everyone is just arguing without a simple experiment?

upvoted 8 times

✉  **kondapaturi** 10 months ago

Answer is BOX1 - compositeIndexes, BOX2 - descending. as query they need city in descending order
upvoted 5 times

✉  **Pratik1216** 10 months, 2 weeks ago

Box 2: should be "ascending"
upvoted 4 times

✉  **SWedig** 9 months ago

You are wrong. It is descending. In the SQL-Statement behind city is written desc.
upvoted 3 times

✉  **mlantonis** 10 months, 4 weeks ago

Box 1: compositeIndexes
Queries that have an ORDER BY clause with two or more properties require a composite index. You can also define a composite index to improve the performance of many equality and range queries. By default, no composite indexes are defined so you should add composite indexes as needed.

Box 2: ascending

In the scenario composite index defined as name ASC and age DESC. It is optional to specify the order. If not specified, the order is ascending.

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/index-policy#composite-indexes>

<https://docs.microsoft.com/en-us/azure/cosmos-db/how-to-manage-indexing-policy?tabs=dotnetv2%2Cpythonv3#composite-index-defined-for-name-asc-age-asc>

upvoted 18 times

✉  **JoeInOregon** 11 months ago

Nazmul99 seems to have it. I was a bonehead for about 30 minutes. The ASC/DESC is about the INDEX, not a QUERY! But the question comes straight from the page that Nazmul99 referenced

upvoted 1 times

HOTSPOT -

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

Answer Area

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

Box 1: 6 -

The number of partitions is specified at creation and must be between 2 and 32.

There are 6 highways.

Box 2: Highway -

Reference:

<https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-features>

dantest 1 year, 4 months ago

Partitions relate to producers - and the logical way to partition the incoming data is by the only value you have at that point, the highway name/id. So the selected answer is correct (6 Partitions, by Highway).

People are getting confused by the departments which would actually each be an event consumer with an associated Consumer Group which would have its own isolated view of each of the highway partitions.

upvoted 80 times

minaritochuck 1 month, 3 weeks ago

It's a best practice for publishers(producers) to remain unaware of the specific partitioning model chosen for an event hub and to only specify a partition key that is used to consistently assign related events to the same partition.

upvoted 1 times

✉  **minaritochuck** 1 month, 3 weeks ago

oh nevermind, I guess it would be most effective when partitions num matches the producers num.

upvoted 1 times

✉  **Robert12345Robert** 9 months, 3 weeks ago

<https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-faq>

The number of partitions in an event hub directly relates to the number of concurrent readers you expect to have

upvoted 8 times

✉  **PhillI** 4 months, 3 weeks ago

If you read the features page you'll understand that this is not the simple answer to the question. <https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-features>

Event receivers organised in consumer groups read all partitions. Via a leasing mechanism the receiver within a consumer group can make sure they don't read duplicate data.

Partitions are more related to Event producers (can be 1-on-1)

upvoted 1 times

✉  **MiraA** 6 months, 2 weeks ago

One thought...

The assignment mentions "Partition Key" (not "Partition Id").

"Producers can provide a value for the event key. When they do, a hashing-based partitioner determines a hash value from the key. The event then goes to the partition associated with that hash value."

<https://docs.microsoft.com/en-us/azure/architecture/reference-architectures/event-hubs/partitioning-in-event-hubs-and-kafka#distribute-events-to-partitions>

So it is possible for 2 or more highways to be - by a chance - hashed to a single partition leaving 1 or more partitions idle at all. If really unlucky then all 6 highways would be hashed to one partition.

The very same situation is with Highway, Department and VM name used as the "Partition Key" as they are discrete values (6 highways, 4 departments, N virtual machines). The Timestamp could do a better job - but "spraying" data from one highway across all partitions...

The best job could do "Partition Id".

"Producers can specify a partition ID with an event. The event then goes to the partition with that ID." So each highway could get hardcoded its own partition preserving order of the data.

upvoted 2 times

✉  **PhillI** 4 months, 3 weeks ago

I guess you're right, although losing maximum availability.

upvoted 1 times

✉  **sasisang**  1 year, 4 months ago

The answer should be 4 and Highway.

Exam Topics - Please provide correct answers. What is the use of buying questions on your site...if you are not sure of the answer yourself

upvoted 30 times

✉  **BrettusMaximus** 12 months ago

There are 6 highways and 6 reports. Each department only needs to read one partition to produce their report on that one highway. If you had partitions you would have to duplicate all the data 4 times (BAD) and then each department would need to read all the data and filter the data for one report (VERY BAD).

upvoted 10 times

✉  **BrettusMaximus** 11 months, 3 weeks ago

When you create the Hub it does not know either the Departments or the VMs

upvoted 3 times

✉  **jessicazheng** 3 months ago

<https://www.linkedin.com/pulse/azure-event-hub-understanding-designing-partitions-unit-kamal-pathak>

upvoted 1 times

✉  **kwaazaar** 1 year ago

But theres 6 highways, so why not 6 partitions?

upvoted 2 times

✉  **clarionprogrammer** 1 year ago

There are 4 consumers.

Partitions are a data organization mechanism that relates to the downstream parallelism required in consuming applications. The number of partitions in an event hub directly relates to the number of concurrent readers you expect to have.

<https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-faq>

upvoted 2 times

✉  **guardna** 11 months, 3 weeks ago

But each department has 3 instances of the Web App/Job. So isn't there 12 consumers?

upvoted 4 times

✉️  **Ranzzan** Most Recent 3 days, 8 hours ago

got this on exam
upvoted 1 times

✉️  **henry1985** 1 week, 4 days ago

Thinking this is about how to choose partitions when there's an ordered delivery requirement. The question states 'The system produces time series analysis-based reports for each highway' and there's six highways.

Event Hubs ensures that all events sharing a partition key value are stored together and delivered in order of arrival. So if 6 partitions are selected then the consumers can read the events in order and create the time series reports.

Ref. <https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-features#publishing-an-event>
upvoted 1 times

✉️  **xRiot007** 1 month, 1 week ago

Partitions - 4, because there are 4 departments. Partitioning is about slicing data for concurrent reading, it has nothing to do with duplication of data, like some silly "explanations" below.

The partition key should be the Highway because that will be your main filter when creating your reports and is also a good identifier for the event source.

upvoted 1 times

✉️  **MohmmadFayez** 4 months ago

To partition we will depends on the producer which is highways,
for consumers(Applications) we will use 4 "consumer groups" ,one consumer group for each application ,so each App will have his specific view for the data,each consumer group will include 3 instances of the app, no more than one instance from the same consumer group can share the same portion at the same time.

So since we will have 6 consumer groups ,then we can assign 2 portions for each instance

upvoted 1 times

✉️  **dho** 6 months, 1 week ago

I would rather choose 12 partitions (4 dep with 3 instances = 12 readers)
<https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-faq#partitions>

The number of partitions in an event hub directly relates to the number of concurrent readers you expect to have.

and Highway

You can use a partition key to map incoming event data into specific partitions for the purpose of data organization.

upvoted 3 times

✉️  **tackchen** 6 months, 2 weeks ago

4*3=12 partitions is absolutely wrong. partition is used to organize data source and is used by consumers separately. 6 partitions, 4 consumer groups, in each consumer group there are 3 receivers.

upvoted 1 times

✉️  **mlantonis** 10 months, 4 weeks ago

Box 1: 6

Box 2: Highway

Reference:

<https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-features>
upvoted 14 times

✉️  **kishe** 11 months ago

The answer should be 6 and Highway according to the architecture of event hubs: https://docs.microsoft.com/en-us/azure/event-hubs/media/event-hubs-about/event_hubs_architecture.svg

On the consumer side, there should be 4 consumer group, and each group has 3 readers.

upvoted 3 times

✉️  **finnishr** 8 months, 3 weeks ago

This is 100% correct
upvoted 1 times

✉️  **Spooky7** 11 months, 1 week ago

So each department has to consume all of the data from each highway and built their own report, right? Given that it means:
- each department = consumer group
- web job instance in department (3 per department) = reader in consumer group

So minimum amount of partitions is 3 as there are 3 readers per consumer group. But there are 6 highways and I don't think so you can pair them up. So there will be at least 6 partitions. Amount of consumer groups (departments) doesn't really matter. I think there is no mechanism which limits amount of consumer groups reading data from specific partition.

So I believe given answer is correct (6 partitions, highway as partition key)
upvoted 1 times

✉️ **shocks** 11 months, 2 weeks ago

To have partitions distributed by consumers you would need to send the data from the highways multiple times, each time with a different key (one for each client), which has no sense as this would make the system nonscalable and because the highway information sender might not have that information. Partitioning data through highways would ensure that your app can access to a concrete highway information timestamp much faster. Having then a consumer group for each client would ensure that each client can access to all the data without having problems (as it is recommended to access to each partition only once for consumer group).

So 6, highway is the correct answer here imo.

upvoted 2 times

✉️ **robin1337** 2 weeks, 6 days ago

Well written, exactly my thoughts. I just can't imagine a way how to make the data spread out into 4 partitions.

upvoted 1 times

✉️ **glam** 11 months, 2 weeks ago

6

Highway

upvoted 1 times

✉️ **Frakandel** 11 months, 2 weeks ago

Number of partitions: 12

Partition Key: Highway

6 Producers, 12 Consumers together with: requirements: Data throughput must be maximized and Latency must be minimized.

upvoted 3 times

✉️ **Tom87** 11 months, 2 weeks ago

Answer is correct.

You can write to different partitions in parallel. Which increases throughput. So, in general, the more partitions, the better. That's why highway (6 different values) is better than department (4 different values).

You can have even more partitions when using Timestamp. But it won't increase throughput, because events written at the same time will have the same timestamp and will go to the same partition. So using timestamp as the partition key would be a bad idea.

upvoted 3 times

✉️ **anandhprakash** 11 months, 3 weeks ago

@Exam Topic - what is correct answer ? Each and every question facing the same problem either the answers are correct or not. In the Discussion answers are different than the actual . Which is correct? How can we ensure that this is correct answer only, Because, for most of the questions not able to confirm the answer bcz different thoughts. Please provide suggestion on how to proceed further.

upvoted 4 times

✉️ **azuregenerator** 1 year ago

The following is from the Azure Portal

"Partitions are a data organization mechanism that relates to the downstream parallelism required in consuming applications. The number of partitions in an event hub directly relates to the number of concurrent readers you expect to have"

It follows partitions should be 12 to enhance throughput and the partition key timestamp.

upvoted 1 times

✉️ **guardna** 11 months, 3 weeks ago

How can you divide/partition by timestamp? Aren't timestamps too precise?

upvoted 1 times

DRAG DROP -

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 Area

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

Box 1: Helm -

To create the ingress controller, use Helm to install nginx-ingress.

Box 2: kubectl -

To find the cluster IP address of a Kubernetes pod, use the kubectl get pod command on your local machine, with the option -o wide .

Box 3: Ingress Controller -

An ingress controller is a piece of software that provides reverse proxy, configurable traffic routing, and TLS termination for Kubernetes services. Kubernetes ingress resources are used to configure the ingress rules and routes for individual Kubernetes services.

Incorrect Answers:

Virtual Kubelet: Virtual Kubelet is an open-source Kubernetes kubelet implementation that masquerades as a kubelet. This allows Kubernetes nodes to be backed by Virtual Kubelet providers such as serverless cloud container platforms.

CoreDNS: CoreDNS is a flexible, extensible DNS server that can serve as the Kubernetes cluster DNS. Like Kubernetes, the CoreDNS project is hosted by the

CNCF.

Reference:

<https://docs.microsoft.com/bs-cyrl-ba/azure/aks/ingress-basic> <https://www.digitalocean.com/community/tutorials/how-to-inspect-kubernetes-networking>

✉  **mlantonis**  10 months, 4 weeks ago

Box 1: Helm

Helm helps you manage Kubernetes applications — Helm Charts help you define, install, and upgrade even the most complex Kubernetes application. To create the ingress controller, use Helm to install nginx-ingress.

Box 2: Kubectl

The Kubernetes command-line tool, kubectl, allows you to run commands against Kubernetes clusters. To find the cluster IP address of a Kubernetes pod, use the kubectl get pod command on your local machine, with the option -o wide .

Box 3: Ingress Controller

An ingress controller is a piece of software that provides reverse proxy, configurable traffic routing, and TLS termination for Kubernetes services. Kubernetes ingress resources are used to configure the ingress rules and routes for individual Kubernetes services. Using an ingress controller and ingress rules, a single IP address can be used to route traffic to multiple services in a Kubernetes cluster.

upvoted 35 times

✉  **robin1337** 2 weeks, 6 days ago

Correct, I am a certified CKA and CKAD. The question isn't that well written though as you could also deploy a solution with kubectl...

upvoted 1 times

✉  **mlantonis** 10 months, 4 weeks ago

Reference:

<https://helm.sh>

<https://kubernetes.io/docs/tasks/tools/>

<https://kubernetes.io/docs/concepts/services-networking/ingress-controllers>

<https://docs.microsoft.com/bs-cyrl-ba/azure/aks/ingress-basic>

<https://www.digitalocean.com/community/tutorials/how-to-inspect-kubernetes-networking>

upvoted 3 times

✉  **Leandromellor**  1 year, 5 months ago

I believe there is no AKS question in the exam:

<https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RE4oZ7B>

upvoted 10 times

✉  **RockmOuld** 1 month ago

I'm pretty sure I got this question on the exam, they be messin' with us

upvoted 1 times

✉  **cherylm** 1 year, 2 months ago

I've also seen a lot of people mentioned in facebook groups they got kubernetes questions on the real exam az-204

upvoted 3 times

✉  **matejka** 1 year, 4 months ago

Haven't done the exam yet, but found many comments (eg. on Udemy tutorials) that Kubernetes actually IS part of the exam.

upvoted 5 times

✉  **luppittegui** 1 year, 4 months ago

It's not: <https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RE4oZ7B>

"Azure Kubernetes Service (AKS) is out of scope"

upvoted 3 times

✉  **Cornholioz** 1 year, 4 months ago

And yet, here we are with this question. I'm guessing it has appeared in the exam and hence here. I am wondering what's actually "excluded" from Azure in this weird exam. Can't say it for many, but this one is a poorly constructed exam.

upvoted 6 times

✉️  **daveonplanetearth** 1 year, 2 months ago

I also thought AKS was excluded but people say they have had AKS questions in the exam. I don't understand why they would want to exclude it.

upvoted 1 times

✉️  **azurelearner666** Most Recent 10 months, 1 week ago

It is correct.

Helm

KubeCtl

Ingress

simple as that.

upvoted 5 times

✉️  **mlantonis** 11 months ago

Answer seems legit, but it's weird getting Kubernetes questions, when AKS is out of the scope of the exam.

upvoted 2 times

✉️  **glam** 11 months, 2 weeks ago

correct.

upvoted 1 times

✉️  **Frakandel** 11 months, 2 weeks ago

Answer:

1. KubeCtl or Helm
2. KubeCtl
3. Ingress Controller

upvoted 2 times

✉️  **Annamarie0408** 1 year ago

Just took this test last week (last week of March) AKS -- WAS IN FACT -- In the test.

upvoted 6 times

✉️  **i_ra** 1 year ago

Is these questions still valid? I'm taking the exam this week can I depend on these?? please answer me

upvoted 2 times

✉️  **kwaazaar** 1 year ago

helm and kubectl can both be used to deploy.

upvoted 3 times

✉️  **svaza** 1 year, 2 months ago

Answer is right

upvoted 2 times

DRAG DROP -

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		Answer Area	
SQLFilter		Subscription	Filter type
CorrelationFilter	•	FutureOrders	filter type
No Filter	•	HighPriorityOrders	filter type
	•	InternationalOrders	filter type
	•	HighQuantityOrders	filter type
	•	AllOrders	filter type

Filter types		Answer Area	
SQLFilter		Subscription	Filter type
CorrelationFilter	•	FutureOrders	SQLFilter
Correct Answer: No Filter	•	HighPriorityOrders	CorrelationFilter
	•	InternationalOrders	SQLFilter
	•	HighQuantityOrders	SQLFilter
	•	AllOrders	No Filter

FutureOrders: SQLFilter -

HighPriorityOrders: CorrelationFilter

CorrelationID only -

InternationalOrders: SQLFilter -

Country NOT USA requires an SQL Filter

HighQuantityOrders: SQLFilter -

Need to use relational operators so an SQL Filter is needed.

AllOrders: No Filter -

SQL Filter: SQL Filters - A SqlFilter holds a SQL-like conditional expression that is evaluated in the broker against the arriving messages' user-defined properties and system properties. All system properties must be prefixed with sys. in the conditional expression. The SQL-language subset for filter conditions tests for the existence of properties (EXISTS), as well as for null-values (IS NULL), logical NOT/AND/OR, relational operators, simple numeric arithmetic, and simple text pattern matching with LIKE.

Correlation Filters - A CorrelationFilter holds a set of conditions that are matched against one or more of an arriving message's user and system properties. A common use is to match against the CorrelationId property, but the application can also choose to match against ContentType, Label, MessageId, ReplyTo,

ReplyToSessionId, SessionId, To, and any user-defined properties. A match exists when an arriving message's value for a property is equal to the value specified in the correlation filter. For string expressions, the comparison is case-sensitive. When specifying multiple match properties, the filter combines them as a logical

AND condition, meaning for the filter to match, all conditions must match.

Boolean filters - The TrueFilter and FalseFilter either cause all arriving messages (true) or none of the arriving messages (false) to be selected for the subscription.

Reference:

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/topic-filters>

✉️  **stylebc** Highly Voted  1 year, 5 months ago

I think that it should be

-Correlation Filter (with the not existing value of any field to avoid getting any message)

-SQL filter (as we need to get all high priority AND international orders, but for Correlation filter: A match exists when an arriving message's value for a property is equal to the value specified in the correlation filter and we need not equal)

-SQL filter

-SQL filter

-No Filter

upvoted 86 times

✉️  **ferut** 11 months, 1 week ago

FutureOrder, not based on the property -> Correlation Filter.

AllOrders, it's clear.. no filter.

The rest is based on one or more properties --> SQL filter

I agree with @stylebc

upvoted 13 times

✉️  **MiraA** 7 months, 1 week ago

Just note...

I think the FutureOrders and AllOrders should be accomplished with "TrueFilter" and "FalseFilter" but these options are not available in the assignment. May be in the future.

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/topic-filters>

upvoted 3 times

✉️  **mandynotmandy** 1 month, 2 weeks ago

boolean filters are sql filters, true would be 1=1, false would be 1=0

upvoted 1 times

✉️  **brtx** 1 year, 4 months ago

Just realized you came to the same conclusion, I think this one makes most sense.

upvoted 5 times

✉️  **TEMPKAKAM** Highly Voted  1 year, 5 months ago

The Correct answers are:

No Filter

Correlation Filter

SQL filter

SQL filter

SQL filter

upvoted 33 times

✉️  **cbn** 1 year, 2 months ago

How do you justify Correlation Filter for HighPriorityOrders, when it involves Region <> US ?

I think it should be SQL filter as well.

upvoted 8 times

✉️  **rashjan** 1 year, 5 months ago

Why a filter for all orders?

upvoted 3 times

✉  **MrNair007** 1 year, 4 months ago

See the basic is subscription does not have filter then does not receive any data. And since all orders needs all the orders it should have SQL filter with 1=1 so that all orders are passed to it.

upvoted 2 times

✉  **TakumaK** 11 months, 2 weeks ago

if no filter explicitly specified, the true filter will be assigned which enables ALL messages. So your comment is wrong and makes confused.

upvoted 7 times

✉  **brtx** 1 year, 4 months ago

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/topic-filters>

"If you don't explicitly specify a filter condition for the rule, the applied filter is the true filter that enables all messages to be selected into the subscription."

upvoted 20 times

✉  **danielcr** 1 year, 2 months ago

So.. The answer is correct.

upvoted 2 times

✉  **Evo_Morales** Most Recent 1 week, 2 days ago

IMO: SQL; Correlation; SQL; SQL; No Filter

upvoted 1 times

✉  **AZ204Cert** 1 week, 5 days ago

Got this on 04/05/22 (selected Correlation Filter, -SQL filter, -SQL filter, -SQL filter, -No Filter)

upvoted 1 times

✉  **SivajiTheBoss** 1 month, 1 week ago

Corret Answer: Question missed Boolean filters

False Filter

Correlation Filter

Sql Filter

Sql Filter

True Filter

upvoted 1 times

✉  **SivajiTheBoss** 1 month, 1 week ago

But as per the question asked:

-Correlation Filter

-SQL filter

-SQL filter

-SQL filter

-No Filter

upvoted 1 times

✉  **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22

upvoted 1 times

✉  **minaritochuck** 1 month, 2 weeks ago

since the correlation filter match against LABEL, which as listed in the question, has location property and quantity value. Therefore InternationalOrders and HighQuantityOrders can be filtered by Correlation Filter.

FutureOrders - SQL (True / False)

HighPriorityOrders: since priority properties are not in the Label property, it is SQL.

InternationalOrders: we can use 'ShipLocation' in Label property

HighQuantityOrders: we can use 'Quantity' in Label property

AllOrders: No filter

upvoted 1 times

✉  **leonidn** 2 months, 2 weeks ago

Got this on the exam

upvoted 2 times

✉  **meetrais** 3 months, 1 week ago

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/topic-filters>

upvoted 1 times

✉  **meetrais** 3 months, 1 week ago

Correct Answers are as below.

FalseFilter

CorrelationFilter

SQLFilter

SQLFilter
TrueFilter
upvoted 7 times

✉ **asdasdasg2** 3 months, 2 weeks ago

"No filter" is not real. The first and last ones should ideally be boolean filters, however in lieu of that not being a possible answer, I would go with SQLFilter - boolean filters derive from SQL filters, and you can easily make a true/false SQLfilter.

As for people who quote MS saying that correlation filters are more performant than SQL filters... this is only true when you consider that SQL filters often are used to apply reads in a manner which takes extra time, such as using comparisons or checking multiple fields.

Think of the difference in performance between reading a DB entry by primary key and by a comparator or by multiple fields. This obviously does not apply if you are using the SQLfilter as a boolean filter.

The answer should be SQL for all of the options
upvoted 1 times

✉ **Lucario95** 4 months, 1 week ago

Here <https://docs.microsoft.com/en-us/azure/service-bus-messaging/topic-filters>
It says Boolean Filters are derived from Sql ones.
So SQL Filter should be the option for all the questions except the last one, which will go with No Filter
upvoted 3 times

✉ **pandaz** 4 months ago

Did you find it in the exam?
upvoted 1 times

✉ **NiceGuyAlberto** 5 months ago

.. to be noted that "Whenever possible, applications should choose correlation filters over SQL-like filters because they're much more efficient in processing and have less impact on throughput"
<https://docs.microsoft.com/en-us/azure/service-bus-messaging/topic-filters#filters>
upvoted 1 times

✉ **edengoforit** 5 months, 1 week ago

Correlation Filters - A CorrelationFilter holds a set of conditions that are matched against one or more of an arriving message's user and system properties. A common use is to match against the CorrelationId property, but the application can also choose to match against the following properties:
upvoted 1 times

✉ **Gautam47** 5 months, 4 weeks ago

-Correlation filter
-SQL filter
-SQL filter
-SQL filter
-No filter
upvoted 8 times

✉ **dho** 6 months, 1 week ago

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/topic-filters#filters>
we have to maximize throughput and correlation filter is best in this case so
Correlation Filter : with an impossible match
SQL filter : because of the high prio and NOT US
SQL filter : because of the NOT US
SQL filter : because of greater than
SQL filter : because of the action defined that updates

Actions

With SQL filter conditions, you can define an action that can annotate the message by adding, removing, or replacing properties and their values. The action uses a SQL-like expression that loosely leans on the SQL UPDATE statement syntax. The action is done on the message after it has been matched and before the message is selected into the subscription. The changes to the message properties are private to the message copied into the subscription.

upvoted 7 times

✉ **BlueSnow** 6 months, 2 weeks ago

Options provided for is missing True/False filter options
upvoted 2 times

DRAG DROP -

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.	(Up arrow)
A user requests the image from the CDN URL. The DNS routes the request to the best performing POP location.	(Down arrow)
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.	(Up arrow)
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.	(Down arrow)

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.
A user requests the image from the CDN URL. The DNS routes the request to the best performing POP location.	If no edge servers in the POP have the image in cache, the POP requests the file from the origin server.
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.
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.	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.

Step 1: A user requests the image..

A user requests a file (also called an asset) by using a URL with a special domain name, such as <endpoint name>.azureedge.net. This name can be an endpoint hostname or a custom domain. The DNS routes the request to the best performing POP location, which is usually the POP that is geographically closest to the user.

Step 2: If no edge servers in the POP have the..

If no edge servers in the POP have the file in their cache, the POP requests the file from the origin server. The origin server can be an Azure Web App, Azure

Cloud Service, Azure Storage account, or any publicly accessible web server.

Step 3: The origin server returns the..

The origin server returns the file to an edge server in the POP.

An edge server in the POP caches the file and returns the file to the original requestor (Alice). The file remains cached on the edge server in the POP until the time-to-live (TTL) specified by its HTTP headers expires. If the origin server didn't specify a TTL, the default TTL is seven days.

Step 4: Subsequent requests for..

Additional users can then request the same file by using the same URL that the original user used, and can also be directed to the same POP.

If the TTL for the file hasn't expired, the POP edge server returns the file directly from the cache. This process results in a faster, more responsive user experience.

Reference:

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

✉  **Ash111** Highly Voted 1 year, 5 months ago

Given ans is correct
upvoted 58 times

✉  **KhabibcandefeatGSP** 10 months, 1 week ago

It feels so good when there are no debates on what is the correct answer.
upvoted 26 times

✉  **Tealon** Highly Voted 1 year, 4 months ago

The given answer is correct.
upvoted 8 times

✉  **meoukg** Most Recent 1 month, 1 week ago

Got it on 03/2022, chose the same as the given answer.
upvoted 1 times

✉  **silva_831** 10 months, 1 week ago

The given answer is correct
upvoted 2 times

✉  **mlantonis** 10 months, 4 weeks ago

The Answer is correct

Reference:

<https://docs.microsoft.com/en-us/azure/cdn/cdn-overview>
upvoted 4 times

✉  **prabhjot** 11 months ago

correct ans
upvoted 1 times

✉  **UnknowMan** 11 months, 1 week ago

The given answer is correct.
upvoted 2 times

✉  **glam** 11 months, 2 weeks ago

correct.
upvoted 1 times

✉  **Fr3ddy** 1 year, 2 months ago

The az-204 exam voucher costs 100 euros.
This value includes Study material + dump
upvoted 3 times

And? this comment is silly and does not help.

It's like saying: the sky is blue, except when it is clouded (or dark).
Admin: can you delete this useless message above? (and mine)
upvoted 8 times

Lol...

upvoted 3 times

✉  **pac1311** 1 year, 2 months ago

correct!
upvoted 2 times

✉  **sndp** 1 year, 4 months ago

Answer is correct.
upvoted 5 times

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

Correct Answer: DE

You can form a partition key by concatenating multiple property values into a single artificial partitionKey property. These keys are referred to as synthetic keys.

Another possible strategy to distribute the workload more evenly is to append a random number at the end of the partition key value. When you distribute items in this way, you can perform parallel write operations across partitions.

Note: It's the best practice to have a partition key with many distinct values, such as hundreds or thousands. The goal is to distribute your data and workload evenly across the items associated with these partition key values. If such a property doesn't exist in your data, you can construct a synthetic partition key.

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/synthetic-partition-keys>

✉  **TEMPKAKAM** Highly Voted 1 year, 5 months ago

The given answer is correct
upvoted 60 times

✉  **mlantonis** Highly Voted 10 months, 4 weeks ago

D and E

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/synthetic-partition-keys>
upvoted 13 times

✉  **oescm** Most Recent 2 months, 2 weeks ago

Got this one 02/2022. Went with highly voted answer.
upvoted 4 times

✉  **Mev4953** 3 months ago

Got this in the exam 01/22
upvoted 4 times

✉  **tramlong888** 4 months ago

the given answer is correct.
upvoted 1 times

✉  **sanjayrawat** 6 months, 2 weeks ago

seems, the given answer is correct.
upvoted 1 times

✉  **ning** 8 months, 2 weeks ago

"The properties of the documents do not contain distinct values for partitioning." based on this statement, no single property in document can be used for partition, so only possibility is D / E, though in reality, I think you might be able to use something else
upvoted 3 times

✉  **francis6170** 10 months, 3 weeks ago

got this in the exam :)
upvoted 4 times

 **carlos0808** 8 months, 3 weeks ago

About how many questions that are present here, appeared in the exam?

upvoted 1 times

 **cool_tool** 8 months, 3 weeks ago

Go Fun yourself

upvoted 2 times

 **glam** 11 months, 2 weeks ago

D. a concatenation of multiple property values with a random suffix appended

E. a hash suffix appended to a property value

upvoted 3 times

 **AfroYeti** 1 year, 3 months ago

Just unfortunate that E will give you roblems when trying to find your records

upvoted 1 times

 **ning** 8 months, 1 week ago

Does not say you have to modify the field directly, you can create a new field concatenate the old field value and the hash

upvoted 1 times

 **clarionprogrammer** 1 year ago

That is why E is wrong. It should be C. C was intended to say "[A] single property value (with high cardinality) that appears frequently in the documents."

upvoted 1 times

 **clarionprogrammer** 1 year ago

nm... I thought 'C' was worded poorly....

E is right.... The link explains it.

<https://docs.microsoft.com/en-us/azure/cosmos-db/synthetic-partition-keys>

upvoted 3 times

 **Tealon** 1 year, 4 months ago

The given answer is correct.

upvoted 8 times

HOTSPOT -

You are developing an Azure-hosted e-commerce web application. The application will use Azure Cosmos DB to store sales orders. You are using the latest SDK to manage the sales orders in the database.

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"/>

Answer Area

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

Box 1: Yes -

The createDatabaseIfNotExistsAsync method checks if a database exists, and if it doesn't, create it.

The Database.CreateContainerAsync method creates a container as an asynchronous operation in the Azure Cosmos service.

Box 2: Yes -

The CosmosContainer.CreateItemAsync method creates an item as an asynchronous operation in the Azure Cosmos service.

Box 3: Yes -

Reference:

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.cosmos.cosmosclient.createdatabaseifnotexistsasync>

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.cosmos.database.createcontainerasync> <https://docs.microsoft.com/en-us/dotnet/api/azure.cosmos.cosmoscontainer.createitemasync>

✉  **mlantonis** Highly Voted 10 months, 3 weeks ago

Box 1: Yes

The createDatabaseIfNotExistsAsync method checks if a database exists, and if it doesn't, create it. (Line 22)

The Database.CreateContainerAsync method creates a container as an asynchronous operation in the Azure Cosmos service. (Line 23 and 24)

Box 2: Yes

The CosmosContainer.CreateItemAsync method creates an item as an asynchronous operation in the Azure Cosmos service. (Line 26 and 28)

Box 3: Yes

The CosmosContainer.CreateItemAsync method creates an item as an asynchronous operation in the Azure Cosmos service. (Line 30)

upvoted 41 times

✉  **mlantonis** 10 months, 3 weeks ago

Reference:

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.cosmos.cosmosclient.createdatabaseifnotexistsasync>

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.cosmos.database.createcontainerasync>

<https://docs.microsoft.com/en-us/dotnet/api/azure.cosmos.cosmoscontainer.createitemasync>

upvoted 3 times

✉  **AOE** Highly Voted 8 months, 1 week ago

Line 21 is tricky, it assumes the database is already created as it calls DeleteStreamAsync. I'm confused.

upvoted 5 times

✉  **nargzul** Most Recent 10 months ago

I'm just curious, how do you know that Container 1 contains 2 items and container2 contains 1 item and not the opposite? I see that we are partitioning on the account number, but not sure to understand how the partition is made?

upvoted 2 times

✉  **ariel_dev** 10 months ago

container1 is called two times adding the items, container2 just one.

upvoted 5 times

✉  **BroGood** 10 months ago

see Lines 26 & 28 contain items for Container 1

Only Line 30 contains an item for Container 2

upvoted 5 times

✉  **AlokSingh** 10 months, 1 week ago

Correct Answer

upvoted 1 times

DRAG DROP -

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
Host
Delegate
Lease container
Monitored container

Answer Area

Requirement	Component
Store the data from which the change feed is generated.	Component
Coordinate processing of the change feed across multiple workers.	Component
Use the change feed processor to listen for changes.	Component
Handle each batch of changes.	Component

Correct Answer:

Components

Answer Area

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

Box 1: The monitored container -

The monitored container has the data from which the change feed is generated. Any inserts and updates to the monitored container are reflected in the change feed of the container.

Box 2: The lease container -

The lease container acts as a state storage and coordinates processing the change feed across multiple workers. The lease container can be stored in the same account as the monitored container or in a separate account.

Box 3: The host: A host is an application instance that uses the change feed processor to listen for changes. Multiple instances with the same lease configuration can run in parallel, but each instance should have a different instance name.

Box 4: The delegate -

The delegate is the code that defines what you, the developer, want to do with each batch of changes that the change feed processor reads.

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/change-feed-processor>

✉  **MattXu**  9 months, 4 weeks ago

The given answer is correct.

upvoted 32 times

✉  **TakumaK** 9 months, 3 weeks ago

You are right. The given answer is correct.

upvoted 3 times

✉  **john4p** 4 months, 2 weeks ago

And your given answer, that MattXu is right, is also correct.

upvoted 4 times

✉️  **dbobspurfpoo** 4 months, 1 week ago

that observation is correct, john
upvoted 5 times

✉️  **john4p** 4 months, 1 week ago

Thank you for the confirmation.
upvoted 4 times

✉️  **heisenberg33** 2 months, 3 weeks ago

Thank you for the confirmation of that observation on the given answer. You are right, the given answer is correct.
upvoted 4 times

✉️  **MK22** Highly Voted  8 months, 4 weeks ago

Answer is correct
upvoted 5 times

✉️  **herrmutig** Most Recent  2 weeks, 4 days ago

Answer is correct.

*Note that the "Host" Component should be called Compute Instance instead.

<https://docs.microsoft.com/en-us/azure/cosmos-db/change-feed-processor>
upvoted 1 times

✉️  **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22
upvoted 1 times

✉️  **oescm** 2 months, 2 weeks ago

Got this one 02/2022. Went with the given answer
upvoted 4 times

✉️  **lugospod** 3 months ago

Got similar this one 01/2022 but it was in the CASE study. Exact same offered options...
upvoted 4 times

HOTSPOT -

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">Implement Blob StorageImplement Azure Cosmos DBImplement Storage (general purpose v1)Implement StorageV2 (general purpose v2)
Configure data retention	<ul style="list-style-type: none">Snapshot blobs and move them to the archive tierSet a lifecycle management policy to move blobs to the cool tierUse AzCopy to copy the data to an on-premises device for backupSet a lifecycle management policy to move blobs to the archive tier

Correct Answer:**Answer Area**

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

Reference:

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-storage-tiers> <https://docs.microsoft.com/en-us/azure/storage/common/storage-redundancy?toc=/azure/storage/blobs/toc.json>

HOTSPOT -

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"/>

Answer Area

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

Box 1: Yes -

Create a table.

A CloudTableClient object lets you get reference objects for tables and entities. The following code creates a CloudTableClient object and uses it to create a new

CloudTable object, which represents a table

// Retrieve storage account from connection-string.

```
CloudStorageAccount storageAccount =  
CloudStorageAccount.parse(storageConnectionString);
```

// Create the table client.

```
CloudTableClient tableClient = storageAccount.createCloudTableClient();
```

// Create the table if it doesn't exist.

```
String tableName = "people";
```

```
CloudTable cloudTable = tableClient.getTableReference(tableName); cloudTable.createIfNotExists();
```

Box 2: No -

New records are inserted with TableOperation.insert. Old records are not updated.

Question #23

Topic 3

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

Correct Answer: A

To move a storage account, create a copy of your storage account in another region. Then, move your data to that account by using AzCopy, or another tool of your choice and finally, delete the resources in the source region.

To get started, export, and then modify a Resource Manager template.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-account-move?tabs=azure-portal>

HOTSPOT -

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**

Azure Cosmos DB API

Value

	▼
Gremlin	
Table API	
Core (SQL)	

Configuration Parameter

Azure Cosmos DB partition key

Value

	▼
first name	
last name	
package count	
item id	

Answer Area**Configuration Parameter**

Azure Cosmos DB API

Value

	▼
Gremlin	
Table API	
Core (SQL)	

Correct Answer:

Configuration Parameter

Azure Cosmos DB partition key

	▼
first name	
last name	
package count	
item id	

Box 1: Core (SQL)

Core(SQL) API stores data in document format. It offers the best end-to-end experience as we have full control over the interface, service, and

the SDK client libraries. SQL API supports analytics and offers performance isolation between operational and analytical workloads.

Box 2: item id -

item id is a unique identifier and is suitable for the partition key.

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/choose-api>

<https://docs.microsoft.com/en-us/azure/cosmos-db/partitioning-overview>

Topic 4 - Question Set 4

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

Correct Answer: C

Azure Cosmos DB now provides a new RBAC role, Cosmos DB Operator. This new role lets you provision Azure Cosmos accounts, databases, and containers, but can't access the keys that are required to access the data. This role is intended for use in scenarios where the ability to grant access to Azure Active Directory service principals to manage deployment operations for Cosmos DB is needed, including the account, database, and containers.

Reference:

<https://azure.microsoft.com/en-us/updates/azure-cosmos-db-operator-role-for-role-based-access-control-rbac-is-now-available/>

✉️  **RaviKS** Highly Voted 1 year, 4 months ago

Answer is correct
upvoted 32 times

✉️  **mlantonis** Highly Voted 10 months, 4 weeks ago

Correct Answer: C

DocumentDB Account Contributor: Can manage Azure Cosmos DB accounts.

Cosmos Backup Operator: Can submit a restore request for Azure portal for a periodic backup enabled database or a container. Can modify the backup interval and retention on the Azure portal. Cannot access any data or use Data Explorer.

Cosmos DB Operator: Can provision Azure Cosmos accounts, databases, and containers. Cannot access any data or use Data Explorer.

Cosmos DB Account Reader: Can read Azure Cosmos DB account data.

CosmosRestoreOperator: Can perform restore action for Azure Cosmos DB account with continuous backup mode.

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/role-based-access-control>
upvoted 19 times

✉️  **AZ204Cert** Most Recent 1 week, 5 days ago

Got this on 04/05/22 (selected Cosmos DB Operator)
upvoted 1 times

✉️  **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22
upvoted 2 times

✉️  **Abisola** 11 months, 1 week ago

Correct
upvoted 2 times

✉️  **UnknowMan** 11 months, 1 week ago

The given answer is correct.
upvoted 2 times

✉️  **glam** 11 months, 1 week ago

correct
upvoted 4 times

✉️  **pmsiva** 1 year, 1 month ago

<https://docs.microsoft.com/en-us/azure/cosmos-db/role-based-access-control>
upvoted 4 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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?

A. Yes

B. No

Correct Answer: B

Instead in the Azure AD application's manifest, set value of the groupMembershipClaims option to All.

Reference:

<https://blogs.msdn.microsoft.com/waws/2017/03/13/azure-app-service-authentication-aad-groups/>

 **fadikh** Highly Voted  1 year, 1 month ago

Answer is correct. The proposed solution lacks the authorization part.

upvoted 20 times

 **ferut** 11 months, 1 week ago

Agree. Setting up the access on AD is one thing. The application should be set up to differentiate different roles and access.

upvoted 3 times

 **edengoforit** 2 months, 4 weeks ago

Answer is NO

upvoted 2 times

 **kondapaturi** Highly Voted  10 months ago

Answer – No, Here you need to create an application in Azure AD. Then set the groupMembershipClaims claims. Then inspect the token in the application to see if the user is part of that group.

Hence - B is correct

upvoted 6 times

 **pradipbobhate** Most Recent  1 month, 2 weeks ago

Selected Answer: A

correct Answer

upvoted 1 times

 **Freidrich** 1 month, 4 weeks ago

Selected Answer: B

The correct answer is B: No.

upvoted 1 times

 **edengoforit** 3 months, 1 week ago

This is the correct answer:

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.

upvoted 3 times

 **edengoforit** 3 months, 1 week ago

Provided answer and explanation is correct.

upvoted 1 times

 **ehurfheiz** 3 months, 1 week ago

Selected Answer: B

B seems to be the correct answer

upvoted 1 times

✉  **tramlong888** 4 months ago

Correct Answer is No

upvoted 1 times

✉  **mlantonis** 10 months, 4 weeks ago

Correct Answer: No

Reference:

<https://docs.microsoft.com/en-us/archive/blogs/waws/azure-app-service-authentication-aad-groups>

upvoted 3 times

✉  **UnknowMan** 11 months, 1 week ago

Answer is correct.

upvoted 2 times

✉  **glam** 11 months, 1 week ago

B. No...

upvoted 3 times

✉  **clarionprogrammer** 1 year ago

B. 'No'

It says "A user's Azure AD group membership must be used to determine the permission level." You got to set it.

<https://docs.microsoft.com/en-us/archive/blogs/waws/azure-app-service-authentication-aad-groups>

upvoted 3 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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?

A. Yes

B. No

Correct Answer: A

To configure Manifest to include Group Claims in Auth Token

1. Go to Azure Active Directory to configure the Manifest. Click on Azure Active Directory, and go to App registrations to find your application:

2. Click on your application (or search for it if you have a lot of apps) and edit the Manifest by clicking on it.

3. Locate the `groupMembershipClaims` setting. Set its value to either `SecurityGroups` or `All`. To help you decide which:

☞ `SecurityGroups` - groups claim will contain the identifiers of all security groups of which the user is a member.

☞ `All` - groups claim will contain the identifiers of all security groups and all distribution lists of which the user is a member

Now your application will include group claims in your manifest and you can use this fact in your code.

Reference:

<https://blogs.msdn.microsoft.com/waws/2017/03/13/azure-app-service-authentication-aad-groups/>

✉  **mlantonis** Highly Voted 10 months, 4 weeks ago

Correct Answer: Yes

Reference:

<https://docs.microsoft.com/en-us/archive/blogs/waws/azure-app-service-authentication-aad-groups>

upvoted 28 times

✉  **kondapaturi** Highly Voted 10 months ago

Answer – Yes, this is the correct approach. The Application manifest has a setting for groupMembershipClaims. By setting this to all, the Azure AD groups that the user belongs to will be returned as part of the claims in the JWT token.

upvoted 5 times

✉  **PieroFranco** Most Recent 1 month ago

Selected Answer: A

The answer is correct. If you do not add the groupMembershipClaims to the manifest you wont see any AD group in the auth token.
upvoted 1 times

✉  **Freidrich** 1 month, 4 weeks ago

Selected Answer: A

The answer is correct.

upvoted 1 times

✉  **sujitwarrier11** 10 months ago

I think the answer is no. group claims are at Azure Ad tenant level. The question mentions that the authorization should be for the app. So roles would be the better option here.

upvoted 1 times

✉  **ZodiaC** 9 months ago

thats not true, look link plz: <https://docs.microsoft.com/en-us/archive/blogs/waws/azure-app-service-authentication-aad-groups>

upvoted 1 times

✉  **UnknowMan** 11 months, 1 week ago

Answer is correct

upvoted 1 times

✉️  **glam** 11 months, 1 week ago

A. Yes

upvoted 1 times

✉️  **clarionprogrammer** 1 year ago

A. Yes

Note: Azure AD caps at 200 the number of groups that can be sent via JWT format.

<https://docs.microsoft.com/en-us/archive/blogs/waws/azure-app-service-authentication-aad-groups>

upvoted 5 times

✉️  **Marusyk** 1 year, 1 month ago

Answer is correct

upvoted 4 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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?

A. Yes

B. No

Correct Answer: B

To configure Manifest to include Group Claims in Auth Token

1. Go to Azure Active Directory to configure the Manifest. Click on Azure Active Directory, and go to App registrations to find your application:
2. Click on your application (or search for it if you have a lot of apps) and edit the Manifest by clicking on it.
3. Locate the `groupMembershipClaims` setting. Set its value to either `SecurityGroups` or `All`. To help you decide which:
 - ☞ `SecurityGroups` - groups claim will contain the identifiers of all security groups of which the user is a member.
 - ☞ `All` - groups claim will contain the identifiers of all security groups and all distribution lists of which the user is a member

Now your application will include group claims in your manifest and you can use this fact in your code.

Reference:

<https://blogs.msdn.microsoft.com/waws/2017/03/13/azure-app-service-authentication-aad-groups/>

✉  **melli**  1 year, 3 months ago

I agree that this solution should work as well. The roles get assigned by AD groups, so the requirement "A user's Azure AD group membership must be used to determine the permission level" is met.

This solution should be answered with "yes".

This scenario has 2 solutions provided as the approach using the "groupMembershipClaims" is possible as well.

That's OK as it says "Some question sets might have more than one correct solution, while others might not have a correct solution."

upvoted 37 times

✉  **Adrian1405**  1 year, 4 months ago

This should be the correct answer: <https://docs.microsoft.com/en-us/azure/active-directory/develop/howto-add-app-roles-in-azure-ad-apps>

upvoted 15 times

✉  **ALittleBunny** 1 year, 4 months ago

You're totally right. It's just managing permissions in two different ways, groupMembershipClaims and assigning the appropriate Azure AD group to each role, which are both correct.

upvoted 5 times

✉  **ahadjithoma** 1 year, 4 months ago

Requirement: A user's Azure AD group membership must be used to determine the permission level.

Does that solution meets the above requirement?

upvoted 3 times

✉  **bugimachi** 1 year, 3 months ago

I think so; you can add groups to app roles defined in manifest.

upvoted 4 times

✉  **rdemontis** 1 year, 1 month ago

I think you can't instead, because AppRoles are intended for RBAC access control and not AAD group membership as required in the question. See this for more info: <https://docs.microsoft.com/en-us/azure/active-directory/develop/howto-add-app-roles-in-azure-ad-apps>

upvoted 2 times

✉  **iiiihhh** 1 year, 4 months ago

I think that without the "groupMembershipClaims" setting you will not be able to obtain group membership information and so the proposal doesn't meet the goal.

upvoted 5 times

✉  **bugimachi** 1 year, 3 months ago

I am not too sure about this. "groupMembershipClaims" will include AAD groups' IDs in the JWT "group" array, which is one way to go. The other way would be to add a app role in the manifest (which is not necessary for the first approach!) and then add groups to this role. This will include the app roles (but not the group IDs) in the JWT's "roles" array (but not in the "groups" array!).

I liked this blog post to understand the difference: <https://joonasw.net/view/using-groups-vs-using-app-roles-in-azure-ad-apps>

upvoted 7 times

✉  **clarionprogrammer** 1 year ago

Excellent post! A. Yes.

Final answer.

upvoted 4 times

✉  **Azprep** Most Recent 2 weeks ago

Answer should be yes

upvoted 1 times

✉  **Freidrich** 1 month, 4 weeks ago

Selected Answer: A

I think the correct answer is A: Yes.

upvoted 2 times

✉  **idroj** 2 months ago

Selected Answer: A

The correct answer is yes

upvoted 2 times

✉  **Elemta** 2 months, 2 weeks ago

Yes. I agree with "melli": The roles get assigned by AD groups, so the requirement "A user's Azure AD group membership must be used to determine the permission level" is met.

This scenario has 2 solutions provided as the approach using the "groupMembershipClaims" is possible as well.

upvoted 1 times

✉  **Saurabh_Kulkarni** 7 months ago

'No' is correct answer. Application roles are assigned which are provided in 'app claims' and get removed if application get deleted. But in the requirement, it is mentioned that 'group membership' must be used, means 'group claims' must be done, which doesn't changes as per application lifecycle. Even though the solution will work but the requirement is different. (this type of requirement is necessary when there will be multiple apps in future).

upvoted 3 times

✉  **RajMasilamani** 7 months ago

The answer is Yes.

upvoted 2 times

✉  **Kalaisuran** 9 months, 3 weeks ago

As per the explanation in the reference link application role base authentication for the AD group also possible
Reference Link : <https://docs.microsoft.com/en-us/azure/active-directory/hybrid/how-to-connect-fed-group-claims>

upvoted 1 times

✉  **sujitwarrier11** 10 months ago

The answer should be yes. They have mentioned that the claims are for the website. group claims are at Azure AD level while role claims are at app level. since they have mentioned that the authrizations is for the website. this is the right answer and not group claims.

<https://docs.microsoft.com/en-us/azure/active-directory/develop/howto-add-app-roles-in-azure-ad-apps>

upvoted 3 times

✉  **dreamcoder** 4 months ago

i agree that this yes is the correct answer. Group claims are not enough. The app roles need to be assigned to appropriate AD groups from "Enterprise Apps".

upvoted 1 times

✉  **Lyonel** 10 months, 1 week ago

Answer is B = NO

Because the solution calls for you to "Create a new Azure AD application. In the application's manifest, define application roles that match the required permission levels for the application."

The groupMembershipClaims should be set to ALL, as specified in documentation and the previous question; you're NOT to "define application roles that match the required permission levels for the application" under the Manifest setting.

<https://docs.microsoft.com/en-us/archive/blogs/waws/azure-app-service-authentication-aad-groups>
upvoted 1 times

✉  **mlantonis** 10 months, 4 weeks ago

Correct Answer: Yes

Reference:

<https://docs.microsoft.com/en-us/archive/blogs/waws/azure-app-service-authentication-aad-groups>
<https://joonasw.net/view/using-groups-vs-using-app-roles-in-azure-ad-apps>

upvoted 6 times

✉  **glam** 11 months, 1 week ago

A. Yes

upvoted 3 times

DRAG DROP -

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
Soft delete			
Shared access signature			

Correct Answer:

Features	Answer Area	Action	Feature
Access policy		Enable retention period and accidental deletion.	Soft delete
Purge protection		Enforce retention period and accidental deletion.	Purge protection
Soft delete			
Shared access signature			

Box 1: Soft delete -

When soft-delete is enabled, resources marked as deleted resources are retained for a specified period (90 days by default). The service further provides a mechanism for recovering the deleted object, essentially undoing the deletion.

Box 2: Purge protection -

Purge protection is an optional Key Vault behavior and is not enabled by default. Purge protection can only be enabled once soft-delete is enabled.

When purge protection is on, a vault or an object in the deleted state cannot be purged until the retention period has passed. Soft-deleted vaults and objects can still be recovered, ensuring that the retention policy will be followed.

Reference:

<https://docs.microsoft.com/en-us/azure/key-vault/general/soft-delete-overview>

✉  **andsol**  1 year, 1 month ago

The answer is correct.

upvoted 39 times

✉  **mlantonis**  10 months, 4 weeks ago

Box 1: Soft delete

When soft-delete is enabled, resources marked as deleted resources are retained for a specified period (90 days by default). The service further provides a mechanism for recovering the deleted object, essentially undoing the deletion.

This can be achieved with the help of the soft-delete feature of the key vault.

Box 2: Purge protection

Purge protection is an optional Key Vault behavior and is not enabled by default. Purge protection can only be enabled once soft-delete is enabled.

When purge protection is on, a vault or an object in the deleted state cannot be purged until the retention period has passed. Soft-deleted vaults

and objects can still be recovered, ensuring that the retention policy will be followed.

This can be achieved with the help of the purge protection feature of the key vault.

Reference:

<https://docs.microsoft.com/en-us/azure/key-vault/general/soft-delete-overview>

upvoted 22 times

✉  **meoukg**  1 month, 1 week ago

ot it on 03/2022, I chose Soft delete => Purge protection

upvoted 2 times

✉  **francis6170** 10 months, 3 weeks ago

got this in the exam :)

upvoted 7 times

✉  **UnknowMan** 11 months, 1 week ago

The answer is correct.

upvoted 2 times

✉  **glam** 11 months, 1 week ago

correct

upvoted 2 times

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

Correct Answer: CD

✉  **Nielson** Highly Voted 1 year, 2 months ago

A, C

<https://www.examtopics.com/exams/microsoft/az-203/view/15/>

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies>

upvoted 67 times

✉  **BrettusMaximus** 11 months, 4 weeks ago

Must be A,C As the API documentation only allows 3 options. It states: >>>

Authentication policies

Authenticate with Basic - Authenticate with a backend service using Basic authentication.

Authenticate with client certificate - Authenticate with a backend service using client certificates.

Authenticate with managed identity - Authenticate with the managed identity for the API Management service.

upvoted 12 times

✉  **BrettusMaximus** 11 months, 4 weeks ago

It can't be D as we need to authenticate to the backend and not from client.

upvoted 5 times

✉  **fadikh** 1 year, 1 month ago

but client certificate does not use the authorization header

upvoted 5 times

✉  **vb3d** 1 year ago

I think this means correct answer is A and D

upvoted 7 times

✉  **vb3d** 1 year ago

Client certificate does use the x-arr-clientcert header

As Kitkit pointed out below, check this link

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies>.

upvoted 7 times

✉  **hobob** Highly Voted 1 year, 1 month ago

A, D

The question states that the solution MUST use the HTTP authorization header. The only two options that do are Basic Authentication (where the header would be "Authorization: Basic <auth-base64-encoded-string>" or "Bearer <bearer-token-string>").

upvoted 32 times

✉  **syfool** 7 months, 3 weeks ago

D is not the answer, as that is not even an AUTHENTICATION POLICY!!!

The link below lists 3 authentication policies:

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies>

upvoted 1 times

✉  **MiraA** 7 months, 1 week ago

It seems "OAuth Client Credential Grant" exists and could be considered as the specific type of "Authenticate with managed identity" which sends the authorization header?

<https://oauth.net/2/grant-types/client-credentials/>

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies>

upvoted 4 times

 **pmsiva** 1 year, 1 month ago

AD is correct. Certificate authentication will not send http auth header
<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies#Basic>
upvoted 5 times

 **Evo_Morales** (Most Recent) 1 week, 1 day ago

Selected Answer: AC

agree with BrettusMaximus 11 months, 2 weeks ago
upvoted 1 times

 **systherm** 3 weeks, 5 days ago

Selected Answer: AC

correct (I hope)
upvoted 2 times

 **PieroFranco** 1 month ago

Selected Answer: AC

AC as they are the only two policies in the list that exist.
<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies>
upvoted 1 times

 **SivajiTheBoss** 1 month, 2 weeks ago

Selected Answer: AD

Correct Answer AD
upvoted 1 times

 **SivajiTheBoss** 1 month, 1 week ago

Typo: It is AC : Basic and certificate Authentication
upvoted 1 times

 **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22
upvoted 1 times

 **jasifu3** 1 month, 3 weeks ago

Selected Answer: AD

looks like the OAuth2 is a managed identity policy
upvoted 1 times

 **vilainchien** 2 months ago

Selected Answer: AC

BASIC + Client Request
upvoted 1 times

 **Dev666** 2 months, 2 weeks ago

Selected Answer: AD

The question states that the solution MUST use the HTTP authorization header
upvoted 1 times

 **edengoforit** 3 months, 1 week ago

Selected Answer: AC

A, C as there are only three Authentication policies and two of them are A, C
upvoted 2 times

 **Loai** 3 months, 1 week ago

Selected Answer: AD

AD is the right answer
upvoted 1 times

 **Simon_G** 3 months, 2 weeks ago

A, D
More evidence for D:
"In this article, you'll learn how to configure your Azure API Management instance to protect an API, by using the OAuth 2.0 protocol with Azure Active Directory (Azure AD)."
<https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-protect-backend-with-aad>
upvoted 2 times

 **dbobspurfpoo** 4 months, 2 weeks ago

ffs which is *actually* the correct answer? AC or AD? trying to study for an exam here...
upvoted 8 times

 **nkphuc700** 4 months, 2 weeks ago

Selected Answer: AD

<https://www.examtopics.com/exams/microsoft/az-203/view/15/>
<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies>

upvoted 2 times

✉  **junkieman** 8 months ago

Answer is A and D.

Although API Management authentication support 3 types of authentication:

1. Basic Auth,
2. Certificates,
3. and Managed Identity (an OAuth2 authentication concept)

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies>

Only Certificates that does not require to provide Authorization Header. You only require to specify X-Client-Cert in your HTTP Header, which is not part of Authorization HTTP Header.

upvoted 7 times

✉  **ning** 8 months, 2 weeks ago

A and D, clearly stated in the <https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies> both are generating header tokens

upvoted 1 times

✉  **ning** 8 months, 2 weeks ago

In addition, it mentioned that head must be included for every request, then client certificate cannot be the case, this is NOT for azure only, but just common sense for web applications

upvoted 1 times

DRAG DROP -

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

- client_id
- profile
- delegated
- application
- user_impersonation

Answer Area

API	Permission	Type
Azure Storage	Setting	Setting
Microsoft Graph	User.Read	Setting

Correct Answer:

Settings

- client_id
- profile
- delegated
- application
- user_impersonation

Answer Area

API	Permission	Type
Azure Storage	user_impersonation	delegated
Microsoft Graph	User.Read	delegated

Box 1: user_impersonation -

Box 2: delegated -

Example:

1. Select the API permissions section
2. Click the Add a permission button and then:
Ensure that the My APIs tab is selected
3. In the list of APIs, select the API TodoListService-aspnetcore.
4. In the Delegated permissions section, ensure that the right permissions are checked: user_impersonation.
5. Select the Add permissions button.

Box 3: delegated -

Example -

1. Select the API permissions section
2. Click the Add a permission button and then,
Ensure that the Microsoft APIs tab is selected
3. In the Commonly used Microsoft APIs section, click on Microsoft Graph
4. In the Delegated permissions section, ensure that the right permissions are checked: User.Read. Use the search box if necessary.
5. Select the Add permissions button

Reference:

<https://docs.microsoft.com/en-us/samples/azure-samples/active-directory-dotnet-webapp-webapi-openidconnect-aspnetcore/calling-a-web-api-in-an-aspnet-core- web-application-using-azure-ad/>

 **aswqe338**  1 year, 1 month ago

The given answer is correct.

upvoted 29 times

mlantonis Highly Voted 10 months, 4 weeks ago

Box 1: user_impersonation

The built-in user_impersonation scope indicates that the token is being requested on behalf of the user. Azure Storage exposes a single delegation scope named user_impersonation that permits applications to take any action allowed by the user.

Box 2: delegated

Box 3: delegated

Reference:

<https://stackoverflow.com/questions/31404128/azure-ad-app-application-permissions-vs-delegated-permissions>

<https://docs.microsoft.com/en-us/azure/active-directory/develop/v2-permissions-and-consent>

<https://docs.microsoft.com/en-us/azure/storage/common/storage-auth-aad-app?tabs=dotnet>

<https://docs.microsoft.com/en-us/rest/api/storageservices/authorize-with-azure-active-directory>

upvoted 16 times

petitbilly Most Recent 1 month, 2 weeks ago

Got it in exam 03/22

upvoted 1 times

edengoforit 5 months ago

Application Permissions: Your application needs to access the web API directly as itself (no user context). This type of permission requires administrator consent and is also not available for native client applications.

Delegation Permissions: Your application needs to access the web API as the signed-in user, but with access limited by the selected permission. This type of permission can be granted by a user unless the permission is configured as requiring administrator consent.

upvoted 2 times

lugospod 3 months, 3 weeks ago

Nope, it explicitly states that user is given RBAC permissions, and that each users permissions need to be used to access storage. So Application is not an option.

upvoted 1 times

jungaster 11 months ago

the answer is correct.

upvoted 1 times

roybunt 11 months, 1 week ago

The answer is correct. For granting registered app permissions to Azure Storage, find in reference: <https://docs.microsoft.com/en-us/azure/storage/common/storage-auth-aad-app?tabs=dotnet#grant-your-registered-app-permissions-to-azure-storage>

upvoted 4 times

glam 11 months, 1 week ago

correct

upvoted 1 times

kwaazaar 1 year ago

why Graph API?

upvoted 3 times

Sachini 2 months, 1 week ago

"Permissions are granted to Microsoft Graph automatically when you first register your app with Azure AD."

upvoted 1 times

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 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.    (); // Options: UseAuthentication, UseStaticFiles, UseSession, UseCookiePolicy

    app.    (); // Options: UseAuthorization, UseHttpsRedirection, UseSession, UseCookiePolicy

    app.    (); // Options: UseAzureAppConfiguration, UseRequestLocalization, UseCors, UseStaticFiles

    app.UseEndpoint(endpoints =>
    {
        endpoints.MapRazorPages();
    });
}
```

Answer Area

```
public void Configure(IApplicationBuilder app, IWebHostEnvironment env)
{
    if (env.IsDevelopment())
    {
        app.UseDeveloperExceptionPage();
    }
    else
    {
        app.UseExceptionHandler("/Error");
    }

    app. ();
```

Correct Answer:

```
app. ();
```

Box 1: UseAuthentication -

```
app. ();
```

Box 2: UseAuthorization -

```
app. ();
```

Box 3: UseStaticFiles -

```
app.UseEndpoint(endpoints =>
{
    endpoints.MapRazorPages();
});
```

Box 1: UseAuthentication -

Need to validate users before users are allowed access to secure resources.

UseAuthentication adds the AuthenticationMiddleware to the specified IApplicationBuilder, which enables authentication capabilities.

Box 2: UseAuthorization -

Need to permit users to access secure resources.

UseAuthorization adds the AuthorizationMiddleware to the specified IApplicationBuilder, which enables authorization capabilities.

Box 3: UseStaticFiles -

Need to use the Export feature in the app without requiring a restart of the app.

UseStaticFiles enables static file serving for the current request path

Reference:

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.aspnetcore.builder.iapplicationbuilder?view=aspnetcore-5.0>

✉  **hobob** Highly Voted  1 year, 1 month ago

UseAuthentication, Use Authorization, UseAzureAppConfiguration.

The last option allows dynamic configuration to be reloaded without an app restart.

<https://docs.microsoft.com/en-us/azure/azure-app-configuration/enable-dynamic-configuration-aspnet-core?tabs=core5x>

upvoted 101 times

✉  **rdemontis** 1 year, 1 month ago

correct, you're right!

upvoted 4 times

✉  **Pooochie** 1 year, 1 month ago

According to the site provided by you it should be

1. UseAzureAppConfiguration

2. UseAuthentication

3. Use Authorization

upvoted 9 times

✉  **hobob** 1 year, 1 month ago

And that's what I said. Just in a different order.
upvoted 5 times

✉  **avanthasiriwardana** 1 year ago

Order matters
upvoted 8 times

✉  **TakumaK** 11 months ago

Order matters but it would be bothered in this question.
UseAuthentication and Use Authorization should be in order but UseAzureAppConfiguration is not.

<https://docs.microsoft.com/en-us/aspnet/core/fundamentals/middleware/?view=aspnetcore-3.1#middleware-order>
upvoted 5 times

✉  **TakumaK** 11 months ago

typo in my previous comment.
corrected: it would NOT be bothered
upvoted 2 times

✉  **mlantonis**  10 months, 4 weeks ago

Box 1: UseAuthentication
Need to validate users before users are allowed access to secure resources.
UseAuthentication adds the AuthenticationMiddleware to the specified IApplicationBuilder, which enables authentication capabilities. To verify users, we need to use the Authentication middleware.

Box 2: UseAuthorization

Need to permit users to access secure resources.
UseAuthorization adds the AuthorizationMiddleware to the specified IApplicationBuilder, which enables authorization capabilities. To authorize users to access resources , we need to use the Authorization middleware.

Box 3: UseAzureAppConfiguration

Adding the UseAzureAppConfiguration middleware to allow the configuration settings registered for refresh to be updated while the ASP.NET Core web app continues to receive requests. For using feature flags, you need to make use of the Azure App Configuration service. To ensure the configuration settings are refreshed without the need to restart the web app, you can use the middleware of UseAzureAppConfiguration();
upvoted 27 times

✉  **mlantonis** 10 months, 4 weeks ago

Reference:

<https://docs.microsoft.com/en-us/azure/azure-app-configuration/enable-dynamic-configuration-aspnet-core?tabs=core5x>

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.aspnetcore.builder.iapplicationbuilder?view=aspnetcore-5.0>
upvoted 4 times

✉  **tramlong888**  4 months ago

the correct answer should be UseAuthentication, Use Authorization, UseAzureAppConfiguration.
upvoted 2 times

✉  **doudou123** 6 months, 3 weeks ago

according Udemy,
1. UseAuthentication
2.Use Authorization
3. UseAzureAppConfiguration
upvoted 4 times

✉  **kondapaturi** 10 months ago

app.UseAuthentication(); - To verify users ,we need to use the Authentication middleware.
app.UseAuthorization(); -To authorize users to access resources , we need to use the Authorization middleware.
app.UseAzureAppConfiguration(); -For using feature flags, you need to make use of the Azure App Configuration service. To ensure the configuration settings are refreshed without the need to restart the web app, you can use the middleware of UseAzureAppConfiguration();
upvoted 2 times

✉  **UnknowMan** 11 months, 1 week ago

1.UseAuthentication, -> Login
2.Use Authorization, -> Authorization
3.UseAzureAppConfiguration. -> Dynamic App settings
upvoted 3 times

✉  **glam** 11 months, 1 week ago

UseAuthentication, Use Authorization, UseAzureAppConfiguration.
upvoted 1 times

✉  **pavan555manjunath** 11 months, 1 week ago

Any one please confirm the answer is correct
1.UseAuthentication,

2.Use Authorization,
3.UseAzureAppConfiguration.
upvoted 4 times

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.

Correct Answer: C

Use Key Vault references for App Service and Azure Functions.

Key Vault references currently only support system-assigned managed identities. User-assigned identities cannot be used.

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/app-service-key-vault-references>

✉️  **AssilAbdulrahim** Highly Voted 1 year, 1 month ago

I think the answer is A. Create a single user-assigned Managed Identity with permission to access Key Vault and configure each App Service to use that Managed Identity.

Because we have more than one App (Web App and other Function Apps), So we agree it is going to be a managed identity but should I create one for each app or one for all apps?

If I create system MI then there should be one for each App.

If I create user MI then I can re-use it for any App I want with minimum change to AD
upvoted 72 times

✉️  **ferut** 11 months ago

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/overview>

The lifecycle of user-assigned managed identity is manually managed by the user and can be used (not assigned) to several services.

The lifecycle of the system-assigned managed identity is tightly coupled with the service, it's assigned to a service. When the service is deleted, the identity will also be gone.

To minimize changes to AD, user-assigned is more suitable.

upvoted 7 times

✉️  **vtomy** 9 months, 3 weeks ago

User assigned MI is not supported for keyvault.

System assigned MI is correct.

upvoted 3 times

✉️  **ztt** 8 months, 4 weeks ago

This is not true: see: <https://kasunkodagoda.com/2019/06/09/using-user-assigned-managed-identity-to-access-azure-key-vault-from-azure-app-service/>

upvoted 4 times

✉️  **PhILLI** 4 months, 1 week ago

I don't read this on that page t.b.h.

upvoted 1 times

✉️  **Basu525** 1 year, 1 month ago

Yes exactly. The question emphasizes on having multiple resources having to access Key vault. So using User Assigned MI is more pragmatic.

upvoted 2 times

✉️  **SlavMar** 9 months, 4 weeks ago

Well from security standpoint you could assign different secrets to different parts of application (if they are using system managed identity)
so if one component is compromised - not all secrets are available to hackers

upvoted 2 times

✉️  **midhy** 1 year, 1 month ago

User assigned cannot be used Look at the link provided.

upvoted 3 times

✉️ **vb3d** 1 year, 1 month ago

I just tried this, I was able to give access to a user assigned managed identity to a key vault.

upvoted 6 times

✉️ **vb3d** 1 year, 1 month ago

I think that note in the link is only for the usage of key vault references, which is a new thing in key vaults. I think a user assigned identity should still have access to the key vault.

upvoted 3 times

✉️ **Tom87** 1 year ago

That's true.

<https://kasunkodagoda.com/2019/06/09/using-user-assigned-managed-identity-to-access-azure-key-vault-from-azure-app-service/>

upvoted 1 times

✉️ **Zsolt72** 1 year ago

Yes, key vault reference is an App Configuration feature referencing a secret from key vault.

upvoted 1 times

✉️ **mlantonis** Highly Voted 10 months, 4 weeks ago

Correct Answer: C

Key Vault references currently only support system-assigned managed identities. User-assigned identities cannot be used.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/overview#managed-identity-types>

<https://docs.microsoft.com/en-us/azure/app-service/app-service-key-vault-references>

upvoted 31 times

✉️ **TakumaK** 9 months, 3 weeks ago

You are wrong. your second link OBVIOUSLY says

"Key Vault references will use the app's system assigned identity by default, but you can specify a user-assigned identity."

upvoted 13 times

✉️ **altafpatel1984** 5 months ago

Don't misguide people. In the same link you give, this statement exists "Some apps need to reference secrets at creation time, when a system-assigned identity would not yet be available. In these cases, a user-assigned identity can be created and given access to the vault in advance."

Your given reference: <https://docs.microsoft.com/en-us/azure/app-service/app-service-key-vault-references>

upvoted 4 times

✉️ **ztt** 8 months, 4 weeks ago

Not correct: see link <https://kasunkodagoda.com/2019/06/09/using-user-assigned-managed-identity-to-access-azure-key-vault-from-azure-app-service/>

upvoted 4 times

✉️ **Rockm0uld** Most Recent 1 month ago

Selected Answer: A

I'll go for A. User-assigned identity

works with apps and functions: <https://docs.microsoft.com/en-us/azure/app-service/overview-managed-identity?tabs=portal%2Chttp>

upvoted 1 times

✉️ **SivajiTheBoss** 1 month, 2 weeks ago

Selected Answer: C

Answer: C

upvoted 1 times

✉️ **Maniam** 1 month, 2 weeks ago

Based on the following sentence.

Some apps need to reference secrets at creation time, when a system-assigned identity would not yet be available. In these cases, a user-assigned identity can be created and given access to the vault in advance.

Option A is a correct answer. If I am wrong pls give the answer with proper reference.

upvoted 1 times

✉️ **asdasdasg2** 2 months, 2 weeks ago

Selected Answer: A

Used assigned MSI minimizes changes to AAD

upvoted 4 times

✉️ **Mev4953** 3 months ago

Got this in the exam 01/22

upvoted 8 times

✉  **leonidn** 3 months, 2 weeks ago

Selected Answer: A

System and User Assigned managed identities are possible options. But here is mentioned that multiple services access KeyVault. In this case, User Assigned managed identity is the preferable option.

upvoted 3 times

✉  **AzureXin** 4 months, 2 weeks ago

C. Create a system assigned Managed Identity in each App Service with permission to access Key Vault.

upvoted 2 times

✉  **AOE** 8 months, 1 week ago

Maybe MS doc has been updated, but it clearly states that by default, it will use the system managed identity, but you can use user managed identity. Check the link:

<https://docs.microsoft.com/en-us/azure/app-service/app-service-key-vault-references>

In order to read secrets from Key Vault, you need to have a vault created and give your app permission to access it.

Create a key vault by following the Key Vault quickstart.

Create a managed identity for your application.

Key Vault references will use the app's system assigned identity by default, but you can specify a user-assigned identity.

Create an access policy in Key Vault for the application identity you created earlier. Enable the "Get" secret permission on this policy. Do not configure the "authorized application" or applicationId settings, as this is not compatible with a managed identity.

upvoted 8 times

✉  **ning** 8 months, 2 weeks ago

A user assigned identity can definitely used for access key vault, just tested in azure portal.

upvoted 5 times

✉  **AzureLearning** 8 months, 3 weeks ago

Here since we want to minimize changes to Azure AD ,we can create one user-assigned managed identity and assign it to all of the Azure Web Apps and functions. We can then gives the required access to the managed identity to the resources in the key vault

upvoted 2 times

✉  **somenkr** 9 months, 2 weeks ago

Its user assigned manage Identity is the answer..

See the question "Changes to Azure Active Directory (Azure AD) must be minimized." and System assigned creates profile in AD where as User assigned creates in resource itself.

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/overview>

upvoted 4 times

✉  **kondapaturi** 10 months ago

Create a single user-assigned Managed Identity with permission to access Key Vault and configure each App Service to use that Managed Identity. we want to minimize changes to Azure AD ,we can create one user-assigned managed identity and assign it to all of the Azure Web Apps and functions. We can then give the required access to the managed identity to the resources in the key vault.

Answer is A

upvoted 3 times

✉  **SlavMar** 9 months, 4 weeks ago

Question is why one function should have access to connection string used by other function?

upvoted 1 times

✉  **kondapaturi** 10 months ago

Create a single user-assigned Managed Identity with permission to access Key Vault and configure each App Service to use that Managed Identity. Answer is A

upvoted 3 times

✉  **hems4all** 10 months, 3 weeks ago

Use Key Vault references for App Service and Azure Functions.

Key Vault references currently only support system-assigned managed identities. User-assigned identities cannot be used.

<https://docs.microsoft.com/en-us/azure/app-service/app-service-key-vault-references>

upvoted 5 times

✉  **TakumaK** 9 months, 3 weeks ago

"Key Vault references will use the app's system assigned identity by default, but you can specify a user-assigned identity."

upvoted 1 times

✉  **UnknowMan** 11 months, 1 week ago

Key Vault references currently only support system-assigned managed identities. User-assigned identities cannot be used.

So =>

System-Assigned
upvoted 3 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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?

A. Yes

B. No

Correct Answer: A

✉  **pac1311** Highly Voted 1 year, 2 months ago

Correct!

upvoted 27 times

✉  **bingohah** Highly Voted 1 year, 1 month ago

The answer is right, but not good. Because we should use symmetric key to encrypt file, instead of public key. The best practise is: encrypt file by symmetric key, and the symmetric key is protected by public key.

upvoted 16 times

✉  **vb3d** 1 year, 1 month ago

Not sure what do you mean, but check the link below.

Symmetric key means the same key is used for encryption and decryption. When you use an Asymmetric key, you encrypt with the public key and decrypt with a secret key, which is what the solution is talking about and is better.

<https://www.ssl2buy.com/wiki/symmetric-vs-asymmetric-encryption-what-are-differences#:~:text=Symmetric%20encryption%20uses%20a%20single,and%20decrypt%20messages%20when%20communicating.>

upvoted 10 times

✉  **aarrtturas** 11 months, 1 week ago

We should use symmetric key not asymmetric key. Asymmetric key is used for small amount's of data to encrypt. Usually asymmetric key encrypts symmetric key, and symmetric key encrypts data

upvoted 2 times

✉  **fearoffree** 2 months, 1 week ago

The asymmetric key is used to sign the intake so it could not be compromised!

upvoted 1 times

✉  **petitbilly** Most Recent 1 month, 2 weeks ago

Got it in exam 03/22

upvoted 1 times

✉  **Freidrich** 1 month, 4 weeks ago

Selected Answer: A

I agree with the proposed answer A: Yes.

upvoted 1 times

✉  **Mev4953** 3 months ago

Got this in the exam 01/22

upvoted 5 times

✉  **kondapaturi** 10 months ago

YES - Here the authorized clients will have the private key that will be used to decrypt the blobs. If other clients try to download the blobs that have already been encrypted, they will not be able to access the content of the blobs if they don't have the private key.

upvoted 1 times

✉  **RicardoDuarte1999** 10 months ago

I don't understand where the keyvault comes into play, can't we just store it in the blob storage according to what is asked?
I only said yes because it would do the job but according to the description it is not needed right?

upvoted 1 times

✉  **Kvm1** 10 months ago

Correct Answer. The need of Key Vault is to store the public and private keys. The webapp access the key vault to fetch and send the public key to the upload request page on client side and it encrypts using public key stores in blob storage. And the other internal functions and other required apps access key vault to fetch private key to decrypt the encrypted docs in blob storage. As private key is mandatory to decrypt the documents others who don't have access to key vault can use the encrypted documents even thought they hacked and downloaded those encrypted documents

upvoted 9 times

✉  **mlantonis** 10 months, 4 weeks ago

Correct Answer: A - Yes

upvoted 7 times

✉  **glam** 11 months, 1 week ago

A. Yes

upvoted 1 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

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?

A. Yes

B. No

Correct Answer: B

Instead use an Azure Key vault and public key encryption. Store the encrypted form in Azure Storage Blob storage.

✉  **cbn** Highly Voted 1 year, 2 months ago

I think the rationale is Azure Cosmos is not the best place to store blob data, like scanned patient intake forms.

<https://stackoverflow.com/questions/49343675/how-can-i-store-images-in-azure-cosmos-db>
upvoted 25 times

✉  **iamstudying** 1 month, 1 week ago

Although it's not ideal, it is still a valid solution (sort of)... media files are stored in blob storage <https://docs.microsoft.com/en-us/azure/cosmos-db/database-encryption-at-rest>

The key thing to point here is that the solution requires encrypted files when downloaded, but the solution here is only encryption at rest
upvoted 2 times

✉  **pieronegri** 1 year, 1 month ago

agreed

upvoted 2 times

✉  **mlantonis** Highly Voted 10 months, 4 weeks ago

Correct Answer: B - No

If storage is encrypted by default but you need to encrypt the content so when downloaded, its useless to unauthorised party.

Instead use an Azure Key vault and public key encryption. Store the encrypted form in Azure Storage Blob storage.
upvoted 16 times

✉  **petitbilly** Most Recent 1 month, 2 weeks ago

Got it in exam 03/22

upvoted 2 times

✉  **altafpatel1984** 5 months ago

I guess Cosmos DB is for semi-structured data, not for unstructured data. Here scanned copies of forms are pdf/image files which are unstructured files, hence they cannot be stored in CosmosDB. Instead should be stored in Blob Storage which also supports security for data in-transit and data at rest. And because of this B - No is correct.

upvoted 1 times

✉  **glam** 11 months, 1 week ago

B. No..

upvoted 3 times

✉  **Frakandel** 11 months, 2 weeks ago

Question is unclear... However, if I interpret the question as a third party trying to hack the database by directly downloading (outside of the Cosmos environment) the stored documents-, the answer is Yes. because the data is encrypted at rest/is stored encrypted...

upvoted 3 times

✉  **jokergester** 1 year ago

Encryption at rest should not be confused with encrypting the data. The former is encrypting the SSD/HDD whereas the latter is data being encrypted. The third party specified can still download the encrypted data from blob but will not be able read it plainly without having the decryption or private key.

Blob encryption - <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-encrypt-decrypt-blobs-key-vault?tabs=dotnet#encrypt-blob-and-upload>

upvoted 7 times

✉ **SummerWarrior** 3 months, 2 weeks ago

How can third party have access to the data if Cosmos DB access is restricted to only certain identities?

upvoted 2 times

✉ **raelo** 1 year ago

Encryption at rest is a phrase that commonly refers to the encryption of data on nonvolatile storage devices, such as solid state drives (SSDs) and hard disk drives (HDDs)

From the quote above, it is the data that is being encrypted. <https://docs.microsoft.com/en-us/azure/cosmos-db/database-encryption-at-rest#:~:text=With%20the%20release%20of%20encryption,is%20very%20easy%20to%20use.>

upvoted 1 times

✉ **Aiffone** 1 year, 1 month ago

It should be "No" just as the given answer suggests. If storage is encrypted by default but you need to encrypt the content so when downloaded, its useless to unauthorised party

upvoted 5 times

✉ **Zidimirite** 1 year ago

Right? The question is a bit vague about it since it doesn't specify how the data is being downloaded, but under normal conditions, the data will be decrypted automatically when downloaded:

With this feature, Azure Storage automatically encrypts your data prior to persisting to storage and decrypts prior to retrieval. The encryption, decryption and key management is totally transparent to users.

<https://github.com/uglide/azure-content/blob/master/articles/storage/storage-service-encryption.md#azure-storage-service-encryption-for-data-at-rest-preview>

upvoted 3 times

✉ **Kvm1** 10 months ago

You need to focus on the sentence "If the stored intake forms are downloaded from storage by a third party," third party downloads the form and not the database and not hacked and downloaded the complete Cosmos DB. so its like third party by some how got the access keys to Cosmos DB and downloaded from it .. so while downloading Azure automatically decrypts it.. so encryption at rest is not sufficient and the documents will be compromised in this scenario. So mandatorily you need to encrypt the data i.e. the document even before storing into Cosmos DB to make highly sensible docs more secure. i.e. you need to either use symmetric or asymmetric encryption before storing in Cosmos or Blob storage in addition to the encryption at rest offered by Azure services.

upvoted 2 times

✉ **Kvm1** 10 months ago

So the answer is correct i.e. NO is correct answer

upvoted 1 times

✉ **rdemontis** 1 year, 1 month ago

exactly!! I think the same!

upvoted 1 times

✉ **Drgn** 1 year, 2 months ago

I think the answer should be "Yes".

I don't see any difference using the same encryption in Azure Storage Blob vs. ComosDB.

I say this is Yes.

<https://docs.microsoft.com/en-us/azure/storage/common/storage-service-encryption>

<https://docs.microsoft.com/en-us/azure/cosmos-db/database-encryption-at-rest>

upvoted 4 times

✉ **BrettusMaximus** 11 months, 4 weeks ago

You are missing the point "If the stored intake forms are downloaded from storage by a third party". This means the 3rd party has accessed the DB and has received the blob by an API call (nothing to do with "at rest"). Cosmos will decrypt it by default, thus the 3rd party can see it in the clear.

upvoted 2 times

✉ **cbn** 1 year, 2 months ago

Agree, storage encryption is available for Cosmos

<https://docs.microsoft.com/en-us/azure/cosmos-db/database-encryption-at-rest#q-how-much-more-does-azure-storage-cost-if-storage-service-encryption-is-enabled>

upvoted 2 times

✉ **clarionprogrammer** 1 year ago

A. Yes

Because all user data stored in Azure Cosmos DB is encrypted at rest and in transport, you don't have to take any action. Another way to put this is that encryption at rest is "on" by default.

<https://docs.microsoft.com/en-us/azure/cosmos-db/database-encryption-at-rest>

upvoted 2 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

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: Store the intake forms as Azure Key Vault secrets.

Does the solution meet the goal?

A. Yes

B. No

Correct Answer: B

Instead use an Azure Key vault and public key encryption. Store the encrypted from in Azure Storage Blob storage.

✉  **clarionprogrammer**  1 year ago

B. No

You'd definitely not want to store "data" in Azure Key Vault.

upvoted 14 times

✉  **mlantonis**  10 months, 4 weeks ago

Correct Answer: B - No

You'd definitely not want to store "data" in Azure Key Vault.

Instead use an Azure Key vault and public key encryption. Store the encrypted from in Azure Storage Blob storage.

upvoted 9 times

✉  **Freidrich**  1 month, 4 weeks ago

Selected Answer: B

The correct answer is B: No.

upvoted 1 times

✉  **Kvm1** 10 months ago

B. No

Technically possible.. but KeyValut is intended to store securely Application secrets, certificates etc. and not to store application data like the Intake forms and other documents.

upvoted 5 times

✉  **glam** 11 months, 1 week ago

B. No...

upvoted 1 times

✉  **jokergester** 1 year ago

Technically possible but the documentation insists on using the Key Vault as storage for Application data or config not user data.

upvoted 3 times

HOTSPOT -

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 $resourcegroup --location westus  
keyvault_name=myvaultname$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 Area

```
az provider register -n Microsoft.KeyVault  
resourcegroup="myResourceGroup"  
az group create --name $resourcegroup --location westus  
keyvault_name=myvaultname$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
```

Correct Answer:

```
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
```

Box 1: keyvault -

Create an Azure Key Vault with az keyvault create and enable the Key Vault for use with disk encryption. Specify a unique Key Vault name for keyvault_name as follows: keyvault_name=myvaultname\$RANDOM az keyvault create \
-name \$keyvault_name \
--resource-group \$resourcegroup \
--location eastus \
--enabled-for-disk-encryption True

Box 2: keyvault key -

The Azure platform needs to be granted access to request the cryptographic keys when the VM boots to decrypt the virtual disks. Create a cryptographic key in your Key Vault with az keyvault key create. The following example creates a key named myKey: az keyvault key create \
--vault-name \$keyvault_name \
--name myKey \
--protection software

Box 3: vm -

Create a VM with az vm create. Only certain marketplace images support disk encryption. The following example creates a VM named myVM using an Ubuntu

16.04 LTS image:

```
az vm create \
--resource-group $resourcegroup \
--name myVM \
--image Canonical:UbuntuServer:16.04-LTS:latest \
--admin-username azureuser \
--generate-ssh-keys \
```

Box 4: vm encryption -

Encrypt your VM with az vm encryption enable:

```
az vm encryption enable \
--resource-group $resourcegroup \
--name myVM \
--disk-encryption-keyvault $keyvault_name \
--key-encryption-key myKey \
--volume-type all \
```

Note: seems to an error in the question. Should have enable instead of create.

Box 5: all -

Encrypt both data and operating system.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/linux/disk-encryption-cli-quickstart>

✉️  **Tom87** Highly Voted 1 year ago

The answer is correct.

Other possibilities doesn't make sense. Although it seems strange to me to create the VM when the question says that we already have one.
upvoted 32 times

✉️  **Tom87** 1 year ago

Ok, now I see that the question doesn't say that the VM is already created. Sorry for that :)

upvoted 7 times

✉️  **glam** Highly Voted 11 months, 1 week ago

correct

upvoted 7 times

✉️  **Baskman** Most Recent 1 month, 2 weeks ago

Got this in the exam 03/22

upvoted 2 times

✉️  **oescm** 2 months, 2 weeks ago

Got this one 02/2022. Went with the given answer

upvoted 3 times

✉️  **lugospod** 3 months ago

Got this one 01/2022. Went with most voted (to avoid writing answers again)

upvoted 3 times

✉️  **tramlong888** 4 months ago

The answer is correct.

upvoted 1 times

✉️  **debanjan10** 6 months, 3 weeks ago

Order: keyvault > keyvault key > vm > vm encryption

upvoted 4 times



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

Correct Answer: C

Azure Active Directory Managed Service Identity (MSI) gives your code an automatically managed identity for authenticating to Azure services, so that you can keep credentials out of your code.

Note: Use the authentication-managed-identity policy to authenticate with a backend service using the managed identity. This policy essentially uses the managed identity to obtain an access token from Azure Active Directory for accessing the specified resource. After successfully obtaining the token, the policy will set the value of the token in the Authorization header using the Bearer scheme.

Incorrect Answers:

A: Use the authentication-basic policy to authenticate with a backend service using Basic authentication. This policy effectively sets the HTTP Authorization header to the value corresponding to the credentials provided in the policy.

B: Anonymous is no authentication at all.

D: Your code needs credentials to authenticate to cloud services, but you want to limit the visibility of those credentials as much as possible. Ideally, they never appear on a developer's workstation or get checked-in to source control. Azure Key Vault can store credentials securely so they aren't in your code, but to retrieve them you need to authenticate to Azure Key Vault. To authenticate to Key Vault, you need a credential! A classic bootstrap problem.

Reference:

<https://azure.microsoft.com/en-us/blog/keep-credentials-out-of-code-introducing-azure-ad-managed-service-identity/>

<https://docs.microsoft.com/en-us/azure/api-management/api-management-authentication-policies>

✉  **clarionprogrammer** Highly Voted 1 year ago

C is correct.

upvoted 19 times

✉  **nnyuf** Highly Voted 10 months, 3 weeks ago

A and D will send credential to the API.

B is not meet the requirement.

only C can be selected

upvoted 7 times

✉  **AZ204Cert** Most Recent 1 week, 5 days ago

Got this on 04/05/22 (selected Managed Identity)

upvoted 1 times

✉  **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22

upvoted 1 times

✉  **ning** 8 months, 2 weeks ago

Question is about from APIM to other azure resource, C is correct managed identity. Question is NOT about how end users access APIM

upvoted 5 times

✉  **francis6170** 10 months, 3 weeks ago

got this in the exam :)

upvoted 5 times

✉  **businesskasper** 11 months ago

Managed identity only works for internal api calls. The requirement is "all api calls must be authenticated". Certificate would meet that requirement?

upvoted 4 times

✉️  **glam** 11 months, 1 week ago

correct

upvoted 2 times

✉️  **MrZoom** 1 year, 1 month ago

D would work though, and it meets all the criteria (the private key of the certificate is never sent to the server during https handshake). If multiple answers are possible, I'd go for C and D, but if only one answer is possible, C is better for the reason stated in the answer explanation section.

upvoted 2 times

✉️  **Spooky7** 11 months ago

How ClientCertificate would help Azure API to authenticate in other Azure resources? The question is not about client authentication but Azure API authentication to use other Azure resources.

upvoted 4 times

✉️  **MrZoom** 1 year, 1 month ago

Also, using certificates for authentication isn't typical use with API's hosted in Azure (which is part of the question).

upvoted 2 times

DRAG DROP -

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

```
$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 Area**Correct Answer:****Powershell commands**

```
$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 Area

```
Get-AzSubscription
```

```
Set-AzContext -SubscriptionId
$subscriptionID
```

```
Get-AzStorageAccountKey -
ResourceGroupName $resGroup -Name
$storAcct
```

```
$secretvalue = ConvertTo-SecureString
$storAcctkey -AsPlainText
-Force
    Set-AzKeyVaultSecret -VaultName
$vaultName -Name $secretName
-SecretValue $secretvalue
```

```
Get-AzKeyVaultSecret -VaultName
$vaultName
```

Step 1: Get-AzSubscription -

If you have multiple subscriptions, you might have to specify the one that was used to create your key vault. Enter the following to see the subscriptions for your account:

Get-AzSubscription -

Step 2: Set-AzContext -SubscriptionId

To specify the subscription that's associated with the key vault you'll be logging, enter:

```
Set-AzContext -SubscriptionId <subscriptionID>
```

Step 3: Get-AzStorageAccountKey -

You must get that storage account key.

```
Step 4: $secretvalue = ConvertTo-SecureString <storageAccountKey> -AsPlainText -Force
```

```
Set-AzKeyVaultSecret -VaultName <vaultName> -Name <secretName> -SecretValue $secretvalue
```

After retrieving your secret (in this case, your storage account key), you must convert that key to a secure string, and then create a secret with that value in your key vault.

Step 5: Get-AzKeyVaultSecret -

Next, get the URI for the secret you created. You'll need this URI in a later step to call the key vault and retrieve your secret. Run the following PowerShell command and make note of the ID value, which is the secret's URI:

```
Get-AzKeyVaultSecret -VaultName <vaultName>
```

Reference:

<https://docs.microsoft.com/en-us/bs-latn-a/Azure/key-vault/key-vault-key-rotation-log-monitoring>

✉️ **AnonymousJhb** Highly Voted 1 year, 4 months ago

Answer looks correct

upvoted 36 times

✉️ **Frakandel** Highly Voted 11 months, 2 weeks ago

Question does not explain where the variables come from... Assuming I set the variables myself (as a "side effect" of the command), the solution below does make sense:

1. Get-AzSubscription
 2. Set-AzContext -SubscriptionId \$subscriptionID
 3. Get-AzKeyVaultSecret -VaultName \$vaultName
 4. Get-AzStorageAccountKey -ResourceGroupName \$resGroup -Name \$storAcct
 5. \$secretvalue = ConvertTo-SecureString \$storAcctkey -AsPlainText -Force
- ```
Set-AzKeyVaultSecret -VaultName $vaultName -Name $secretName -SecretValue $secretvalue
```

upvoted 20 times

✉️ **Azprep** Most Recent 2 weeks ago

Given answer is correct

upvoted 1 times

✉️ **MiraA** 7 months ago

I believe the assignment wants to select a proper subscription, then to retrieve the storage account key, then to store this key into the KeyVault and finally to check the secret was inserted properly. So:

1. Get-AzSubscription (\$subscriptionID = (...).SubscriptionName)
2. Set-AzContext
3. Get-AzStorageAccountKey (\$storAcctkey = "...[0].Value")
4. ConvertTo-SecureString, Set-AzKeyVaultSecret
5. Get-AzKeyVaultSecret (list the secrets stored in the KeyVault - check only)

upvoted 14 times

✉️ **ning** 8 months, 2 weeks ago

Does the question miss some part? Why it has to save the key before retrieval? No where in the question mentioned that ... First two Get-AzSubscription

Set-AzContext -SubscriptionId \$subscriptionID  
are absolutely correct, since there are two subscriptions, you have to point to the correct one ... but I am confused with 3, 4, 5 steps, what are those?

upvoted 5 times

✉️ **glam** 11 months, 1 week ago

correct.

upvoted 1 times

✉️ **sushikid112** 1 year, 3 months ago

Agree with some people saying the question and picture does not make sense. The question only says how to retrieve the secret from Key Vault. Based on the options, we also have to retrieve the value and insert it to Key Vault first. The question/picture lacks information based on what we have.

upvoted 3 times

✉️ **Rodashar** 1 year, 4 months ago

Is this question actually on the exam? Even the url provided to explain the answer says this code is meant to cycle the storage keys stored in the vault not retrieve a key from the vault. Either the question is wrong or the answer is wrong.

upvoted 3 times

✉️ **Tealon** 1 year, 4 months ago

I agree, the question does not match the options to give the answer. If the question was to store the account key to the key vault and then retrieve it from the key vault, the answer would be correct.

upvoted 5 times

 **iiiihhhh** 1 year, 4 months ago

There is another discussion for this question: <https://www.examtopics.com/discussions/microsoft/view/22272-exam-az-204-topic-3-question-5-discussion/>

upvoted 2 times

 **iiiihhhh** 1 year, 4 months ago

The question is: How to get secret from key vault, when there are two subscriptions available?

Available components(in order of boxes):

1. converting \$storageAcctkey to secure string and storing az secret with name \$secretName
2. getting storage account key from storage account (but without storing to variable \$storageAcctkey)
3. setting subscription context for use in current session (<https://docs.microsoft.com/en-us/powershell/module/az.accounts/set-azcontext?view=azps-5.1.0>)
4. list secrets in the vault
5. list subscriptions available

So for retrieving secret we (I think) need 5,3,4 and we need also SecureStringToBSTR (<https://docs.microsoft.com/cs-cz/azure/key-vault/secrets/quick-create-powershell>).

However the question seems to require using all actions available.

Is the question text really matching the picture?

upvoted 6 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

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?

A. Yes

B. No

**Correct Answer: B**

Instead run the Invoke-RestMethod cmdlet to make a request to the local managed identity for Azure resources endpoint.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/tutorial-windows-vm-access-arm>

✉  **KeerthiKP** Highly Voted 1 year, 6 months ago

No is the right answer:

Explanation :

Using the Invoke-WebRequest cmdlet, make a request to the local managed identity for Azure resources endpoint to get an access token for Azure Resource Manager.

link : <https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/tutorial-windows-vm-access-arm>  
upvoted 26 times

✉  **clarionprogrammer** 1 year ago

Using Invoke-WebRequest vs Invoke-RestMethod doesn't matter. The point is that using a certificate is wrong for Identity Management.  
upvoted 7 times

✉  **mlantonis** Highly Voted 10 months, 4 weeks ago

Correct Answer: B - No

A certificate cannot be used to authenticate.

Instead run the Invoke-RestMethod or Invoke-WebRequest cmdlet to make a request to the local managed identity for Azure resources endpoint.

Reference:

<https://docs.microsoft.com/en-us/azure/role-based-access-control/overview>

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/tutorial-windows-vm-access-arm>  
upvoted 13 times

✉  **glam** Most Recent 11 months, 1 week ago

B. No...

upvoted 2 times

✉  **Frakandel** 11 months, 2 weeks ago

Yes, because a certificate can be used to authenticate... See also: <https://devblogs.microsoft.com/premier-developer/centralized-vm-certificate-deployment-across-multiple-regions-with-arm-templates/>

upvoted 1 times

✉  **TakumaK** 11 months ago

Yes, your right. But can you explain this part in the question?

"You need to obtain an Azure Resource Manager access token"

upvoted 2 times

✉  **RahulKate** 1 year, 3 months ago

Using the Invoke-WebRequest cmdlet, make a request to the local managed identity for Azure resources endpoint to get an access token for Azure Resource Manager.

upvoted 1 times

✉  **Tealon** 1 year, 4 months ago

The given answer is correct.

upvoted 5 times

 **cyberbull** 1 year, 6 months ago

No , is the correct Answer

upvoted 8 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

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 the Reader role-based access control (RBAC) role to authenticate the VM with Azure Resource Manager.

Does the solution meet the goal?

A. Yes

B. No

**Correct Answer: B**

Instead run the Invoke-RestMethod cmdlet to make a request to the local managed identity for Azure resources endpoint.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/tutorial-windows-vm-access-arm>

✉  **mlantonis** Highly Voted 10 months, 4 weeks ago

Correct Answer: B - No

Azure RBAC is an authorization system built on Azure Resource Manager that provides fine-grained access management of Azure resources. Here we need to authenticate.

Here we need to make use of managed identities for the virtual machine. Role-based access control is used for authorization and not authentication.

Instead run the Invoke-RestMethod or Invoke-WebRequest cmdlet to make a request to the local managed identity for Azure resources endpoint.

Reference:

<https://docs.microsoft.com/en-us/azure/role-based-access-control/overview>

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/tutorial-windows-vm-access-arm>  
upvoted 22 times

✉  **KeerthiKP** Highly Voted 1 year, 6 months ago

ITs not a invoke-RestMethod , it is: Invoke-WebRequest cmdlet

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/tutorial-windows-vm-access-arm>  
upvoted 20 times

✉  **Tom87** 1 year ago

Both Invoke-RestMethod and Invoke-WebRequest can be used. Their behaviour is very similar.

<https://blog.truesec.com/2020/07/29/Invoke-WebRequest-vs-Invoke-RestMethod/>

upvoted 5 times

✉  **clarionprogrammer** 1 year ago

Agreed. The real reason it is wrong is RBAC can't be used for Identity Management.

upvoted 2 times

✉  **clarionprogrammer** 1 year ago

It's true that the Reader role is required so the VM can read/access the Azure Resource Manager. But, it's not used to authenticate the VM with the Azure Resource Manager.

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/tutorial-windows-vm-access-arm>  
upvoted 3 times

✉  **oversio** 1 year, 6 months ago

Yes! you all right

upvoted 2 times

✉  **sawipef270** Most Recent 4 months, 1 week ago

**Selected Answer: B**

correct

upvoted 1 times

✉  **glam** 11 months, 1 week ago

B. No...

upvoted 1 times

✉  **ccinetto** 1 year, 4 months ago

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/tutorial-windows-vm-access-arm>

Here it says that you first need to go to the Resource Group, and in the IAM tab grant access to the VM as a Reader Role

Then, when you are inside the VM, you can use the command Invoke-WebRequest cmdlet in order to get the Token

4 is Correct because it is the first step you need to do in order to get the Token

and question 5 is correct too

upvoted 4 times

✉  **bugimachi** 1 year, 3 months ago

I'm not sure. What you do in IAM / RBAC is authorizing (!) the VM to access the resource group. You do NOT use IAM / RBAC for authENTICATION.

I mean, you are right in saying that it is needed to grant access for the VM. But strictly speaking, the question asks for authentication only.

upvoted 4 times

✉  **Gathix44** 1 year, 3 months ago

Yes you do. <https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/tutorial-linux-vm-access-arm>

upvoted 1 times

✉  **azahran** 1 year, 3 months ago

The question is you need an access token? Q 4 is preparation step and did not retrieve an access token.

upvoted 3 times

✉  **27close** 1 year, 5 months ago

Using the Invoke-WebRequest cmdlet, make a request to the local managed identity for Azure resources endpoint to get an access token for Azure Resource Manager. answer is NO

upvoted 2 times

✉  **blueturtle** 1 year, 5 months ago

Yup the updated version is to use Invoke-WebRequest cmdlet.

upvoted 1 times

## HOTSPOT -

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.

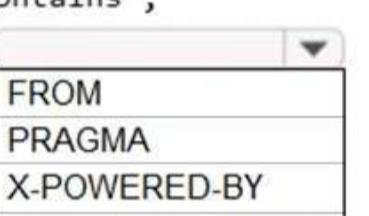
You need to implement an Azure CDN rule that ensures that iPhone users are redirected to the app store.

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.

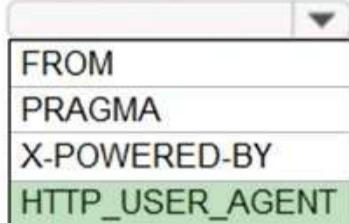
Hot Area:

## Answer Area

```
"conditions": [{
 "name": "IsDevice",
 "parameters": {
 "@odata.type": "#Microsoft.Azure.Cdn.Models."
 },
 "operator": "Equal",
 "matchValues": [" "
 
]
},
{
 "name": "RequestHeader",
 "parameters": {
 "@odata.type": "#Microsoft.Azure.Cdn.Models."
 },
 "operator": "Contains",
 "selector": " "
 
 ", "
 
]
}
]
```

Correct Answer:

Answer Area

```
"conditions": [{
 "name": "IsDevice",
 "parameters": {
 "@odata.type": "#Microsoft.Azure.Cdn.Models.
 "operator": "Equal",
 "matchValues": [" "
 
]
 }
},
{
 "name": "RequestHeader",
 "parameters": {
 "@odata.type": "#Microsoft.Azure.Cdn.Models.
 "operator": "Contains",
 "selector": "
 
 "
 }
}
]
}

"matchValues": ["
 
"]
```

|                                              |
|----------------------------------------------|
| DeliveryRuleIsDeviceConditionParameters      |
| DeliveryRuleCookiesConditionParameters       |
| DeliveryRulePostArgsConditionParameters      |
| DeliveryRuleRequestHeaderConditionParameters |

|                                              |
|----------------------------------------------|
| DeliveryRuleIsDeviceConditionParameters      |
| DeliveryRuleCookiesConditionParameters       |
| DeliveryRulePostArgsConditionParameters      |
| DeliveryRuleRequestHeaderConditionParameters |

Box 1: iOS -

Azure AD Conditional Access supports the following device platforms:

- Android
  - iOS
  - Windows Phone
  - Windows
- macOS
- .

Box 2: DeliveryRuleIsDeviceConditionParameters

The DeliveryRuleIsDeviceCondition defines the IsDevice condition for the delivery rule. parameters defines the parameters for the condition.

Box 3: HTTP\_USER\_AGENT -

Incorrect Answers:

- The Pragma HTTP/1.0 general header is an implementation-specific header that may have various effects along the request-response chain. It is used for backwards compatibility with HTTP/1.0 caches.

- "X-Powered-By" is a common non-standard HTTP response header (most headers prefixed with an 'X-' are non-standard).

Box 4: DeliveryRuleRequestHeaderConditionParameters

DeliveryRuleRequestHeaderCondition defines the RequestHeader condition for the delivery rule. parameters defines the parameters for the condition.

Box 5: iOS -

The Require approved client app requirement only supports the iOS and Android for device platform condition.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/conditional-access/concept-conditional-access-conditions>

<https://docs.microsoft.com/en-us/azure/active-directory/conditional-access/concept-conditional-access-grant>

 **Zidimirite**  1 year ago

First box: Mobile

<https://docs.microsoft.com/en-us/python/api/azure-mgmt-cdn/azure.mgmt.cdn.models.isdevicematchconditionparametersmatchvaluesitem>

Third box: iPhone. We are not looking for other Apple devices running iOS. It's the iPhone we're looking for.

upvoted 56 times

 **minaritochuck** 4 weeks, 1 day ago

yes for example:  
HTTP\_USER\_AGENT=Mozilla/5.0 (iPhone; U; CPU like Mac OS X; en)  
upvoted 3 times

✉ **atomicicebreaker** 1 year ago

I agree, question is about CDN and answer explanation is all about Azure AD...  
upvoted 3 times

✉ **titombo** 1 year ago

You are right, also the HTTP\_USER\_AGENT can be iPhone, iPad, etc... There isn't iOS. Even because iPhone and iPad I believe both could have iOS running in it.  
upvoted 3 times

✉ **kondapaturi** [Highly Voted] 10 months ago

1.DeliveryRuleDeviceConditionParameters - we are first checking for a device condition, hence we need to use the condition of DeliveryRuleDeviceConditionParameters  
2.Mobile - The devices can be either Desktop or Mobile. These are the two accepted values. Here since we need to route requests based on mobile devices, we need to choose the value of Mobile.  
3.DeliveryRequestHeaderConditionParameters. we need to understand the type of operating system running on the device. We can get this information from the request headers. Hence, we need to use the parameter of DeliveryRequestHeaderConditionParameters.  
4.HTTP\_USER\_AGENT - we can check the HTTP\_USER\_AGENT property in the request header. In the user agent property of the request header, you will normally get information about the environment where the request is originating from. An example is given below where I am showing the request header from my own machine when I browse to a site.  
5.iOS - we need to check the operating system which will be iOS.  
upvoted 27 times

✉ **ivan0590** 6 days, 9 hours ago

I agree on the first four points, but the fifth point is incorrect.

The correct answer is iPhone.

Here you can see lots of iOS User Agent examples:

[https://developers.whatismybrowser.com/useragents/explore/operating\\_system\\_name/ios/](https://developers.whatismybrowser.com/useragents/explore/operating_system_name/ios/)  
"iPhone" appears all the time and "Mac OS X" is used instead of "iOS"

Example:

Mozilla/5.0 (iPhone; CPU iPhone OS 9\_3\_1 like Mac OS X) AppleWebKit/601.1.46 (KHTML, like Gecko) Version/9.0 Mobile/13E238 Safari/601.1  
upvoted 1 times

✉ **SivajiTheBoss** [Most Recent] 1 month, 1 week ago

Correct Answer:  
DeliveryRuleIsDeviceConditionParameters  
Mobile  
DeliveryRuleRequestHeaderConditionParameters  
HTTP\_USER\_AGENT  
iPhone  
upvoted 4 times

✉ **meoukg** 1 month, 1 week ago

Got it on 03/2022, I chose as below:  
1. Mobile  
2. DeliveryRuleIsDeviceConditionParameters  
3. HTTP\_USER\_AGENT  
4. DeliveryRuleRequestHeaderConditionParameters  
5. Iphone  
upvoted 3 times

✉ **szymson** 1 month, 1 week ago

DeviceCondition box must be mobile or desktop:  
<https://docs.microsoft.com/en-us/azure/cdn/cdn-standard-rules-engine-match-conditions>  
upvoted 2 times

✉ **SivajiTheBoss** 1 month, 2 weeks ago

Correct answer Provided:  
Q2: IOS not mobile  
<https://docs.microsoft.com/en-us/azure/active-directory/conditional-access/concept-conditional-access-conditions#device-platforms>  
upvoted 1 times

✉ **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22  
upvoted 1 times

✉ **heisenberg33** 2 months ago

2nd box is Mobile Ref: <https://docs.microsoft.com/en-us/python/api/azure-mgmt-cdn/azure.mgmt.cdn.models.isdevicematchconditionparametersmatchvaluesitem?view=azure-python>  
Last box is iOS Ref: <https://docs.microsoft.com/en-us/azure/active-directory/conditional-access/concept-conditional-access-conditions#device-platforms>  
upvoted 3 times

✉ **massnonn** 2 months, 1 week ago  
first box: Mobile  
third box:iphone  
HTTP\_USER\_AGENT=Mozilla/5.0 (iPhone; U; CPU like Mac OS X; en) AppleWebKit/420+ (KHTML, like Gecko) Version/3.0 Mobile/1C25 Safari/419.3  
upvoted 2 times

✉ **vulht** 2 months, 1 week ago  
There is no Mobile listed in support device platform  
Recently, the list is:  
Android  
iOS  
Windows  
macOS  
Linux (Preview)  
upvoted 2 times

✉ **oescm** 2 months, 2 weeks ago  
Got this one 02/2022. Went with the given answer  
upvoted 3 times

✉ **MasterQuestMaster** 3 months ago  
Got this on the exam!  
upvoted 5 times

✉ **lugospod** 3 months ago  
Got this one 01/2022. Went with @zdimirites answer (avoiding duplicating offered solutions)  
upvoted 4 times

✉ **avenger34** 5 months ago  
These are http user agent values for specified header.  
Last Box => iPhone  
<https://deviceatlas.com/blog/list-of-user-agent-strings>  
upvoted 3 times

✉ **debanjan10** 6 months, 2 weeks ago  
I think:  
DeliveryRuleIsDeviceConditionParameters  
Mobile  
DeliveryRuleRequestHeaderConditionParameters  
HTTP\_USER\_AGENT  
iPhone  
upvoted 4 times

✉ **scollyus** 7 months ago  
Azure AD Conditional Access supports the following device platforms:  
  
Android  
iOS  
Windows Phone  
Windows  
macOS  
  
<https://docs.microsoft.com/en-us/azure/active-directory/conditional-access/concept-conditional-access-conditions>  
upvoted 3 times

✉ **Lyonel** 10 months ago  
Folks -- I hope this helps with the answers regarding Box 1 (first Box) and Box 5 (last Box): The answer explanation specifies that Azure AD Conditional Access supports Windows, Windows Phone, iOS, Android, and MacOS.

Therefore, the ONLY answer can be iOS, because the problem is specifically geared toward iPhone, and the iPhone runs iOS as its Operating System.

Here's a link reagrding Azure AD Registered Devices that should also help: <https://docs.microsoft.com/en-us/azure/active-directory/devices/concept-azure-ad-register>  
upvoted 2 times

✉ **Cholo981** 10 months, 2 weeks ago  
isDevice equal "Mobile"  
Header(with selector: "HTTP\_USER\_AGENT") contains "iPhone"  
upvoted 2 times

✉ **Cholo981** 10 months, 2 weeks ago  
So:  
1- IsDevice  
2- Mobile  
3- RequestHeader  
4- HTTP\_USER\_AGENT  
5- iPhone

upvoted 12 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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 group to which the user is a member.

Does the solution meet the goal?

A. Yes

B. No

**Correct Answer: B**

Microsoft Graph is a RESTful web API that enables you to access Microsoft Cloud service resources.

Instead in the Azure AD 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.

Reference:

<https://blogs.msdn.microsoft.com/waws/2017/03/13/azure-app-service-authentication-aad-groups/>

✉  **mlantonis** Highly Voted 10 months, 4 weeks ago

Correct Answer: B - No

Reference:

<https://docs.microsoft.com/en-us/archive/blogs/waws/azure-app-service-authentication-aad-groups>

<https://github.com/AzureAD/microsoft-authentication-library-for-dotnet/wiki/Integrated-Windows-Authentication>

<https://docs.microsoft.com/en-us/graph/api/resources/azure-ad-overview?view=graph-rest-1.0>  
upvoted 25 times

✉  **lugospod** 3 months, 1 week ago

I would say yes. Because if you have AD federation, then just by enabling WINDOWS authentication in your web app you gain access to Azure AD... so it is feasible

upvoted 1 times

✉  **mattvasc** 1 month, 3 weeks ago

Authentication isn't the same as authorization, what about the roles? The answer is No.

upvoted 1 times

✉  **Tom87** Highly Voted 1 year ago

I would say the solution meets the goal, according to this:

<https://github.com/AzureAD/microsoft-authentication-library-for-dotnet/wiki/Integrated-Windows-Authentication>

upvoted 10 times

✉  **minaritochuck** Most Recent 4 weeks, 1 day ago

It makes sense for app to use Integrated Windows Authentication (Implicit grant) for authentication and authorized by Microsoft Graph to access AD resources.

<https://docs.microsoft.com/en-us/graph/api/resources/directoryrole?view=graph-rest-1.0>  
upvoted 1 times

✉  **EwanoE** 1 month, 2 weeks ago

**Selected Answer: B**

Question says "website that will run as an Azure Web App" and there's no Integrated Windows Authentication in Azure Web App (aka App Service)  
upvoted 1 times

✉  **Freidrich** 1 month, 4 weeks ago

**Selected Answer: B**

The correct answer is B: No.

upvoted 1 times

✉  **mattdober** 2 months, 3 weeks ago

**Selected Answer: B**

I think its B

upvoted 1 times

✉  **ScubaDiver123456** 2 months, 3 weeks ago

**Selected Answer: A**

The answer is YES, assuming the application is hosted on a domain-joined VM. This document shows you how to set it up  
<https://github.com/AzureAD/microsoft-authentication-library-for-dotnet/wiki/Integrated-Windows-Authentication>

upvoted 1 times

✉  **ScubaDiver123456** 2 months, 3 weeks ago

Sorry. It does say it is an Azure Web App which can only run on Azure App Service. You can't join the underlying VMs to Active Directory.  
Therefore, I'm changing my vote to NO

upvoted 5 times

✉  **ning** 8 months, 2 weeks ago

No, windows integrated authentication is NOT azure AD, you need app registration to get Azure AD

upvoted 5 times

✉  **kondapaturi** 10 months ago

Answer – No, Here you need to create an application in Azure AD. Then set the groupMembershipClaims claims. Then inspect the token in the application to see if the user is part of that group.

upvoted 5 times

✉  **Idkhow** 10 months, 1 week ago

seriously what's the real answer??  
in my opinion i think it's a yesn't

Configure and use Integrated Windows Authentication in the website.  
(what does it have to do with the Integrated Windows Authentication)

In the website, query Microsoft Graph API to load the group to which the user is a member.  
(like what the explanation said that it works)

upvoted 1 times

✉  **glam** 11 months, 1 week ago

A. Yes

upvoted 1 times

✉  **lexzone** 11 months, 3 weeks ago

Yes

With Microsoft Graph, you can access Azure Active Directory (Azure AD) resources to enable scenarios like managing administrator (directory) roles, inviting external users to an organization

<https://docs.microsoft.com/en-us/graph/api/resources/azure-ad-overview?view=graph-rest-1.0>

upvoted 1 times

✉  **TakumaK** 11 months ago

agree with you. but can you explain why "Configure and use Integrated Windows Authentication in the website" can make the answer is correct  
upvoted 1 times

✉  **lugospod** 3 months, 3 weeks ago

This is just another way to say AD authentication.

There was a question earlier in the examtopics that has an example saying that i.e. user has more than 200 groups assigned AD will not return the id/name of all of the groups. Rather it will return a URL that is targeting MS GRAPH to acquire the user's roles. so I think that the answer is that this is an OK solution.

"Note: Azure AD caps at 200 the number of groups that can be sent via JWT format. If the user belongs to more than 200 groups, Azure AD does not pass any group claims; rather, it sends an overage claim that provides the app with the URI to use for retrieving the user's groups information via the Graph API. You should change the appRoles.Add section to accommodate this" - <https://docs.microsoft.com/en-us/archive/blogs/waws/azure-app-service-authentication-aad-groups>

upvoted 1 times

✉  **sien** 1 year ago

The answer is NO. You cannot select windows authentication in app service (assuming that we will be using an app service for hosting the website)  
Options there in the authentication part are: anonymous, AD, facebook, twitter, google and microsoft account.

Additionaly, We've been moving a classic .net app from on-premises to azure that used windows integrated authentication. Without AD integration and configuring app/roles it won't even possible to retrieve the groups that the user belongs to. You need to map group to AD role in app registration in AD

upvoted 7 times

✉  **ahaz** 1 year ago

The given answer is correct (Answer is NO)

For using the Integrated Windows Authentication, the client machine should be a windows machine, connected to the same Azure AD. The question is talking about a web app, so this scenario should be handled by setting groupMemberShipClaims to all, and enable oAuth implicit flow, and using the jwt to determine permissions.

upvoted 7 times

✉️  **TakumaK** 10 months, 4 weeks ago

correct!

upvoted 1 times

✉️  **clarionprogrammer** 1 year ago

A. Yes is correct.

Microsoft Graph exposes REST APIs and client libraries to access data on the following Microsoft cloud services:

Enterprise Mobility and Security services: Azure Active Directory

<https://docs.microsoft.com/en-us/graph/overview>

upvoted 1 times

✉️  **TakumaK** 11 months ago

Can you elaborate why "use Integrated Windows Authentication in the website" is also correct?

upvoted 2 times

✉️  **jokergester** 1 year ago

This approach will make the permission handling within the app itself while the suggested answer will happen within the AD

upvoted 4 times

✉️  **titombo** 1 year ago

In the question it says that it will use integrated Windows authentication, exactly like it's described on the link from Tom87. I also think the solution meets the goal.

upvoted 1 times

✉️  **TakumaK** 11 months ago

Are AD and AAD same?

upvoted 1 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

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: Run the Invoke-RestMethod cmdlet to make a request to the local managed identity for Azure resources endpoint.

Does the solution meet the goal?

A. Yes

B. No

#### Correct Answer: A

Get an access token using the VM's system-assigned managed identity and use it to call Azure Resource Manager

You will need to use PowerShell in this portion.

1. In the portal, navigate to Virtual Machines and go to your Windows virtual machine and in the Overview, click Connect.
2. Enter in your Username and Password for which you added when you created the Windows VM.
3. Now that you have created a Remote Desktop Connection with the virtual machine, open PowerShell in the remote session.
4. Using the Invoke-WebRequest cmdlet, make a request to the local managed identity for Azure resources endpoint to get an access token for Azure Resource

Manager.

Example:

```
$response = Invoke-WebRequest -Uri 'http://169.254.169.254/metadata/identity/oauth2/token?api-version=2018-02-01&resource=https://management.azure.com/' -Method GET -Headers @{Metadata="true"}
```

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/tutorial-windows-vm-access-arm>

✉  **princesskay** Highly Voted 1 year, 7 months ago

This does make sense since a web-request can be a rest call!

In the link below, it explains how web-request supports HTML content while Rest-Method supports JSON and XML content. The link provided for the solution is correct as well.

<https://superuser.com/questions/1235349/what-is-the-difference-between-invoke-webrequest-and-invoke-restmethod>  
upvoted 21 times

✉  **mlantonis** Highly Voted 10 months, 4 weeks ago

Correct Answer: Yes

Using the Invoke-WebRequest cmdlet, make a request to the local managed identity for Azure resources endpoint to get an access token for Azure Resource Manager.

I believe we can use Invoke-RestMethod too.

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/tutorial-windows-vm-access-arm>  
upvoted 18 times

✉  **Azprep** Most Recent 2 weeks ago

Answer is Yes

upvoted 1 times

✉  **SivajiTheBoss** 1 month, 2 weeks ago

Selected Answer: B

Need to use Invoke-WebRequest cmdlet not Invoke-RestMethod

Correct Answer: B

Get an access token using the VM's system-assigned managed identity and use it to call Azure Resource Manager

You will need to use PowerShell in this portion.

1. In the portal, navigate to Virtual Machines and go to your Windows virtual machine and in the Overview, click Connect.
2. Enter in your Username and Password for which you added when you created the Windows VM.
3. Now that you have created a Remote Desktop Connection with the virtual machine, open PowerShell in the remote session.
4. Using the Invoke-WebRequest cmdlet, make a request to the local managed identity for Azure resources endpoint to get an access token for Azure Resource Manager.

Example:

```
$response = Invoke-WebRequest -Uri 'http://169.254.169.254/metadata/identity/oauth2/token?api-version=2018-02-01&resource=https://management.azure.com/' -Method GET -Headers @{Metadata="true"}
```

Reference:  
<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/tutorial-windows-vm-access-arm>  
upvoted 1 times

✉ **mabusalma** 2 months, 4 weeks ago

**Selected Answer: A**

The answer is Yes correct  
Invoke-WebRequest or Invoke-RestMethod will do the same job but the response in RestMethod will be much simpler.  
upvoted 3 times

✉ **LauraGF** 7 months, 3 weeks ago

The answer is no  
Invoke-RestMethod: Grant your VM access to a secret stored in a Key Vault  
<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/tutorial-windows-vm-access-nonaad>  
Invoke-WebRequest: Grant your VM access to a Resource Group in Azure Resource Manager  
<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/tutorial-windows-vm-access-arm>  
upvoted 3 times

✉ **kondapaturi** 10 months ago

Answer is YES, you can make use of the PowerShell commands to make a request to managed identity service of the virtual machine. The Invoke-RestMethod is a generic call that is available in PowerShell for making a call to a web service.  
upvoted 4 times

✉ **Spooky7** 11 months, 1 week ago

In order to grant VM access to ARM you need to:  
- assign VM user/system managed identity  
- configure permission to ARM for that identity  
- and then you can access token by Invoke-WebRequest cmdlet and use it to authenticate in ARM.  
There is nothing in the question which indicates that those 2 previous steps are already done, so I would say it is not a correct answer.  
upvoted 3 times

✉ **glam** 11 months, 1 week ago

A. Yes  
upvoted 1 times

✉ **clarionprogrammer** 1 year ago

A. Yes  
Invoke-RestMethod is merely a rapper commandlet around Invoke-WebRequest.  
upvoted 2 times

✉ **ferut** 11 months, 1 week ago

roflol... do you mean wrapper?  
upvoted 1 times

✉ **businesskasper** 11 months ago

I'm pretty sure its a rapper cmdlet  
upvoted 1 times

✉ **Santileo** 1 year ago

I code in powershell regularly and Invoke-RestMethod is the correct one to fetch these tokens.  
upvoted 3 times

✉ **kwaazaar** 1 year ago

Where does it say the code is running on the VM itself?  
upvoted 1 times

✉ **Gathix444** 1 year, 3 months ago

Question 4 is "yes", Question 5 is "No". This is because the question ask you how to "grant a VM access to specific resource groups in Azure Resource Manager". Question 5 is only "yes" if you assigned the VM with role-base access control first. So Question 4 is more correct than Question 5  
upvoted 2 times

✉ **brainwave15** 1 year, 3 months ago

last line literally says "You need to obtain an Azure Resource Manager access token."  
the only way to obtain is to use the invoke method...  
upvoted 4 times

✉ **bhushan\_786** 1 year, 3 months ago

As per latest document its not a invoke-RestMethod , it is: Invoke-WebRequest cmdlet.  
So is it the correct answer?  
upvoted 2 times

✉ **Dirk** 1 year, 8 months ago

The explanation does not fit to the referred website.  
The website is about the method Invoke-WebRequest.

But the explanation is about the method Invoke-RestMethod which is not the same.  
This is confusing to me...

upvoted 2 times

✉  **arindam1989** 1 day ago

This confuses me too but I think they want to refer the same thing.

upvoted 1 times

**HOTSPOT -**

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: {
 "groupMembershipClaims": "All"
 },
 "allowPublicClient": true,
 "oauth2Permissions": [
 "requiredResourceAccess"
],
 "oauth2AllowImplicitFlow": true
}
```

**Answer Area**

```
{
 ...
 "appId": "d61126e3-089b-4adb-b721-d5023213df7d",
 "displayName": "internal",
 optionalClaims: {
 "groupMembershipClaims": "All"
 },
 "allowPublicClient": true,
 "oauth2Permissions": [
 "requiredResourceAccess"
],
 "oauth2AllowImplicitFlow": true
}
```

Box 1: groupMembershipClaims -

Scenario: Personalization of the website must be based on membership in Active Directory groups.

Group claims can also be configured in the Optional Claims section of the Application Manifest.

Enable group membership claims by changing the groupMembershipClaim

The valid values are:

"All"  
"SecurityGroup"  
"DistributionList"  
"DirectoryRole"

Box 2: oauth2Permissions -

Scenario: Azure AD users must be able to login to the website. oauth2Permissions specifies the collection of OAuth 2.0 permission scopes that the web API (resource) app exposes to client apps. These permission scopes may be granted to client apps during consent.

Incorrect Answers:

oauth2AllowImplicitFlow. oauth2AllowImplicitFlow specifies whether this web app can request OAuth2.0 implicit flow access tokens. The

default is false. This flag is used for browser-based apps, like Javascript single-page apps.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/hybrid/how-to-connect-fed-group-claims>

✉  **AakashNeedsEmAll** Highly Voted 1 year, 5 months ago

Second answer is incorrect. Well, oauth2Permissions can only accept collections value like an array not a boolean. It should be oauth2AllowImplicitFlow.

upvoted 128 times

✉  **cbn** 1 year, 2 months ago

Agree.

oauth2permissions:

<https://docs.microsoft.com/en-us/azure/active-directory/develop/reference-app-manifest#oauth2permissions-attribute>

oauth2allowimplicitflow:

<https://docs.microsoft.com/en-us/azure/active-directory/develop/reference-app-manifest#oauth2allowimplicitflow-attribute>

upvoted 11 times

✉  **Asteriz** 3 months, 1 week ago

Agreed

upvoted 1 times

✉  **Juanlu** 1 year, 2 months ago

I Agree with you:

- 1) groupMembershipClaims
- 2) oauth2AllowImplicitFlow

upvoted 14 times

✉  **cloud\_exam1** 1 year, 5 months ago

I think so. oauth2Permissions is a list. Should be oauth2AllowImplicitFlow.

<https://docs.microsoft.com/en-us/azure/active-directory/develop/reference-app-manifest>

upvoted 9 times

✉  **iiiihhhh** 1 year, 4 months ago

The problem is that oauth2AllowImplicitFlow is for browser-based apps(SPA), what is not mentioned in the question.

upvoted 1 times

✉  **Tealon** 1 year, 4 months ago

OAuth2 can also be used in this scenario. It does not matter if you use the normal grant or implicit flow.

upvoted 2 times

✉  **AfroYeti** 1 year, 2 months ago

It is "You are building a WEBSITE to access project data related to teams within your organization."

I would imagine that, that website would run in a browser

upvoted 6 times

✉  **mlantonis** Highly Voted 10 months, 4 weeks ago

Box 1: groupMembershipClaims

Personalization of the website must be based on membership in Active Directory groups.

Group claims can also be configured in the Optional Claims section of the Application Manifest. Enable group membership claims by changing the groupMembershipClaim

The valid values are:

- "All"
- "SecurityGroup"
- "DistributionList"
- "DirectoryRole"

Here we need to mention that we want to get the groups for the users. Hence we need to mention to set the groupMembershipClaims property to All.

Box 2: oauth2AllowImplicitFlow

Azure AD users must be able to login to the website.

auth2Permissions can only accept collections value like an array, not a boolean. oauth2AllowImplicitFlow accepts boolean value.

Here from the list of options given, if we want the application to fetch the required tokens , we would need to allow Implicit Flow.

upvoted 22 times

✉  **mlantonis** 10 months, 4 weeks ago

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/develop/reference-app-manifest#groupmembershipclaims-attribute>

<https://docs.microsoft.com/en-us/azure/active-directory/develop/reference-app-manifest#oauth2permissions-attribute>

<https://docs.microsoft.com/en-us/azure/active-directory/develop/reference-app-manifest#oauth2allowimplicitflow-attribute>

<https://docs.microsoft.com/en-us/azure/active-directory/hybrid/how-to-connect-fed-group-claims>

<https://docs.microsoft.com/en-us/azure/active-directory/develop/v2-oauth2-implicit-grant-flow>  
upvoted 4 times

✉  **Evo\_Morales** Most Recent 2 weeks ago

Check Point - how many folks knew the correct answer before reading/researching?  
upvoted 1 times

✉  **ReniRechner** 1 month, 3 weeks ago

According to  
<https://docs.microsoft.com/en-us/azure/active-directory/develop/reference-app-manifest>

optionalClaims => "All" might not be allowed  
groupMembershipClaims => "None", ... "All"

allowPublicClient => boolean  
oauth2Permissions => collection  
requiredResourceAccess => collection  
oauth2AllowImplicitFlow => boolean

So first has to be "groupMembershipClaims" (can also be inferred from the requirements).

"allowPublicClient" seems to be meant for special cases not required here, there is only "oauth2AllowImplicitFlow" which makes sense for a website.

upvoted 2 times

✉  **oescm** 2 months, 2 weeks ago

Got this one 02/2022. Went with:

- 1) groupMembershipClaims
- 2) oauth2AllowImplicitFlow

upvoted 3 times

✉  **MasterQuestMaster** 3 months ago

Got this on the exam!

upvoted 3 times

✉  **lugospod** 3 months ago

Got this one 01/2022. Went with most voted (to avoid writing answers again)

upvoted 5 times

✉  **maharaju** 1 week, 2 days ago

How come after writing exams you guys are visiting each questions and commenting ..SO much time

upvoted 1 times

✉  **paulomjeet** 8 months, 2 weeks ago

2nd Answer should be oauth2AllowIdTokenImplicitFlow as it is a Boolean field. On the otherhand oauth2Permissions is an array of permission objects.

upvoted 3 times

✉  **ning** 8 months, 2 weeks ago

oauth2Permissions has to be a collection, cannot be Boolean, and only valid is implicitflow

upvoted 2 times

✉  **weasel97** 9 months ago

The answer stated here seems correct implicit flow doesn't work for allcases. Reference: <https://docs.microsoft.com/en-us/azure/active-directory/develop/v2-oauth2-implicit-grant-flow#:~:text=Prefer%20the%20auth,flow%20as%20well>.

upvoted 1 times

✉  **kondapaturi** 10 months ago

groupMembershipClaims - we need to mention that we want to get the groups for the users. Hence we need to mention to set the groupMembershipClaims property to All

oauth2AllowImplicitFlow - if we want the application to fetch the required tokens , we would need to allow Implicit Flow

upvoted 5 times

✉  **hems4all** 10 months, 3 weeks ago

groupMembershipClaims will get the all of the security groups, distribution groups, and Azure AD directory roles that the signed-in user is a member of. As website personalization is based on user group memberships, this must be configured.

oauth2AllowImplicitFlow flag is used for browser-based apps, like JavaScript single-page apps. Specifies whether this web app can request OAuth2.0 implicit flow access tokens

<https://docs.microsoft.com/en-us/azure/active-directory/develop/reference-app-manifest#configure-the-app-manifest>

upvoted 1 times

✉  **glam** 11 months, 1 week ago

1) groupMembershipClaims  
2) oauth2AllowImplicitFlow  
upvoted 3 times

✉ **Ajaykumar** 1 year, 1 month ago

The second answer should be OAuth2AllowImplicitFlow. OAuth2Permissions accepts a collection, not a boolean value.  
upvoted 3 times

✉ **MrZoom** 1 year, 1 month ago

oauth2AllowImplicitFlow seems to be the correct answer, but note that this is a legacy oauth2 flow that will likely not be supported by future browsers.

Link: <https://docs.microsoft.com/en-us/azure/active-directory/develop/v2-oauth2-implicit-grant-flow>

upvoted 2 times

✉ **RaviKS** 1 year, 3 months ago

Correct Answers are  
GroupMembership  
oauth2AllowImplicitFlow  
upvoted 2 times

✉ **Skyrocket** 1 year, 3 months ago

Admin, request you to update answers to avoid any further confusion.  
GroupMembership  
oauth2AllowImplicitFlow  
upvoted 4 times

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

**Correct Answer: B**

The Start-AzureStorageBlobCopy cmdlet starts to copy a blob.

Example 1: Copy a named blob -

```
C:\PS>Start-AzureStorageBlobCopy -SrcBlob "ContosoPlanning2015" -DestContainer "ContosoArchives" -SrcContainer "ContosoUploads"
```

This command starts the copy operation of the blob named ContosoPlanning2015 from the container named ContosoUploads to the container named

ContosoArchives.

Reference:

<https://docs.microsoft.com/en-us/powershell/module/azure.storage/start-azurestorageblobcopy?view=azurermps-6.13.0>

✉  **AnonymousJhb** Highly Voted 1 year, 4 months ago

B looks correct.

Common Blob storage event scenarios include image or video processing, search indexing, or any file-oriented workflow. Asynchronous file uploads are a great fit for events. When changes are infrequent, but your scenario requires immediate responsiveness, event-based architecture can be especially efficient.

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-event-overview>

upvoted 26 times

✉  **mlantonis** Highly Voted 10 months, 4 weeks ago

Correct Answer: B

The Start-AzureStorageBlobCopy cmdlet starts to copy a blob.

Reference:

<https://docs.microsoft.com/en-us/powershell/module/azure.storage/start-azurestorageblobcopy?view=azurermps-6.13.0>

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-event-overview>

upvoted 10 times

✉  **arindam1989** Most Recent 1 day ago

Selected Answer: B

The automation of the process comes into play. Answer should be (B)

upvoted 1 times

✉  **AZ204Cert** 1 week, 5 days ago

Got this on 04/05/22 (selected B)

upvoted 1 times

✉  **Mev4953** 3 months ago

Selected Answer: B

Correct Answer B

upvoted 2 times

✉  **ehurfheiz** 3 months, 1 week ago

Selected Answer: B

B looks correct

upvoted 1 times

✉  **hems4all** 10 months, 3 weeks ago

The Start-AzureStorageBlobCopy cmdlet starts to copy a blob

The Put Blob operation creates a new block, page, or append blob, or updates the content of an existing block blob. So in the given options, only Start-AzureStorageBlobCopy cmdlet copies the blob  
upvoted 3 times

✉ **glam** 11 months, 1 week ago  
B. Create an Event Grid topic that uses the Start-AzureStorageBlobCopy cmdlet  
upvoted 2 times

✉ **faizalzain** 1 year ago  
the answer is C in udemy  
upvoted 3 times

✉ **AOE** 8 months, 1 week ago  
You dont have snapshots in the question so C is definitely wrong.  
upvoted 2 times

✉ **sien** 1 year ago  
I personally think it should be answer A -> The Put Block operation creates a new block to be committed as part of a blob. ->  
<https://docs.microsoft.com/en-us/rest/api/storageservices/put-block>

Main reasoning is that answer B with the powershell doesn't make sense  
upvoted 2 times

✉ **clarionprogrammer** 1 year ago  
Put Blob is incorrect. It only "[c]reates a new blob or replaces an existing blob within a container."  
<https://docs.microsoft.com/en-us/rest/api/storageservices/blob-service-rest-api>  
upvoted 1 times

✉ **clarionprogrammer** 1 year ago  
It doesn't seem to imply that it can be used for copying between containers.  
upvoted 1 times

✉ **sien** 1 year ago  
a copy between containers is nothing more than taking a blob from container A and then "Create" a blob in container B, isn't it?  
upvoted 2 times

✉ **Zsolt72** 1 year ago  
My opinion is to use the Event grid with Azure automation powershell script as in B.

The A seems to also be possible but it is not efficient due to you have to upload the original file again with the putBlob and in the task we have to copy and the put is not an exact copy operation.  
I would go with B  
upvoted 1 times

✉ **MrZoom** 1 year, 1 month ago  
Agreed, B needs a (powershell-type) Function to trigger the cmdlet. But B doesn't state how the cmdlet is triggered, so I don't see why Functions wouldn't be an option.  
upvoted 1 times

✉ **Kobee** 1 year, 4 months ago  
It uses a storage REST API to upload media, so the block type is a Block Blob, not a Page Blob (used for VM) and Append Blob (used to append data like logs)  
So I think the correct answer is C.  
For a block blob, the request body contains the content of the blob (see <https://docs.microsoft.com/en-us/rest/api/storageservices/put-blob#request-body>)  
upvoted 2 times

✉ **Kobee** 1 year, 4 months ago  
Bad copy/paste: from <https://www.examtopics.com/discussions/microsoft/view/25477-exam-az-203-topic-3-question-13-discussion/> -> correct answer is A  
upvoted 3 times

✉ **VK\_Gladiator** 1 year, 3 months ago  
but the current question . does not say it needs to happen in real time. Also, Az copy is sync in nature so copy operation might block your actual transaction? may be?  
upvoted 2 times

✉ **matejka** 1 year, 4 months ago  
I would say B is correct as the other ones can be hardly automated. And I suppose the question expects the upload to start automatically.  
upvoted 4 times

✉️  **gematsaljoa** 1 year, 4 months ago

A

<https://www.examtopics.com/discussions/microsoft/view/25477-exam-az-203-topic-3-question-13-discussion/>  
upvoted 3 times

✉️  **luppittegui** 1 year, 4 months ago

It's not the same scenario, genius  
upvoted 14 times

✉️  **Cornholioz** 1 year, 4 months ago

Looks like it will need Functions along with EventGrid. But that's not a given solution and I don't know if other options work. I was looking at this:  
<https://mobilefirstcloudfirst.net/2017/12/connecting-azure-blob-storage-events-using-event-grid/>

upvoted 2 times

✉️  **Secure01** 1 year, 5 months ago

How the Event Grid topic can use Start-AzureStorageBlobCopy cmdlet ?  
upvoted 5 times

✉️  **MrNair007** 1 year, 4 months ago

same doubt.  
upvoted 3 times

✉️  **brtx** 1 year, 4 months ago

Yeah sounds really odd to me as well. Possibly they mean via Azure Automation PowerShell runbook. See these links:  
<https://docs.microsoft.com/en-us/azure/event-grid/overview> (one possible handler is Azure Automation)  
<https://docs.microsoft.com/en-us/azure/automation/learn/automation-tutorial-runbook-textual-powershell>  
<https://azure.microsoft.com/de-de/blog/azure-automation-runbook-management/>

Haven't tried that though, just were wondering as well after I read your comments.  
upvoted 3 times

✉️  **AfroYeti** 1 year, 2 months ago

I'll have to agree runbook seems like the only thing that would be able to do that without having to spin up any additional or self managed resources  
upvoted 3 times

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

**Correct Answer: A**

These formats are supported in the lists of paths to purge:

⊖ Single path purge: Purge individual assets by specifying the full path of the asset (without the protocol and domain), with the file extension, for example, /

[1]

⊖ Wildcard purge: Asterisk (\*) may be used as a wildcard. Purge all folders, subfolders, and files under an endpoint with /\* in the path or purge all subfolders and files under a specific folder by specifying the folder followed by /\*, for example, /pictures/\*.

⊖ Root domain purge: Purge the root of the endpoint with "/" in the path.

Reference:

<https://docs.microsoft.com/en-us/azure/frontdoor/front-door-caching>

✉  **Tealon** Highly Voted 1 year, 4 months ago

The given answer is correct.

upvoted 25 times

✉  **mlantonis** Highly Voted 10 months, 4 weeks ago

Correct Answer: A

These formats are supported in the lists of paths to purge:

- Single path purge: Purge individual assets by specifying the full path of the asset (without the protocol and domain), with the file extension, for example, /pictures/strasbourg.png;

- Wildcard purge: Asterisk (\*) may be used as a wildcard. Purge all folders, subfolders, and files under an endpoint with /\* in the path or purge all subfolders and files under a specific folder by specifying the folder followed by /\*, for example, /pictures/\*.

- Root domain purge: Purge the root of the endpoint with "/" in the path.

Here since we just need to purge individual assets, we can just make use of the Single path purge as the format for purging assets.

Reference:

<https://docs.microsoft.com/en-us/azure/frontdoor/front-door-caching>

upvoted 15 times

✉  **AZ204Cert** Most Recent 1 week, 5 days ago

Got this on 04/05/22 (selected Single path)

upvoted 1 times

✉  **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22

upvoted 1 times

✉  **Freidrich** 1 month, 4 weeks ago

**Selected Answer: A**

The proposed answer is correct A: Single path.

upvoted 1 times

✉  **ehurfheiz** 3 months, 1 week ago

**Selected Answer: A**

A is the correct answer

upvoted 2 times

✉  **kondapaturi** 10 months ago

Single Path is correct , we just need to purge individual assets , we can just make use of the Single path purge as the format for purging assets.  
upvoted 1 times

✉ **UnknowMan** 11 months, 1 week ago

The given answer is correct.

upvoted 1 times

✉ **glam** 11 months, 1 week ago

correct

upvoted 2 times

✉ **azahran** 1 year, 3 months ago

individual assets so answer is correct

upvoted 3 times

✉ **RaviKS** 1 year, 3 months ago

Correct Answer is Single path

upvoted 2 times

✉ **Cornholioz** 1 year, 3 months ago

90% aligned with Single Path. Slight apprehension because the question says Files (not file) and based on values (not value). So it's asking to purge multiple. I might be overthinking it :)

upvoted 3 times

✉ **MrZoom** 1 year, 1 month ago

You are, yes :) The q says "individual assets" - so multiple assets, purged individually.

upvoted 2 times

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

**Correct Answer: C**

Use the authentication-managed-identity policy to authenticate with a backend service using the managed identity of the API Management service. This policy essentially uses the managed identity to obtain an access token from Azure Active Directory for accessing the specified resource. After successfully obtaining the token, the policy will set the value of the token in the Authorization header using the Bearer scheme.

Reference:

<https://docs.microsoft.com/bs-cyrl-ba/azure/api-management/api-management-authentication-policies>

✉  **MasDen** Highly Voted 1 year, 5 months ago

If a caller outside Azure doesn't look like we can use Managed Identity in such a situation. I think the client certificate is better.  
upvoted 29 times

✉  **jay158** 10 months ago

Outsides user's can authenticate using Facebook /Google Identity providers.  
Managed Identity is a good answer.  
upvoted 4 times

✉  **ning** 8 months, 1 week ago

Those are NOT managed identity, those are claim based authentication.  
upvoted 3 times

✉  **druk** 1 year, 5 months ago

Seems it's legit because question says "All API calls must be secure"  
upvoted 2 times

✉  **IsildursHeir** 1 year, 4 months ago

They do say "Azure API" so I am guessing they mean its an Azure provided API, not one wrapped around by Azure API management so MI would work..  
upvoted 3 times

✉  **luppittegui** Highly Voted 1 year, 4 months ago

Ans is correct: managed identities eliminate the need for developers having to manage credentials by providing an identity for the Azure resource in Azure AD and using it to obtain Azure Active Directory (Azure AD) tokens.  
<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/overview>  
upvoted 24 times

✉  **Vady98** 6 months, 2 weeks ago

If a caller outside Azure doesn't look like we can use Managed Identity.  
I think the client certificate is better.  
upvoted 2 times

✉  **Azprep** Most Recent 2 weeks ago

Managed identity  
upvoted 1 times

✉  **iamstudying** 1 month, 1 week ago

**Selected Answer: D**  
Agree with MasDen  
upvoted 1 times

✉  **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22

upvoted 1 times

✉  **DonOnur** 1 month, 3 weeks ago

**Selected Answer: C**

Since there is no requirement for users outside of Azure, I would choose C.

upvoted 4 times

✉  **DonOnur** 1 month, 3 weeks ago

Couldn't find the requirement that it has to be available to users outside azure.

upvoted 2 times

✉  **ytingyeu** 2 months ago

There is no service called "Azure API". Thus, I assume it refers to "App Service > API Apps".

<https://azure.microsoft.com/en-us/services/app-service/api>

In the page of "Secure app > Use managed identities", it's all about App itself accesses other resources, not about client calling API.  
<https://docs.microsoft.com/en-us/azure/app-service/overview-managed-identity>

And the page "AuthN and AuthZ in Azure App Service ", it says "App Service uses federated identity", not managed identities.  
<https://docs.microsoft.com/en-us/azure/app-service/overview-authentication-authorization>

So I suppose the only thing we can do is client certificate

<https://docs.microsoft.com/en-us/azure/app-service/app-service-web-configure-tls-mutual-auth>

upvoted 2 times

✉  **ytingyeu** 2 months ago

Plus, in page "Configure your App Service app to use AAD login" which is a part of federated identity, I don't see managed identities either.

<https://docs.microsoft.com/en-us/azure/app-service/configure-authentication-provider-aad>

<https://docs.microsoft.com/en-us/azure/app-service/configure-authentication-provider-aad>

upvoted 1 times

✉  **ytingyeu** 2 months ago

imo managed identities is for resource-to-resource not for client-to-resource

upvoted 2 times

✉  **ScubaDiver123456** 2 months, 3 weeks ago

**Selected Answer: D**

Client Certificate as explained here:

<https://docs.microsoft.com/en-us/learn/modules/explore-api-management/7-secure-access-api-certificates>

upvoted 2 times

✉  **AOE** 8 months, 1 week ago

The API is not connecting to other ressources, so managed identity is definitely not the answer. I believe the anwser is client certificate

upvoted 5 times

✉  **ning** 8 months, 2 weeks ago

Is this question missing some text? I am not sure whether end user authorized to APIM or APIM authorized to other Azure resources. If the former then client certificate, if the latter, then managed identity. You cannot mix this up.

upvoted 4 times

✉  **francis6170** 10 months, 3 weeks ago

got this in the exam :)

upvoted 3 times

✉  **mlantonis** 10 months, 4 weeks ago

Authenticate with Basic: Authenticate with a backend service using Basic authentication.

Authenticate with Client Certificate: Authenticate with a backend service using client certificates.

Authenticate with Managed Identity: Authenticate with the managed identity for the API Management service.

Correct Answer: C, unless we consider D because you can't secure your custom-built API with Managed Identity.

upvoted 7 times

✉  **jungaster** 11 months ago

The answer is correct. <https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/overview>

upvoted 2 times

✉  **glam** 11 months, 1 week ago

correct

upvoted 3 times

✉  **clarionprogrammer** 1 year ago

D. Client certificate

It says "Your company is developing an Azure API." You can't secure your custom-built API with Managed Identity. "All [client] API calls must be secure." Therefore, client certificate makes the most sense.

upvoted 4 times

 **khoant** 1 year, 3 months ago

Answer is correct.

upvoted 4 times

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

**Correct Answer: D**

Add the validate-jwt policy to validate the OAuth token for every incoming request.

Incorrect Answers:

A: The jsonp policy adds JSON with padding (JSONP) support to an operation or an API to allow cross-domain calls from JavaScript browser-based clients.

JSONP is a method used in JavaScript programs to request data from a server in a different domain. JSONP bypasses the limitation enforced by most web browsers where access to web pages must be in the same domain.

JSONP - Adds JSON with padding (JSONP) support to an operation or an API to allow cross-domain calls from JavaScript browser-based clients.

Reference:

<https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-protect-backend-with-aad>

✉  **Cornholioz** Highly Voted 1 year, 4 months ago

Correct. It's validate-jwt for Open ID, API, secure authentication.

upvoted 38 times

✉  **mlantonis** Highly Voted 10 months, 4 weeks ago

Correct Answer: D

Add the validate-jwt policy to validate the OAuth token for every incoming request.

Reference:

<https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-protect-backend-with-aad>

upvoted 9 times

✉  **JotaEleEfe** Most Recent 1 month ago

Selected Answer: D

I think validate-jwt is the correct option.

upvoted 1 times

✉  **iamstudying** 1 month, 1 week ago

Selected Answer: D

validate-jwt, buddies

upvoted 1 times

✉  **Freidrich** 1 month, 4 weeks ago

Selected Answer: D

The proposed answer is correct D: validate-jwt.

upvoted 1 times

✉  **mabusalma** 2 months, 4 weeks ago

Can someone let me understand why a check-header isn't a valid answer?

<https://docs.microsoft.com/en-us/azure/api-management/api-management-access-restriction-policies#CheckHTTPHeader>

Use the check-header policy to enforce that a request has a specified HTTP header. You can optionally check to see if the header has a specific

value or check for a range of allowed values. If the check fails, the policy terminates request processing and returns the HTTP status code and error message specified by the policy.

upvoted 1 times

✉  **mcbc** 8 months, 1 week ago

correct

upvoted 2 times

✉  **Peter304403** 10 months, 2 weeks ago

The answer might be correct, but in the explanation of the incorrect answers it sounds very confusing to read jsonp described 3-times in a similar way? Since I don't know and I couldn't find anything: Could someone please explain the other two answers, what it is or where to find something about that?

upvoted 4 times

✉  **UnknowMan** 11 months, 1 week ago

correct

upvoted 1 times

✉  **glam** 11 months, 1 week ago

correct

upvoted 1 times

✉  **demius\_8** 1 year ago

Answer is correct. Source: <https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-protect-backend-with-aad>

upvoted 3 times

✉  **pac1311** 1 year, 2 months ago

Correctomundo!

upvoted 4 times

✉  **RaviKS** 1 year, 3 months ago

Given Answer is correct

upvoted 2 times

✉  **khoant** 1 year, 3 months ago

Answer is correct.

upvoted 2 times

✉  **Tealon** 1 year, 4 months ago

The given answer is correct.

upvoted 3 times

**DRAG DROP -**

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

| <b>Policy section</b> | <b>Policy</b>      | <b>Policy section</b> |
|-----------------------|--------------------|-----------------------|
|                       | 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"/>  |

## Answer Area

| <b>Policy section</b> | <b>Policy</b>      | <b>Policy section</b> |
|-----------------------|--------------------|-----------------------|
|                       | 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"/>  |

Box 1: Inbound.

A set-variable policy to store the detected user identity.

Example:

```
<policies>
<inbound>
<!-- How you determine user identity is application dependent -->
<set-variable
name="enduserid"
value="@({context.Request.Headers.GetValueOrDefault("Authorization","").Split(' ')[1].AsJwt()?.Subject})" />
```

Box 2: Inbound -

A cache-lookup-value policy -

Example:

```

<inbound>
<base />
<cache-lookup vary-by-developer="true | false" vary-by-developer-groups="true | false" downstream-caching-type="none | private | public" must-revalidate="true | false">
<vary-by-query-parameter>parameter name</vary-by-query-parameter> <!-- optional, can be repeated several times -->
</cache-lookup>
</inbound>

```

#### Box 3: Outbound -

A cache-store-value policy.

Example:

```

<outbound>
<base />
<cache-store duration="3600" />
</outbound>

```

#### Box 4: Outbound -

A find-and-replace policy to update the response body with the user profile information.

Example:

```

<outbound>
<!-- Update response body with user profile-->
<find-and-replace
from="$userprofile$"
to="@((string)context.Variables["userprofile"])" />
<base />
</outbound>

```

Reference:

<https://docs.microsoft.com/en-us/azure/api-management/api-management-caching-policies> <https://docs.microsoft.com/en-us/azure/api-management/api-management-sample-cache-by-key>

✉  **Ave**  1 year, 5 months ago

Inbound  
Inbound  
Inbound  
Outbound  
upvoted 112 times

✉  **ferut** 11 months, 1 week ago

I consider cache-store-value to be Outbound here. I'm just trying to think logically here.

Inbound:

First, you'll look up the user identity and use set-variable to put it on the request.

Then try to find the cache item in the cache using cache-lookup-value.

If you find the cache item, then reply directly otherwise, you'll go to the server and fetch the response.

Inbound ends here.

Outbound:

With the response from the server, update the cache using cache-store-value.

Then use find-and-replace to update the response body.

upvoted 14 times

✉  **aruni\_mishra** 4 months, 3 weeks ago

- cache-store-value is not as same as cache-value.

- cache-store is Outbound- <https://docs.microsoft.com/en-us/azure/api-management/api-management-caching-policies#example>

- cache-store-value is Inbound- <https://docs.microsoft.com/en-us/azure/api-management/api-management-sample-cache-by-key#fragment-caching>

upvoted 10 times

✉  **alperc** 5 months, 2 weeks ago

i agree, looking at: <https://docs.microsoft.com/en-us/azure/api-management/api-management-caching-policies#usage-1> states that cache-store is set on outbound-policy

upvoted 1 times

✉  **alperc** 5 months, 2 weeks ago

delete it. I was confused by cache-store and cache-store-value

upvoted 2 times

✉ **Azprep** 3 months, 3 weeks ago  
<https://docs.microsoft.com/en-us/azure/api-management/api-management-sample-cache-by-key>  
upvoted 3 times

✉ **Azprep** 2 weeks, 3 days ago  
Answers are  
Inbound  
Inbound  
Inbound  
Outbound  
upvoted 1 times

✉ **dbobspurfpoo** 4 months, 1 week ago  
Is this how i should answer on the exam? Is it just this site that's wrong?  
upvoted 1 times

✉ **NiceGuyAlberto** 4 months, 4 weeks ago  
correct!  
-> <https://docs.microsoft.com/en-us/azure/api-management/api-management-sample-cache-by-key#fragment-caching>  
upvoted 3 times

✉ **taupokk** Highly Voted 1 year, 5 months ago  
The answer provided is correct.  
upvoted 27 times

✉ **robertob** 1 year, 5 months ago  
yes is correct: <policies>  
<inbound>  
<base />  
<cache-lookup vary-by-developer="false" vary-by-developer-groups="false" downstream-caching-type="none" must-revalidate="true" caching-type="internal" >  
<vary-by-query-parameter>version</vary-by-query-parameter>  
</cache-lookup>  
</inbound>  
<outbound>  
<cache-store duration="seconds" />  
<base />  
</outbound>  
</policies>  
upvoted 5 times

✉ **cbn** 1 year, 2 months ago  
This is not cache-store-value. However the answer seems correct as per @profesorklaus answer below.  
upvoted 3 times

✉ **Azprep** Most Recent 2 weeks ago  
Inbound  
Inbound  
Inbound  
Outbound  
upvoted 2 times

✉ **Prasu69** 1 month ago  
Inbound  
Inbound  
Inbound  
Outbound  
upvoted 1 times

✉ **petitbilly** 1 month, 2 weeks ago  
According to this docs from Microsoft, the third box (cache-store-value) could be: inbound or outbound.  
<https://docs.microsoft.com/en-us/azure/app-service/faq-app-service-linux#i-m-using-my-own-custom-container--i-want-the-platform-to-mount-an-smb-share-to-the---home---directory>  
upvoted 1 times

✉ **prastogi** 2 months, 4 weeks ago  
<https://docs.microsoft.com/en-us/azure/api-management/api-management-sample-cache-by-key>  
Answer should be  
Inbound  
Inbound  
Inbound  
Outbound  
upvoted 1 times

✉ **AzureLearning** 3 months ago

Why everyone is saying Set-Variable is Inbound ? Microsoft site says it can be used in both inbound and outbound.

<https://docs.microsoft.com/en-us/azure/api-management/api-management-advanced-policies#usage-12>

Set-variable policy can be used in

Policy sections: inbound, outbound, backend, on-error

upvoted 4 times

✉ **DonOnur** 1 month, 3 weeks ago

although it can be used in inbound and outbound it only makes sense as inbound

upvoted 1 times

✉ **tramlong888** 4 months ago

cache-store-value should be Outbound

Refer: <https://docs.microsoft.com/en-us/azure/api-management/api-management-sample-cache-by-key>

upvoted 1 times

✉ **Yazhu** 4 months, 1 week ago

Refer Link : <https://docs.microsoft.com/en-us/azure/api-management/api-management-sample-cache-by-key#fragment-caching>

1. <Inbound> <set-variable/><cache-lookup-value/><<cache-store-value/></Inbound>

2. <Outbound><find-and-replace/></Outbound>

upvoted 2 times

✉ **Pankaj78** 5 months, 2 weeks ago

correct answer is inbound, inbound, inbound, and outbound, it is available at

<https://docs.microsoft.com/en-us/azure/api-management/api-management-sample-cache-by-key>

upvoted 3 times

✉ **ning** 8 months, 2 weeks ago

Cache-stores is out bound <https://docs.microsoft.com/en-us/azure/api-management/api-management-caching-policies#StoreToCache> see samples there please

upvoted 3 times

✉ **somenkr** 9 months, 2 weeks ago

Answer is correct :

Inbound

Inbound

Outbound

Outbound

<policies>

<inbound>

<base />

<cache-lookup vary-by-developer="false" vary-by-developer-groups="false" downstream-caching-type="none" must-revalidate="true" caching-type="internal" >

<vary-by-query-parameter>version</vary-by-query-parameter>

</cache-lookup>

</inbound>

<outbound>

<cache-store duration="seconds" />

<base />

</outbound>

</policies>

upvoted 3 times

✉ **kondapaturi** 10 months ago

A set-variable policy to store the detected user identity - Inbound - Here we need to detect the user identity in the user request and then store the data in the cache. So , we need to look at the Incoming request for this.

A cache-lookup policy - Inbound - Here we have to see if the user data is not already present in the cache. If not, we should then set the cache value.

A cache-store-value policy - Inbound- Here we need to store the data value in the cache if the user data is not already present.

A find-and-replace policy - outbound - Here we need to update the response body, so it should go in the Output section.

upvoted 3 times

✉ **francis6170** 10 months, 3 weeks ago

got this in the exam :)

upvoted 2 times

✉ **Duncan0923** 6 months ago

So when your job interview comes up of a high paid opportunity and the interviewer ask you this question your also gonna say "I got this in the exam" :D good luck BUDDY

upvoted 5 times

✉ **Gregoryhouse2020** 10 months, 3 weeks ago

The given answer is incorrect

Answer :-

Inbound

Inbound

Inbound  
Outbound  
upvoted 4 times

✉  **mlantonis** 10 months, 4 weeks ago

Box 1: Inbound  
A set-variable policy to store the detected user identity.  
Here we need to detect the user identity in the user request and then store the data in the cache. So , we need to look at the Incoming request for this.

Box 2: Inbound  
A cache-lookup-value policy  
Here we have to see if the user data is not already present in the cache. If not, we should then set the cache value.

Box 3: Inbound  
A cache-store-value policy.  
Here we need to store the data value in the cache if the user data is not already present.

Box 4: Outbound  
A find-and-replace policy to update the response body with the user profile information.  
Here we need to update the response body, so it should go in the Output section.  
upvoted 22 times

✉  **mlantonis** 10 months, 4 weeks ago

Reference:

<https://docs.microsoft.com/en-us/azure/api-management/api-management-caching-policies>

<https://docs.microsoft.com/en-us/azure/api-management/api-management-sample-cache-by-key>  
upvoted 1 times

✉  **glam** 11 months, 1 week ago

Inbound  
Inbound  
Inbound  
Outbound  
upvoted 2 times

## DRAG DROP -

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> <b>Code segment</b> <code>( new Uri(var1), new</code> <b>Code segment</b> <code>());</code>
CloudClients	
SecretClient	

## Correct Answer:

Code segments	Answer Area
	<code>string var1 = Environment.GetEnvironmentVariable("KEY_VAULT_URI");</code>
ClientSecretCredential	<code>var var2 = new</code> <b>SecretClient</b> <code>( new Uri(var1), new</code> <b>DefaultAzureCredential</b> <code>());</code>
CloudClients	

Box 1: SecretClient -

Box 2: DefaultAzureCredential -

In below example, the name of your key vault is expanded to the key vault URI, in the format "https://<your-key-vault-name>.vault.azure.net".

This example is using 'DefaultAzureCredential()' class from Azure Identity Library, which allows to use the same code across different environments with different options to provide identity. string keyVaultName = Environment.GetEnvironmentVariable("KEY\_VAULT\_NAME"); var kvUri = "https://" + keyVaultName + ".vault.azure.net"; var client = new SecretClient(new Uri(kvUri), new DefaultAzureCredential());

Reference:

<https://docs.microsoft.com/en-us/azure/key-vault/secrets/quick-create-net>

✉  **mlantonis**  10 months, 3 weeks ago

Answer is correct.

```
string keyVaultName = Environment.GetEnvironmentVariable("KEY_VAULT_NAME");
var kvUri = "https://" + keyVaultName + ".vault.azure.net";
var client = new SecretClient(new Uri(kvUri), new DefaultAzureCredential());
```

Box 1: SecretClient

Box 2: DefaultAzureCredential

Reference:

<https://docs.microsoft.com/en-us/azure/key-vault/secrets/quick-create-net>

upvoted 44 times

✉  **oescm**  2 months, 2 weeks ago

Got this one 02/2022. Went with most voted

upvoted 5 times

✉  **edengoforit**  4 months, 1 week ago

DefaultAzureCredential

DefaultAzureCredential is appropriate for most scenarios where the application is intended to run in the Azure Cloud. This is because the DefaultAzureCredential determines the appropriate credential type based on the environment it is executing in. It supports authenticating both as a service principal or managed identity, and can be configured so that it will work both in a local development environment or when deployed to the cloud.

The DefaultAzureCredential will first attempt to authenticate using credentials provided in the environment. In a development environment you can authenticate as a service principal with the DefaultAzureCredential by providing configuration in environment variables as described in the next section.

If the environment configuration is not present or incomplete, the DefaultAzureCredential will then determine if a managed identity is available in the current environment. Authenticating as a managed identity requires no configuration, but does require platform support. See the managed identity documentation for more details on this.

upvoted 4 times

 **ADJ85** 8 months ago

Correct

upvoted 4 times

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

**Correct Answer: AC**

A: You can use the Azure AD REST APIs in Microsoft Graph to create unique workflows between Azure AD resources and third-party services. Enterprise developers use Microsoft Graph to integrate Azure AD identity management and other services to automate administrative workflows, such as employee onboarding (and termination), profile maintenance, license deployment, and more.

C: API Management (APIM) is a way to create consistent and modern API gateways for existing back-end services.

API Management helps organizations publish APIs to external, partner, and internal developers to unlock the potential of their data and services.

Reference:

<https://docs.microsoft.com/en-us/graph/azuread-identity-access-management-concept-overview>

✉  **Cholo981**  10 months, 2 weeks ago

The Answer is Graph API and MSAL.

API management as nothing to do with the developing of the REST API...

upvoted 59 times

✉  **AndrewJB** 5 months, 2 weeks ago

Correct. To access Graph API user must be logged in, so MSAL is required. APIM is optional and not mandatory for this scenario

upvoted 4 times

✉  **ReniRechner** 1 month, 3 weeks ago

Furthermore the API is not intended for public use but internal use by another web app. So there is no need for APIM.

upvoted 3 times

✉  **mlantonis**  10 months, 3 weeks ago

Answer is correct.

A: Microsoft Graph to retrieve and update user profile info from Azure AD.

C: API Management (APIM)

Reference:

<https://docs.microsoft.com/en-us/graph/azuread-identity-access-management-concept-overview>

<https://docs.microsoft.com/en-us/graph/overview>

<https://docs.microsoft.com/en-us/azure/api-management/api-management-key-concepts>

upvoted 18 times

✉  **ensa** 6 months, 1 week ago

Fiest time see you are wrong.

AAAAAAAAABBBBBBBBBB

upvoted 4 times

✉  **cooyote** 7 months, 3 weeks ago

So wrong, API Management is supposed to create API gateways and rules to manage API calls

upvoted 3 times



 **Azprep** Most Recent 2 weeks ago

Graph Api, Azure APIM  
upvoted 1 times

 **svsv22** 2 weeks, 1 day ago

I think answer should be A and B. MSAL is needed to get the tokens and pass it in Graph API request.  
upvoted 1 times

 **iamstudying** 1 month, 1 week ago

Selected Answer: AB  
AB, buddies. 981Cholo, AndrweJB and ReniRechner are the mvps  
upvoted 1 times

 **karthik0328** 1 month, 2 weeks ago

Selected Answer: AB  
Why is API management required for this?  
upvoted 1 times

 **Chiboy** 2 months, 2 weeks ago

You don't need MSAL to get access to Graph API when you are a web app using azure app service in Azure. The given answer is correct  
upvoted 2 times

 **ehurfheiz** 3 months, 1 week ago

Selected Answer: AB  
Correct answer seems to be AB  
upvoted 1 times

 **vtomy** 9 months, 3 weeks ago

As per the question it is mentioned 'Configure'. MSAL is for process, nothing related to configuere. I guess API management could be correct.  
upvoted 2 times

 **TakumaK** 10 months, 1 week ago

I will go for Graph API and MSAL.  
MSAL is for the secure access to Microsoft Graph.  
upvoted 4 times

 **jay158** 10 months, 2 weeks ago

Correct answer is  
A --Use Microsoft Graph to read data  
B Use MSAL to update the profile  
There is no mention of API Management in the question /requirement  
upvoted 7 times

 **ivan0590** 6 days, 7 hours ago

I agree.  
MSAL is used in the Web App to authenticate to the API.  
Microsoft Graph is used in the API to retrieve the Azure AD profile info.  
upvoted 1 times

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.

**Correct Answer: AB**

A: Revoke a user delegation SAS -

To revoke a user delegation SAS from the Azure CLI, call the az storage account revoke-delegation-keys command. This command revokes all of the user delegation keys associated with the specified storage account. Any shared access signatures associated with those keys are invalidated.

B: To revoke a stored access policy, you can either delete it, or rename it by changing the signed identifier. Changing the signed identifier breaks the associations between any existing signatures and the stored access policy. Deleting or renaming the stored access policy immediately effects all of the shared access signatures associated with it.

Reference:

<https://github.com/MicrosoftDocs/azure-docs/blob/master/articles/storage/blobs/storage-blob-user-delegation-sas-create-cli.md>

<https://docs.microsoft.com/en-us/rest/api/storageservices/define-stored-access-policy#modifying-or-revoking-a-stored-access-policy>

 **jay158** Highly Voted 10 months, 2 weeks ago

Given answer is incorrect.

Correct answers are A , D

<https://docs.microsoft.com/en-us/rest/api/storageservices/create-user-delegation-sas#revoke-a-user-delegation-sas>

upvoted 67 times

 **maukaba** 4 months ago

There're two ways to create a SAS:

(1). The "standard" way to generate a SAS token is to use the storage account key.

(2). by using "managed identities" with a technique is called a "user delegation" SAS, and it allows you to sign the signature with Azure AD credentials instead of with the storage account key.

This question is (2) hence A, D is correct

REF: <https://markheath.net/post/user-delegation-sas>

upvoted 3 times

 **jkes80** 9 months, 2 weeks ago

Your link literally says you're correct it should be A and D.

"If you believe that a SAS has been compromised, then you should revoke the SAS. You can revoke a user delegation SAS either by revoking the user delegation key, or by changing or removing RBAC role assignments for the security principal used to create the SAS."

upvoted 16 times

 **mlantonis** Highly Voted 10 months, 3 weeks ago

Answer seems correct.

A: Use az storage account revoke-delegation-keys command.

B: To revoke a stored access policy, you can either delete it, or rename it by changing the signed identifier.

Reference:

<https://github.com/MicrosoftDocs/azure-docs/blob/master/articles/storage/blobs/storage-blob-user-delegation-sas-create-cli.md>

<https://docs.microsoft.com/en-us/rest/api/storageservices/define-stored-access-policy#modifying-or-revoking-a-stored-access-policy>

[https://docs.microsoft.com/en-us/cli/azure/storage/account?view=azure-cli-latest#az\\_storage\\_account\\_revoke\\_delegation\\_keys](https://docs.microsoft.com/en-us/cli/azure/storage/account?view=azure-cli-latest#az_storage_account_revoke_delegation_keys)

upvoted 13 times

 **Azprep** 2 weeks, 3 days ago

Answers should be A& D

upvoted 1 times

 **Jurgen1234** 9 months, 3 weeks ago

Incorrect it should be D not B, see <https://docs.microsoft.com/en-us/rest/api/storageservices/define-stored-access-policy>

Stored access policies are not supported for the user delegation SAS or the account SAS..

upvoted 2 times

 **Azprep** (Most Recent) 2 weeks ago

Correct answers are A& B

upvoted 1 times

 **Prasu69** 1 month ago

**Selected Answer: AD**

<https://docs.microsoft.com/en-us/rest/api/storageservices/define-stored-access-policy>

upvoted 1 times

 **Prasu69** 1 month ago

A and D

Stored access policies are not supported for the user delegation SAS or the account SAS..

<https://docs.microsoft.com/en-us/rest/api/storageservices/define-stored-access-policy>

upvoted 1 times

 **avanip** 1 month ago

**Selected Answer: AD**

A and D are correct

upvoted 1 times

 **iamstudying** 1 month, 1 week ago

**Selected Answer: AD**

AD, buddies. @158jay is correct. shout out to maukabababa too

upvoted 1 times

 **Freidrich** 1 month, 4 weeks ago

**Selected Answer: AD**

The correct answer is AD.

upvoted 1 times

 **nidhogg** 2 months, 1 week ago

**Selected Answer: AD**

The MS documentation offers no doubt: A, D

upvoted 2 times

 **ehurfheiz** 3 months, 1 week ago

**Selected Answer: AD**

Correct answer seems to be AD

upvoted 2 times

 **HimanshuNankani** 6 months, 1 week ago

What if I regenerate the account key? Wouldn't that also invalidate the token?

For me it seems all 4 options are correct, please if anyone can explain it would be grateful.

upvoted 4 times

 **mcbc** 8 months, 1 week ago

Revoke a user delegation SAS

If you believe that a SAS has been compromised, then you should revoke the SAS. You can revoke a user delegation SAS either by revoking the user delegation key, or by changing or removing RBAC role assignments for the security principal used to create the SAS.

upvoted 2 times

 **ning** 8 months, 2 weeks ago

It seems you can only revoke all user delegate keys, but no way to specify which one to revoke based on <https://docs.microsoft.com/en-us/rest/api/storagerp/storage-accounts/revoke-user-delegation-keys>

upvoted 1 times

 **manojchavan** 9 months, 4 weeks ago

Correct Answer is A and D

upvoted 2 times

 **Paolo93** 10 months ago

Correct answers are A, D.

B answer is incorrect because "Stored access policies are not supported for the user delegation SAS or the account SAS."

MS Doc: <https://docs.microsoft.com/en-us/rest/api/storageservices/define-stored-access-policy#modifying-or-revoking-a-stored-access-policy>  
<https://docs.microsoft.com/en-us/rest/api/storageservices/create-user-delegation-sas#revoke-a-user-delegation-sas>

upvoted 6 times

✉️  **Takumak** 10 months, 1 week ago

The answer is INCORRECT. It should be A and D.

To revoke a user delegation SAS either by revoking the user delegation key, or by changing or removing RBAC role assignments for the security principal used to create the SAS.

upvoted 5 times

✉️  **julisch94** 10 months, 2 weeks ago

The docs say: "Stored access policies give you the option to revoke permissions for a service SAS without having to regenerate the storage account keys."

So I believe "regenerate the account key" might be correct, as well.

<https://docs.microsoft.com/en-us/azure/storage/common/storage-sas-overview>

upvoted 1 times

**DRAG DROP -**

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****Correct Answer:****Actions**

Create a custom policy definition in Azure Policy.

Run the `az keyvault key restore` command.

**Answer Area**

Generate a Key Exchange Key (KEK).

Retrieve the Key Exchange Key (KEK) public key.

Generate a key transfer blob file by using the HSM vendor-provided tool.

Run the `az keyvault key import` command.

To perform a key transfer, a user performs following steps:

- Generate KEK.
- Retrieve the public key of the KEK.
- Using HSM vendor provided BYOK tool - Import the KEK into the target HSM and exports the Target Key protected by the KEK.
- Import the protected Target Key to Azure Key Vault.

Step 1: Generate a Key Exchange Key (KEK).

Step 2: Retrieve the Key Exchange Key (KEK) public key.

Step 3: Generate a key transfer blob file by using the HSM vendor-provided tool.

Generate key transfer blob using HSM vendor provided BYOK tool

Step 4: Run the `az keyvault key import` command

Upload key transfer blob to import HSM-key.

Customer will transfer the Key Transfer Blob ("byok" file) to an online workstation and then run a `az keyvault key import` command to import this blob as a new HSM-backed key into Key Vault.

HSM-backed key into Key Vault.

To import an RSA key use this command:

`az keyvault key import`

Reference:

<https://docs.microsoft.com/en-us/azure/key-vault/keys/byok-specification>

✉  **aradice**  9 months, 3 weeks ago

correct: <https://docs.microsoft.com/en-us/azure/key-vault/keys/byok-specification#user-steps>

upvoted 27 times

✉  **TakumaK** 9 months, 3 weeks ago

agree with you!

upvoted 3 times

✉️  **MasterQuestMaster**  3 months ago

Got this on the exam. :)  
top kek

upvoted 9 times

✉️  **petitbilly**  1 month, 2 weeks ago

Got it in exam 03/22  
upvoted 1 times

✉️  **oescm** 2 months, 2 weeks ago

Got this one 02/2022. Went with most voted  
upvoted 3 times

✉️  **lugospod** 3 months ago

Got this one 01/2022. Went with originally proposed solution  
upvoted 3 times

✉️  **danila16030** 2 months, 4 weeks ago

Ho many questions from you test you find on this site? Just interesting)  
upvoted 1 times

✉️  **mcbc** 8 months, 1 week ago

Generate KEK.  
Retrieve the public key of the KEK.  
Using HSM vendor provided BYOK tool - Import the KEK into the target HSM and exports the Target Key protected by the KEK.  
Import the protected Target Key to Azure Key Vault.  
upvoted 2 times

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.

#### Correct Answer: A

To give a managed identity access to an Azure resource, you need to add a role to the target resource for that identity.

Note: To easily authenticate access to other resources that are protected by Azure Active Directory (Azure AD) without having to sign in and provide credentials or secrets, your logic app can use a managed identity (formerly known as Managed Service Identity or MSI). Azure manages this identity for you and helps secure your credentials because you don't have to provide or rotate secrets.

If you set up your logic app to use the system-assigned identity or a manually created, user-assigned identity, the function in your logic app can also use that same identity for authentication.

Reference:

<https://docs.microsoft.com/en-us/azure/logic-apps/create-managed-service-identity> <https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-mutual-certificates-for-clients>

✉  **aradice** Highly Voted 9 months, 3 weeks ago

correct "Azure AD resources must remain if the Azure Logic app is deleted."

upvoted 31 times

✉  **debanjan10** Highly Voted 6 months, 2 weeks ago

User-assigned keys are individual components. Even if the logic apps are deleted, the keys remain. But in case of system-assigned keys, those are auto generated and are deleted when the Azure resources themselves are deleted.

upvoted 9 times

✉  **iamstudying** Most Recent 1 month, 1 week ago

**Selected Answer: A**

A, buddies. Agree with @dejanban10

upvoted 1 times

✉  **meoukg** 1 month, 1 week ago

Got it on 03/2022, I chose A. Create a user-assigned managed identity and assign role-based access controls.

upvoted 1 times

✉  **mattvasc** 1 month, 3 weeks ago

**Selected Answer: A**

In here <https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/overview>

We can find:

"Common use cases: Workloads where resources are recycled frequently, but permissions should stay consistent."

upvoted 1 times

✉  **AJ309** 7 months ago

logic app is out of course right?

upvoted 8 times

✉  **mariodarken** 2 months, 2 weeks ago

Yes, but this is more a Azure AD question

upvoted 1 times

**HOTSPOT -**

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": { "daysAfterModificationGreaterThan": 60 },
15 "tierToArchive": { "daysAfterModificationGreaterThan": 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 "daysAfterLastAccessTimeGreaterThan": 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": { "daysAfterModificationGreaterThan": 730 }
51]
52]
53 }
54 }
55]
56 }
57]
58 }
```

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
-----	----

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.

Blobs are moved to cool storage if they have not been accessed for 30 days.

Blobs will automatically be tiered from cool back to hot if accessed again after being tiered to cool.

All block blobs older than 730 days will be deleted.

Correct Answer:

## Answer Area

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.

Blobs are moved to cool storage if they have not been accessed for 30 days.

Blobs will automatically be tiered from cool back to hot if accessed again after being tiered to cool.

All block blobs older than 730 days will be deleted.

Box 1: Yes -

```
"rules": [
 {
 "name": "agingDataRule",
 "enabled": true,
 "type": "Lifecycle",
 "definition": {
 "filters": {
 "blobTypes": ["blockBlob"],
 "prefixMatch": ["container1/salesorders", "container2/inventory"]
 },
 "actions": {
 "baseBlob": {
 "tierToCool": { "daysAfterModificationGreaterThan": 60 },
 "tierToArchive": { "daysAfterModificationGreaterThan": 120 }
 }
 }
 }
 }
]
```

Box 2: Yes -

```
"enabled": true,
"name": "lastAccessedDataRule",
"type": "Lifecycle",
"definition": {
 "actions": {
 "baseBlob": {
 "enableAutoTierToHotFromCool": true,
 "tierToCool": {
 "daysAfterLastAccessTimeGreaterThan": 30
 }
 }
 }
}
```

Box 3: Yes -

Box 4: Yes -

```
"rules": [
 {
 "name": "expirationDataRule",
 "enabled": true,
 "type": "Lifecycle",
 "definition": {
 "filters": {
 "blobTypes": ["blockBlob"]
 },
 "actions": {
 "baseBlob": {
 "delete": { "daysAfterModificationGreaterThan": 730 }
 }
 }
 }
]
```

  **jay158** Highly Voted 9 months, 3 weeks ago

Answer is correct

1. Yes
2. Yes
3. Yes
4. Yes

upvoted 36 times

  **yibuqian** 1 month, 1 week ago

#2 rule conflict with #1, so #1ans - No  
#4ans is No, because the rule is not for created date  
upvoted 1 times

  **wangga** 1 month, 2 weeks ago

4. No, It should be daysAfterCreationGreaterThan  
<https://docs.microsoft.com/en-us/azure/storage/blobs/lifecycle-management-overview?tabs=azure-portal>  
upvoted 4 times

✉️  **jasifu3** 1 month, 3 weeks ago

wrong - 4 is No. If a block has recently been modified then it will not be deleted despite being older than 730 days.  
upvoted 3 times

✉️  **ucsdmiami2020** 4 months, 4 weeks ago

4 is Yes. Per the Microsoft docs "Some data is expected to expire days or months after creation. You can configure a lifecycle management policy to expire data by deletion based on data age. The following example shows a policy that deletes all block blobs older than 365 days."

```
"actions": {
 "baseBlob": {
 "delete": { "daysAfterModificationGreaterThanOrEqual": 365 }
 }
}
```

<https://docs.microsoft.com/en-us/azure/storage/blobs/lifecycle-management-overview?tabs=azure-portal#move-aging-data-to-a-cooler-tier>  
upvoted 3 times

✉️  **mattvasc** 1 month, 2 weeks ago

I have opened an PR, and now, the docs is correct:  
"The following example shows a policy that deletes all block blobs that have not been modified in the last 365 days."  
PR:  
<https://github.com/MicrosoftDocs/azure-docs/pull/89203>

Docs:

<https://docs.microsoft.com/en-us/azure/storage/blobs/lifecycle-management-overview?tabs=azure-portal#expire-data-based-on-age>  
upvoted 4 times

✉️  **finnishr** Highly Voted 8 months, 2 weeks ago

Correct answer:

1. Yes
2. Yes
3. Yes
4. No

upvoted 33 times

✉️  **windflower555** 7 months ago

4 No, correct answer is: should be block blobs will be deleted 730 days after last modified  
(missed deleted part in my previous comment)

upvoted 10 times

✉️  **Vady98** 6 months, 2 weeks ago

Agree  
I think  
upvoted 1 times

✉️  **windflower555** 7 months ago

Agree, 4 should be no. Instead of "All block blobs older than 730 days will be deleted", it should be: "all block blobs 730 days after last modified".

All info can be found at:

<https://docs.microsoft.com/en-us/azure/storage/blobs/lifecycle-management-overview?tabs=azure-portal#move-aging-data-to-a-cooler-tier>  
upvoted 11 times

✉️  **Azprep** Most Recent 2 weeks ago

No  
No,  
No,  
Yes  
upvoted 1 times

✉️  **Rockm0uld** 4 weeks ago

No.2 says "have not been accessed for 30 days" yet the json says "greater than" 30 days, not "greater and equal to", so that would be 31+?  
Sounds like 2 is NO based on that  
upvoted 1 times

✉️  **MasterQuestMaster** 3 months ago

got this on the exam!  
upvoted 5 times

✉️  **lugospod** 3 months ago

Got this one 01/2022. Went with most voted (to avoid writing answers again)  
upvoted 4 times

✉️  **laup4321** 1 month, 2 weeks ago

There are 2 different answers above - both tagged with Highly voted. One has 'Yes' for answer (4) one has 'No' which did you put?  
upvoted 1 times

- ✉ **iamstudying** 1 month, 1 week ago  
4. No, buddies.  
upvoted 1 times
- ✉ **biswajit29** 4 months, 1 week ago  
answer should be Yes, No, Yes, No  
upvoted 1 times
- ✉ **mattvasc** 1 month, 3 weeks ago  
The second one is Yes, please check it again the second rule on json.  
upvoted 2 times
- ✉ **alperc** 5 months, 2 weeks ago  
regarding question 3; can it be a tricky question and the answer be no, because there is a filter below that sets type to "blockBlob".  
upvoted 3 times
- ✉ **BeshoyRomany** 7 months ago  
The given answer is correct for one reason that is the blob storage is a premium blockBlob storage so the blob types will be blockBlobs only  
  
So The Answer is correct  
1. Yes  
2. Yes  
3. Yes  
4. Yes  
upvoted 4 times
- ✉ **Drummer** 7 months ago  
YES-NO-YES-YES..Only "Move to Cool" is NO  
upvoted 4 times
- ✉ **sraadev** 1 month, 1 week ago  
I agree, in the link below are the same 3 examples of this question (1, 3, 4) - YES  
2nd is NO because the second rule is matching with 3rd proposal  
  
<https://docs.microsoft.com/en-us/azure/storage/blobs/lifecycle-management-overview?tabs=azure-portal#move-aging-data-to-a-cooler-tier>  
upvoted 1 times
- ✉ **Mal22002** 1 month ago  
Read it again, the same link you provided above. It says:  
In the following example, blobs are moved to cool storage if they haven't been accessed for 30 days. The enableAutoTierToHotFromCool property is a Boolean value that indicates whether a blob should automatically be tiered from cool back to hot if it is accessed again after being tiered to cool.  
upvoted 1 times
- ✉ **sraadev** 1 month, 1 week ago  
<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.management.storage.models.managementpolicybaseblob.enableautotierohotfromcool?view=azure-dotnet>  
upvoted 1 times
- ✉ **mcbc** 8 months, 1 week ago  
Do not confuse other, answer is correct, some people knows the correct one but intentially creating confusion.  
upvoted 6 times
- ✉ **ning** 8 months, 2 weeks ago  
Very confusing, block blob vs just blob, is the a real question, or typo some where?  
upvoted 1 times
- ✉ **ning** 8 months, 2 weeks ago  
After another careful read, I think the given answer is correct. This premium account for block blob, so block blob and blob are the same in this context. Other are premium accounts are file / page blob  
upvoted 1 times
- ✉ **SaNagh** 8 months, 3 weeks ago  
Answer is correct.  
"You are developing an application that uses a premium block blob storage account." So all blobs are block blob.  
Correct answer: Yes, Yes, Yes, Yes  
upvoted 3 times
- ✉ **BeshoyRomany** 7 months ago  
you are totally right :) because there's any other types instead of blockBlobs only  
The answer is :  
YES -YES -YES -YES  
upvoted 1 times
- ✉ **wolf\_lu** 8 months, 4 weeks ago  
yes, yes, yes, yes

upvoted 2 times

✉  **NoWayJosee123** 9 months ago

daysAfterModificationGreaterThan 730 != all block blobs older than 730 days

How come nobody seems to have an issue with that. What about a block blob that has been modified at his 729 day birthday? Will it be deleted tomorrow. That would be inhuman!

upvoted 15 times

✉  **BasAZ** 5 months ago

I would agree with you, but from the official MS docs:

"The following example shows a policy that deletes all block blobs older than 365 days."

<https://docs.microsoft.com/en-us/azure/storage/blobs/lifecycle-management-overview?tabs=azure-portal#move-aging-data-to-a-cooler-tier>

Says "all" while it's the exact same example.

So I think the answer is Yes, Yes, Yes, Yes even though the last one is vague.

upvoted 3 times

✉  **mattvasc** 1 month, 3 weeks ago

I think that instead of going through the wrong answer because the docs is also wrong, we should go for the right answer and report the mistake for Microsoft so they can fix it.

upvoted 1 times

✉  **mattvasc** 1 month, 3 weeks ago

I created a PR for the docs, let's see if the Microsoft accepts it.

<https://github.com/MicrosoftDocs/azure-docs/pull/89203>

upvoted 1 times

✉  **mattvasc** 1 month, 2 weeks ago

Yeah, seems now that the docs is fine.

upvoted 1 times

✉  **TakumaK** 9 months, 3 weeks ago

Given answer is WRONG!

upvoted 1 times

✉  **kairavdp27** 9 months, 3 weeks ago

Answer is correct as tierToCool, enableAutoTierToHotFromCool, tierToArchive is only supported for block blobs. Only delete is supported for delete

Link: <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-lifecycle-management-concepts?tabs=template>

upvoted 3 times

✉  **kairavdp27** 9 months, 3 weeks ago

\* delete is supported for both block and append blobs. (sorry for typo).

upvoted 1 times

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.

**Correct Answer: C**

Azure Functions is the simplest option if you are just getting started using the change feed. Due to its simplicity, it is also the recommended option for most change feed use cases. When you create an Azure Functions trigger for Azure Cosmos DB, you select the container to connect, and the Azure Function gets triggered whenever there is a change in the container. Because Azure Functions uses the change feed processor behind the scenes, it automatically parallelizes change processing across your container's partitions.

Note: You can work with change feed using the following options:

- Using change feed with Azure Functions
- Using change feed with change feed processor

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/read-change-feed>

  **Zulhin** Highly Voted 9 months, 3 weeks ago

Answer C & D.

"What are two possible ways to achieve this goal?"

upvoted 29 times

  **Chiboy** 2 months, 2 weeks ago

C is the correct answer. Each answer has two possible ways that in combination, gives the solution. Moreover, because of the requirement to "Process changes to all partitions immediately", D cannot be the answer or part of it since it "processes the change feed by using the pull mode on the container"

upvoted 1 times

  **Baskman** 2 months, 1 week ago

Agree with C & D

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

upvoted 3 times

  **aradice** Highly Voted 9 months, 3 weeks ago

c and d ? <https://docs.microsoft.com/en-us/azure/cosmos-db/read-change-feed#azure-functions>

<https://docs.microsoft.com/en-us/azure/cosmos-db/change-feed-pull-model#using-feedrange-for-parallelization>

upvoted 13 times

  **Jurgen1234** 9 months, 3 weeks ago

I agree

upvoted 3 times

  **iamstudying** Most Recent 1 month, 1 week ago

**Selected Answer: D**

C & D, buddies.

C: Push model, Az Functions automatically parallelizes change processing <https://docs.microsoft.com/en-us/azure/cosmos-db/sql/read-change-feed#azure-functions>

D: Pull model, use FeedRange for parallelization <https://docs.microsoft.com/en-us/azure/cosmos-db/sql/change-feed-pull-model#using-feedrange-for-parallelization>  
upvoted 2 times

✉ **SivaJiTheBoss** 1 month, 2 weeks ago

CD seems correct answer  
upvoted 2 times

✉ **Dev666** 1 month, 3 weeks ago

**Selected Answer: A**

A and C ?  
upvoted 1 times

✉ **Vantirup** 2 months ago

**Selected Answer: C**

A seems to be the answer  
upvoted 1 times

✉ **ScubaDiver123456** 2 months, 1 week ago

**Selected Answer: A**

Voting for A and C

"A" seems to come out of this explanation: <https://docs.microsoft.com/en-us/azure/cosmos-db/sql/how-to-use-change-feed-estimator#implement-the-change-feed-estimator>

upvoted 2 times

✉ **Bogdan75** 1 month, 2 weeks ago

I also originally considered A, but I think it's wrong – see the example in your link, and notice the change feed estimator triggers a delegate which is a C# function; using Azure App Service API in this context wouldn't make sense.  
upvoted 1 times

✉ **whymatter** 6 months, 1 week ago

Why not the AKS solution?  
upvoted 1 times

✉ **mattvasc** 1 month, 3 weeks ago

To me seems like the solution is incomplete, didn't handle with the part "Allow parallelization of change processing."

(It is possible to do with AKS, but the answer didn't mention it.)  
upvoted 1 times

✉ **Drummer** 7 months ago

This question is for two options in the real exam.. C and D final answer  
upvoted 5 times

✉ **ning** 8 months, 2 weeks ago

A & C tested with codes  
upvoted 7 times

✉ **ning** 8 months, 2 weeks ago

<https://docs.microsoft.com/en-us/azure/cosmos-db/how-to-use-change-feed-estimator> here is document for change feed estimator  
upvoted 1 times

✉ **MiraA** 6 months, 3 weeks ago

The purpose of the "change feed estimator" is "to monitor the progress of your change feed processor instances as they read the change feed". Just to know if your "change feed processor is lagging behind or not".  
So C & D.  
upvoted 4 times

✉ **ZodiaC** 9 months ago

D says OBJEXT, I think is FAULT!  
upvoted 1 times

✉ **jay158** 9 months, 3 weeks ago

Answer is D  
Change-feed will save changes in "lease" container. and then function app will update storage account.  
<https://docs.microsoft.com/en-us/azure/cosmos-db/change-feed-pull-model>  
upvoted 1 times

✉ **RenIRechner** 1 month, 3 weeks ago

what would be the trigger in the D case?  
We require something that allows for scaling.  
upvoted 1 times



**HOTSPOT -**

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**

	<b>Yes</b>	<b>No</b>
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"/>

Correct Answer:

**Answer Area**

	<b>Yes</b>	<b>No</b>
The minimum throughput for the container is 400 R/Us.	<input type="radio"/>	<input checked="" type="radio"/>
The first query statement is an in-partition query.	<input type="radio"/>	<input checked="" type="radio"/>
The second query statement is a cross-partition query.	<input checked="" type="radio"/>	<input type="radio"/>

Box 1: No -

You set the highest, or maximum RU/s Tmax you don't want the system to exceed. The system automatically scales the throughput T such that  $0.1 * Tmax \leq T \leq Tmax$ .

In this example we have autoscaleMaxThroughput = 5000, so the minimum throughput for the container is 500 R/Us.

Box 2: No -

First query: `SELECT * FROM c WHERE c.EmployeeId > '12345'`

Here's a query that has a range filter on the partition key and won't be scoped to a single physical partition. In order to be an in-partition query, the query must have an equality filter that includes the partition key:

```
SELECT * FROM c WHERE c.DeviceId > 'XMS-0001'
```

Box 3: Yes -

Example of In-partition query:

Consider the below query with an equality filter on Deviceld. If we run this query on a container partitioned on Deviceld, this query will filter to a single physical partition.

SELECT \* FROM c WHERE c.Deviceld = 'XMS-0001'

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/how-to-choose-offer> <https://docs.microsoft.com/en-us/azure/cosmos-db/how-to-query-container>

✉  **aradice** Highly Voted  9 months, 3 weeks ago

correct:

1° no => line 6

2° no =>

<https://docs.microsoft.com/en-us/azure/cosmos-db/how-to-choose-offer#overview-of-provisioned-throughput-types>  
<https://docs.microsoft.com/en-us/azure/cosmos-db/how-to-query-container#in-partition-query>

"Here's a query that has a range filter on the partition key and won't be scoped to a single physical partition. In order to be an in-partition query, the query must have an equality filter that includes the partition key: SELECT \* FROM c WHERE c.Deviceld > 'XMS-0001'"

3° : yes => partition key is EmployeeId. <https://docs.microsoft.com/en-us/azure/cosmos-db/how-to-query-container#cross-partition-query>  
upvoted 31 times

✉  **xRiot007** 1 month, 2 weeks ago

The documentation on the second point could be better.

They put the most important part at the end and that is that even if the query uses the partition key it MUST use an equality filter to be considered in-partition.

upvoted 1 times

✉  **finnishr** 8 months, 2 weeks ago

100% correct!

upvoted 1 times

✉  **HimanshuNankani** Highly Voted  6 months, 1 week ago

1. No : Because as question specifies max RUs = 5000, so minimum RUs = 5000/10 = 500

<https://docs.microsoft.com/en-us/azure/cosmos-db/how-to-choose-offer#overview-of-provisioned-throughput-types>

2. No : In-partition query needs equality filter that is missing here

3. Yes: Though we have equality filter here, 'UserId' is not a partition key here.

<https://docs.microsoft.com/en-us/azure/cosmos-db/sql/how-to-query-container>

upvoted 15 times

✉  **Azprep** Most Recent  2 weeks ago

No,

No,

Yes

upvoted 1 times

✉  **meoukg** 1 month, 1 week ago

Got it on 03/2022, I chose as below:

The minimum throughput for the container is 400 R/Us = No

The first query statement is an in-partition query. = No

The second query statement is a cross-partiton query. = Yes

upvoted 1 times

✉  **leonidn** 3 months, 2 weeks ago

No

No

Yes

<https://docs.microsoft.com/en-us/azure/cosmos-db/sql/how-to-query-container#in-partition-query>

"Here's a query that has a range filter on the partition key and won't be scoped to a single physical partition. In order to be an in-partition query, the query must have an equality filter that includes the partition key"

upvoted 2 times

✉  **xortan** 7 months, 1 week ago

"Here's a query that has a range filter on the partition key and won't be scoped to a single physical partition. In order to be an in-partition query, the query must have an equality filter that includes the partition key."

SELECT \* FROM c WHERE c.Deviceld > 'XMS-0001'"

This is from <https://docs.microsoft.com/en-us/azure/cosmos-db/sql/how-to-query-container#in-partition-query>

So based on this, the second cannot be an in-partition query, because it is not an equality filter.

upvoted 2 times

✉  **mcbc** 8 months, 1 week ago

No->Yes->Yes

PartitionKey EmployeeID. use common sense

upvoted 1 times

✉  **MK22** 8 months, 2 weeks ago

Provided answer is correct  
upvoted 1 times

✉  **kevifarr** 8 months, 3 weeks ago

the answer should be  
No  
Yes  
Yes

In this question EmployeeId is the partitionKeyPath

"In-partition query"

When you query data from containers, if the query has a partition key filter specified, Azure Cosmos DB automatically optimizes the query. It routes the query to the physical partitions corresponding to the partition key values specified in the filter.

Consider the below query with an equality filter on DeviceId. If we run this query on a container partitioned on DeviceId,

Example

SELECT \* FROM c WHERE c.DeviceId > 'XMS-0001'

<https://docs.microsoft.com/en-us/azure/cosmos-db/how-to-query-container#cross-partition-query>

upvoted 7 times

✉  **aruni\_mishra** 4 months, 3 weeks ago

2 is No,  
"In order to be an in-partition query, the query must have an ~equality filter~ that includes the partition key"  
"a query that has a ~range filter~ on the partition key and won't be scoped to a single physical partition"  
<https://docs.microsoft.com/en-us/azure/cosmos-db/sql/how-to-query-container#cross-partition-query>

upvoted 2 times

✉  **altafpatel1984** 5 months ago

But it helps when find for equal operator. Here query is for range i.e. greater than, so it will be cross partition.  
upvoted 4 times

✉  **Quirkafleeg** 7 months, 1 week ago

c.DeviceId > 'XMS-0001' is an example of a range filter, not an equality filter  
upvoted 5 times

✉  **argoth** 9 months ago

The answer should be N-N-N as c.UserID is not a partition key.  
upvoted 1 times

✉  **argoth** 9 months ago

my bad, do not consider it.  
upvoted 5 times

✉  **txbka** 9 months, 4 weeks ago

First seems true "A minimum of 400 RU/s throughput must be provisioned for Azure Cosmos DB containers and databases."  
upvoted 1 times

✉  **vtomy** 9 months, 3 weeks ago

Minimum is not 400, it is 10% for max value. Answer is No  
upvoted 3 times

✉  **Brain** 9 months, 3 weeks ago

400 is correct. <https://docs.microsoft.com/hu-hu/azure/cosmos-db/concepts-limits>  
upvoted 1 times

✉  **LauraGF** 8 months ago

It does not ask what the minimum should be, if not what it is in this specific case. There is a variable that indicates "\$autoscaleMaxThroughput = 5000" therefore it is 500 R / us  
upvoted 3 times

✉  **Jurgen1234** 9 months, 3 weeks ago

Answer should be no, see <https://docs.microsoft.com/en-us/azure/cosmos-db/concepts-limits#limits-for-autoscale-provisioned-throughput>  
upvoted 1 times

**HOTSPOT -**

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 = .Create(config.ClientId)

ConfidentialClientApplicationBuilder
GetAccountAsync()
GetAccountsAsync()
ConfidentialClientApplication

.WithCertificate(certificate)
.WithAuthority(new Uri(config.Authority))
.Build();

string[] scopes = new string[] { $"{config.ApiUrl}.default" };
AuthenticationResult result = await app.AcquireTokenForClient(.ExecuteAsync();
```

scopes
app
config

**Correct Answer:****Answer Area**

```
AuthenticationConfig config = AuthenticationConfig.ReadFromJsonFile("appsettings.json");
X509Certificate2 certificate = ReadCertificate(config.CertificateName);
var app = .Create(config.ClientId)

ConfidentialClientApplicationBuilder
GetAccountAsync()
GetAccountsAsync()
ConfidentialClientApplication

.WithCertificate(certificate)
.WithAuthority(new Uri(config.Authority))
.Build();

string[] scopes = new string[] { $"{config.ApiUrl}.default" };
AuthenticationResult result = await app.AcquireTokenForClient(.ExecuteAsync();
```

scopes
app
config

Box 1: ConfidentialClientApplicationBuilder

Here's the code to instantiate the confidential client application with a client secret: app =

ConfidentialClientApplicationBuilder.Create(config.ClientId)

.WithClientSecret(config.ClientSecret)

.WithAuthority(new Uri(config.Authority))

.Build();

Box 2: scopes -

After you've constructed a confidential client application, you can acquire a token for the app by calling AcquireTokenForClient, passing the scope, and optionally forcing a refresh of the token.

Sample code: result = await app.AcquireTokenForClient(scopes)

.ExecuteAsync();

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/develop/scenario-daemon-app-configuration> <https://docs.microsoft.com/en-us/azure/active-directory/develop/scenario-daemon-acquire-token>

✉  **aradice**  9 months, 3 weeks ago

correct <https://docs.microsoft.com/en-us/azure/active-directory/develop/scenario-daemon-app-configuration?tabs=dotnet#instantiate-the-confidential-client-application-with-a-client-certificate>  
<https://docs.microsoft.com/en-us/azure/active-directory/develop/scenario-daemon-acquire-token?tabs=dotnet#acquiretokenforclient-api>

upvoted 39 times

✉  **MK22**  8 months, 2 weeks ago

Provided answer is correct.

upvoted 9 times

✉  **lugospod**  3 months ago

Got this one 01/2022. Went with most voted (to avoid writing answers again)

upvoted 7 times

**HOTSPOT -**

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	<input type="checkbox"/> Service principal <input type="checkbox"/> Individual identity <input type="checkbox"/> Repository-scoped access token <input checked="" type="checkbox"/> Managed identity for Azure resources
RBAC role	<input type="checkbox"/> AcrPull <input type="checkbox"/> Owner <input checked="" type="checkbox"/> AcrPush <input type="checkbox"/> Contributor

**Answer Area**

Authentication	Option
Registry authentication method	<input checked="" type="checkbox"/> Service principal <input type="checkbox"/> Individual identity <input type="checkbox"/> Repository-scoped access token <input type="checkbox"/> Managed identity for Azure resources
RBAC role	<input type="checkbox"/> AcrPull <input type="checkbox"/> Owner <input checked="" type="checkbox"/> AcrPush <input type="checkbox"/> Contributor

Box 1: Service principal -

Applications and container orchestrators can perform unattended, or "headless," authentication by using an Azure Active Directory (Azure AD) service principal.

Incorrect Answers:

- Individual AD identity does not support unattended push/pull
- Repository-scoped access token is not integrated with AD identity
- Managed identity for Azure resources is used to authenticate to an Azure container registry from another Azure resource.

Box 2: AcrPush -

AcrPush provides pull/push permissions only and meets the principle of least privilege.

Incorrect Answers:

- AcrPull only allows pull permissions it does not allow push permissions.

Owner and Contributor allow pull/push permissions but does not meet the principle of least privilege.

Reference:

<https://docs.microsoft.com/en-us/azure/container-registry/container-registry-authentication?tabs=azure-cli> <https://docs.microsoft.com/en-us/azure/container-registry/container-registry-roles?tabs=azure-cli>

Question #37

Topic 4

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

**Correct Answer: A**

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-auth-aad-app?tabs=dotnet>

Question #38

Topic 4

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.

**Correct Answer: A**

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-sas-overview>

**DRAG DROP -**

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 **Manifest** from the middle-tier service registration.

In Enterprise Applications, select **New application**.

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 **New registration**.



Correct Answer:

**Actions****Answer Area**

Select **Manifest** from the middle-tier service registration.

In App Registrations, select **New registration**.

In Enterprise Applications, select **New application**.

Select the Azure AD instance.

Add a Cryptographic key.

Create a new application and provide the name, account type, and redirect URI.



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 **New registration**.

Register a new application using the Azure portal

1. Sign in to the Azure portal using either a work or school account or a personal Microsoft account.

2. If your account gives you access to more than one tenant, select your account in the upper right corner. Set your portal session to the Azure AD tenant that you want.

3. Search for and select Azure Active Directory. Under Manage, select App registrations.
4. Select New registration. (Step 1)
5. In Register an application, enter a meaningful application name to display to users.
6. Specify who can use the application. Select the Azure AD instance. (Step 2)
7. Under Redirect URI (optional), select the type of app you're building: Web or Public client (mobile & desktop). Then enter the redirect URI, or reply URL, for your application. (Step 3)
8. When finished, select Register.

✉️  **Komat** Highly Voted  1 year, 5 months ago

1 Azure AD instance  
2 In App Registration, select new registration  
3 Create a new application and provide the name  
Discussion: <https://www.examtopics.com/discussions/microsoft/view/22224-exam-az-204-topic-3-question-3-discussion/>  
upvoted 163 times

✉️  **riteshsiotiya** 7 months, 4 weeks ago

Provided answer is correct. They have mentioned AD instance.  
upvoted 4 times

✉️  **Archimedes** 1 year, 2 months ago

Agree with Komat. App Registrations are per AAD tenant. So, you have to select the AAD instance first and then select App Registrations in the AAD context left navigation bar. There's no option to select AAD tenant from "App Registration" page.  
upvoted 4 times

✉️  **MG90** 1 year, 3 months ago

Komat is right, reference is here: <https://docs.microsoft.com/en-us/azure/active-directory/develop/quickstart-register-app>  
upvoted 5 times

✉️  **AnonymousJhb** 1 year, 4 months ago

Correct Steps  
<https://docs.microsoft.com/en-us/azure/active-directory/develop/quickstart-register-app#:~:text=If%20you%20have%20access%20to,a%20Name%20for%20your%20application.>  
upvoted 10 times

✉️  **Cornholioz** 1 year, 3 months ago

It's a chicken and egg scenario for steps 1 & 2. You can go to New App Registration and Select the AAD instance for which you want to register the App... OR you can go through the AAD instance and choose the App to register under that instance.  
CHICKEN and EGG!  
upvoted 3 times

✉️  **monniq** 1 year, 2 months ago

You can't select the AAD instance on the app registration form. You can only set the supported account type which is included in 'Create new application and provide...' step  
upvoted 5 times

✉️  **profesorklaus** Highly Voted  1 year, 3 months ago

I agree with you that it should be in following order:  
1. Select AD instance - select AD tenant in portal  
2. In App Registration, select new registration - use switched tenant  
3. Create a new application and provide the name  
upvoted 10 times

✉️  **meoukg** Most Recent  1 month, 1 week ago

Got it on 03/2022, I chose as below:  
1. Select the Azure AD Instance  
2. In App Registration, select New registration.  
3. Create a new application and provide the name, account type, and redirect URL.  
upvoted 3 times

✉️  **Mev4953** 3 months, 1 week ago

I think provided answer is very clear  
upvoted 1 times

✉️  **john4p** 4 months, 2 weeks ago

What? You register the non-existing app beforehand and then create it?  
upvoted 1 times

✉️  **Lucario95** 5 months ago

First answer should be swapped with the second one:  
1. Select Azure AD Instance  
2. In App Registration, Selecte Create New  
3. Create a new application  
upvoted 1 times

✉️  **mimi21212152** 5 months, 2 weeks ago

page 12 is so perfect with the right answers throughout :)  
upvoted 2 times

✉️  **AJ309** 7 months ago

given answer is correct, since it has already written in question as Active Azure instance  
upvoted 2 times

✉️  **GigaCaster** 9 months ago

To me, the given answer is correct as it says select Azure AD instance and not create.  
upvoted 3 times

✉️  **DouDouQin** 9 months, 2 weeks ago

Answer is correct!  
upvoted 2 times

✉️  **Kalaisuran** 9 months, 3 weeks ago

My Answer :  
1 Azure AD instance  
2 In App Registration, select new registration  
3 Create a new application and provide the name  
Reference Link : <https://docs.microsoft.com/en-us/powerapps/developer/data-platform/walkthrough-register-app-azure-active-directory>  
upvoted 1 times

✉️  **kondapaturi** 10 months ago

The correct sequence of steps is  
1) Select the Azure AD instance  
2) In App registrations, select New registration  
3) Create a new application and provide the name, account type and redirect URL  
upvoted 3 times

✉️  **francis6170** 10 months, 3 weeks ago

got this in the exam :)  
upvoted 1 times

**carlos0808** 8 months, 3 weeks ago

About how many questions that are present here, appeared in the exam?  
upvoted 3 times

✉️  **mlantonis** 10 months, 4 weeks ago

Step 1: Select the Azure AD instance  
Step 2: In App Registration, select new registration  
Step 3: Create a new application and provide the name, account type, and redirect URL

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/develop/quickstart-register-app>  
upvoted 6 times

✉️  **glam** 11 months, 1 week ago

1 Azure AD instance  
2 In App Registration, select new registration  
3 Create a new application and provide the name  
upvoted 2 times

✉️  **jvyas** 1 year ago

Provided answer is correct.  
upvoted 1 times

✉️  **RaviKS** 1 year, 3 months ago

Correct Answers are  
Azure AD instance  
In App Registration, select new registration  
Create a new application and provide the name  
upvoted 2 times

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.

**Correct Answer: BC**

B: MFA Enabled by conditional access policy. It is the most flexible means to enable two-step verification for your users. Enabling using conditional access policy only works for Azure MFA in the cloud and is a premium feature of Azure AD.

C: Multi-Factor Authentication comes as part of the following offerings:

- Azure Active Directory Premium licenses - Full featured use of Azure Multi-Factor Authentication Service (Cloud) or Azure Multi-Factor Authentication Server (On-premises).
- Multi-Factor Authentication for Office 365
- Azure Active Directory Global Administrators

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/authentication/howto-mfa-getstarted>

✉  **Codenob0** Highly Voted 1 year, 7 months ago

B and C are correct.

<https://docs.microsoft.com/en-us/azure/active-directory/authentication/tutorial-enable-azure-mfa>

upvoted 58 times

✉  **sebainones** 1 year, 6 months ago

Yes, based on the link you provided:

"Prerequisites

A working Azure AD tenant with at least an Azure AD Premium P1 or trial license enabled."

upvoted 4 times

✉  **Tealon** Highly Voted 1 year, 4 months ago

The given answer is correct.

upvoted 10 times

✉  **SivajiTheBoss** Most Recent 1 month, 2 weeks ago

**Selected Answer: BC**

BC is the perfect Match

upvoted 1 times

✉  **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22

upvoted 1 times

✉  **sawipef270** 4 months, 1 week ago

**Selected Answer: BC**

correct

upvoted 2 times

✉  **AhmedHamdo** 5 months ago

**Selected Answer: BC**

Answers are correct

upvoted 4 times

✉  **ning** 8 months, 2 weeks ago

You can definitely create conditional access policies, in premium pricing tier. For E, the problem is "the baseline" there are several baseline policies that are offered by MS, which one is the one??? Also, I do not know any baseline policy can target a specific web app

upvoted 2 times

✉ **kondapaturi** 10 months ago

Create a new conditional access policy in Azure AD  
Upgrade your licensing for Azure AD to Premium license  
Hence answer is BC  
upvoted 2 times

✉ **mlantonis** 10 months, 4 weeks ago

Correct Answer: B and C

Azure AD Multi-Factor Authentication and Conditional Access policies give the flexibility to enable MFA for users during specific sign-in events. The recommended way to enable and use Azure AD Multi-Factor Authentication is with Conditional Access policies.

You need a working Azure AD tenant with at least an Azure AD Premium P1.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/authentication/howto-mfa-getstarted>  
<https://docs.microsoft.com/en-us/azure/active-directory/authentication/tutorial-enable-azure-mfa>  
<https://azure.microsoft.com/en-us/pricing/details/active-directory>

upvoted 7 times

✉ **prabhjot** 11 months ago

the given ans is 100% correct  
upvoted 1 times

✉ **UnknowMan** 11 months, 1 week ago

The given answer is correct.  
upvoted 1 times

✉ **glam** 11 months, 1 week ago

correct  
upvoted 1 times

✉ **daporh** 1 year, 2 months ago

You can have MFA on the Free tier by enabling security defaults however to use conditional access, security defaults must be disabled  
<https://docs.microsoft.com/en-us/azure/active-directory/fundamentals/concept-fundamentals-security-defaults#disabling-security-defaults>  
However Conditional Access is the way to setup MFA on the Premium Tier and since the question does not mention Security Defaults, then the given answer is correct.  
upvoted 3 times

✉ **Albertoski** 1 year, 2 months ago

Given answer is correct. Clearly in the docs says P1 is needed:  
<https://docs.microsoft.com/en-us/azure/active-directory/authentication/tutorial-enable-azure-mfa>  
upvoted 2 times

✉ **Radboud2** 1 year, 3 months ago

It should be B, E. MFA is available for every subscription (<https://docs.microsoft.com/en-uk/azure/active-directory/authentication/concept-mfa-licensing>), no need to upgrade.  
Add an access policy (B) and enable the baseline policy (E), which requires MFA.  
upvoted 1 times

✉ **khoant** 1 year, 3 months ago

B,C correct.  
upvoted 1 times

✉ **JulienYork** 1 year, 3 months ago

Something for the future,  
If there is something like "Upgrade to ..." in the options, that is probably one of the answers to pick :)  
upvoted 2 times

**DRAG DROP -**

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****Account-level****Service-level****User delegation****Answer Area****Requirement**

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

**SAS type****Correct Answer:****SAS types****Account-level****Service-level****User delegation****Answer Area****Requirement**

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

**SAS type****Account-level****Service-level****User delegation****Reference:**

<https://docs.microsoft.com/en-us/azure/storage/common/storage-sas-overview>

**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">
 Export Data

</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

▼
FeatureGate
Route
ServiceFilter
TypeFilter

Startup method

▼
AddAzureAppConfiguration
AddControllersWithViews
AddUserSecrets

AppConfig endpoint setting

▼
https://appfeatureflagstore.azure.net
https://appfeatureflagstore.vault.azure.net
https://export.azure.net
https://export.vault.azure.net

Correct Answer:

## Answer Area

Code section	Value
Controller attribute	<div style="border: 1px solid black; padding: 5px;"><p>▼</p><p>FeatureGate</p><p>Route</p><p>ServiceFilter</p><p>TypeFilter</p></div>
Startup method	<div style="border: 1px solid black; padding: 5px;"><p>▼</p><p>AddAzureAppConfiguration</p><p>AddControllersWithViews</p><p>AddUserSecrets</p></div>
AppConfig endpoint setting	<div style="border: 1px solid black; padding: 5px;"><p>▼</p><p>https://appfeatureflagstore.azureapp.io</p><p>https://appfeatureflagstore.vault.azure.net</p><p>https://export.azureapp.io</p><p>https://export.vault.azure.net</p></div>

Box 1: FeatureGate -

You can use the FeatureGate attribute to control whether a whole controller class or a specific action is enabled.

Box 2: AddAzureAppConfiguration -

The extension method AddAzureAppConfiguration is used to add the Azure App Configuration Provider.

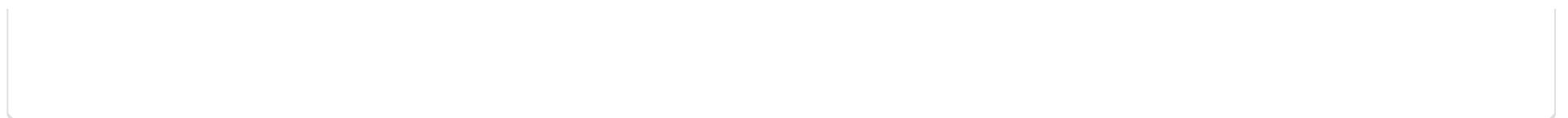
Box 3: https://appfeatureflagstore.azureapp.io

You need to request the access token with resource=https://<yourstorename>.azconfig.io

Reference:

<https://docs.microsoft.com/en-us/azure/azure-app-configuration/use-feature-flags-dotnet-core>

<https://csharp.christiannagel.com/2020/05/19/azureappconfiguration/> <https://stackoverflow.com/questions/61899063/how-to-use-azure-app-configuration-rest-api>



**HOTSPOT -**

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": true,
 "requiredResourceAccess": [{
 "resourceAppId": "00000003-0000-0000-c000-000000000000",
 "resourceAccess": [{
 "id": "24a6cdd6-fab1-4aad-91b8-3cc8225e90d0",
 "type": "Scope"
 }]
 }]
 }]
 },
 "signInAudience":

| |
|------------------------------------|
| All |
| AzureADMyOrg |
| AzureADMultipleOrgs |
| AzureADandPersonalMicrosoftAccount |

}
```

### Correct Answer:

```
{
 "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"
 }]
}
```

Box 1: true -

The oauth2AllowImplicitFlow attribute specifies whether this web app can request OAuth2.0 implicit flow access tokens. The default is false. This flag is used for browser-based apps, like JavaScript single-page apps.

In implicit flow, the app receives tokens directly from the Azure Active Directory (Azure AD) authorize endpoint, without any server-to-server exchange. All authentication logic and session handling is done entirely in the JavaScript client with either a page redirect or a pop-up box.

Box 2: requiredResourceAccess -

With dynamic consent, requiredResourceAccess drives the admin consent experience and the user consent experience for users who are using static consent.

However, this parameter doesn't drive the user consent experience for the general case. resourceAppId is the unique identifier for the resource that the app requires access to. This value should be equal to the appId declared on the target resource app. resourceAccess is an array that lists the OAuth2.0 permission scopes and app roles that the app requires from the specified resource. Contains the id and type values of the specified resources.

Example:

```
"requiredResourceAccess": [
 {
 "resourceAppId": "00000002-0000-0000-c000-000000000000",
 "resourceAccess": [
 {
 "id": "311a71cc-e848-46a1-bdf8-97ff7156d8e6",
 "type": "Scope"
 }
]
 }
]
```

Incorrect Answers:

- ☞ The legacy attribute availableToOtherTenants is no longer supported.
- ☞ The addIns attribute defines custom behavior that a consuming service can use to call an app in specific contexts. For example, applications that can render file streams may set the addIns property for its "FileHandler" functionality. This parameter will let services like Microsoft 365 call the application in the context of a document the user is working on.

Example:

```
"addIns": [
{
"id": "968A844F-7A47-430C-9163-07AE7C31D407",
"type": "FileHandler",
"properties": [
{
"key": "version",
"value": "2"
}
]
}
],
```

Box 3: AzureADMyOrg -

The signInAudience attribute specifies what Microsoft accounts are supported for the current application. Supported values are:

- AzureADMyOrg - Users with a Microsoft work or school account in my organization's Azure AD tenant (for example, single tenant)
- AzureADMultipleOrgs - Users with a Microsoft work or school account in any organization's Azure AD tenant (for example, multi-tenant)
- AzureADandPersonalMicrosoftAccount - Users with a personal Microsoft account, or a work or school account in any organization's Azure AD tenant

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/develop/reference-app-manifest> <https://docs.microsoft.com/en-us/azure/active-directory/develop/v2-oauth2-implicit-grant-flow>

Question #44

Topic 4

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

**Correct Answer: A**

A service SAS is secured with the storage account key. A service SAS delegates access to a resource in only one of the Azure Storage services:

Blob storage,

Queue storage, Table storage, or Azure Files.

Stored access policies give you the option to revoke permissions for a service SAS without having to regenerate the storage account keys.

Incorrect Answers:

Account SAS: Account SAS is specified at the account level. It is secured with the storage account key.

User Delegation SAS: A user delegation SAS applies to Blob storage only.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-sas-overview>

**HOTSPOT -**

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)

	▼
Storage Account Access Key	
System-assigned Managed Identity	
Shared access signature (SAS) token	

Azure Storage (Server)

	▼
Stored Access Policy	
User-assigned Managed Identity	
Cross-Origin Resource Sharing (CORS)	

Correct Answer:

## Answer Area

### Component

Application (Client)

### Security Feature

	▼
Storage Account Access Key	
System-assigned Managed Identity	
Shared access signature (SAS) token	

### Azure Storage (Server)

	▼
Stored Access Policy	
User-assigned Managed Identity	
Cross-Origin Resource Sharing (CORS)	

### Topic 5 - Question Set 5

When your application design requires shared access signatures for access to Blob storage, use Azure AD credentials to create a user delegation SAS when possible for superior security.

Box 2: Stored access policy -

Stored access policies give you the option to revoke permissions for a service SAS without having to regenerate the storage account keys.

A shared access signature can take one of the following two forms:

- Service SAS with stored access policy. A stored access policy is defined on a resource container, which can be a blob container, table, queue, or file share.

The stored access policy can be used to manage constraints for one or more service shared access signatures. When you associate a service SAS with a stored access policy, the SAS inherits the constraints – the start time, expiry time, and permissions – defined for the stored access policy.

- Ad hoc SAS.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-sas-overview>

**DRAG DROP -**

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.

**Actions****Answer Area**

Configure the web app to the Premium App Service tier.

Configure the web app to the Standard App Service tier.

Correct Answer:

Enable autoscaling on the web app.

Add a Scale rule.

Switch to an Azure App Services consumption plan.

Configure a Scale condition.



Step 1: Configure the web app to the Standard App Service Tier

The Standard tier supports auto-scaling, and we should minimize the cost.

Step 2: Enable autoscaling on the web app

First enable autoscale -

Step 3: Add a scale rule -

#### Step 4: Add a Scale condition -

Reference:

<https://docs.microsoft.com/en-us/azure/monitoring-and-diagnostics/monitoring-autoscale-get-started>

✉  **AmirCSUDH** Highly Voted 1 year, 5 months ago

The Provided Answer is Correct

upvoted 70 times

✉  **altafpatel1984** 4 months, 4 weeks ago

No. This is for Monitor auto scale. Question is for Web App auto scale, and for that steps would be as follow:

Configure the web app to the Standard App Service Tier

Enable autoscaling on the web app

Add a Scale condition

Add a scale rule

Reference:

<https://docs.microsoft.com/en-us/learn/modules/app-service-autoscale-rules/6-autoscale-a-web-app>

upvoted 18 times

✉  **rkuifje** 2 months, 3 weeks ago

Seems you are right Altafpatel based on your link. Thanks.

upvoted 2 times

✉  **rkuifje** 2 months, 3 weeks ago

BTW, may be both answer are correct:

See question note: More than one order of answer choices is correct

upvoted 2 times

✉  **Mev4953** 3 months, 1 week ago

There is no "Add a scale condition". Do you mean "Configure a scale condition" ?

upvoted 2 times

✉  **Chiboy** 2 months, 2 weeks ago

It actually says " Add Scale Conditions" on the web app

upvoted 1 times

✉  **dhishtkiyaa** 7 months, 3 weeks ago

the correct answer is :-

Configure the web app to the Standard App Service Tier

Enable autoscaling on the web app

Add a Scale condition

Add a scale rule

Please refer - <https://docs.microsoft.com/en-us/learn/modules/app-service-autoscale-rules/6-autoscale-a-web-app>

upvoted 21 times

✉  **azurelearner666** 10 months, 1 week ago

No, you must create a condition (a default one is created for you) and then add scale rules.

upvoted 15 times

✉  **sgsvve** 10 months, 3 weeks ago

NO, NO, NO.... You can find it out yourself bij going to an appservice-> Scale Out -> Click Manual Scale (Now you have a default SCALE CONDITION) -> Click Add Scale Rule (Now you have a SCALE RULE)

upvoted 9 times

✉  **TEMPKAKAM** Highly Voted 1 year, 5 months ago

Configure the web app to the Standard App Service Tier

Enable autoscaling on the web app

Add a Scale condition

Add a scale rule

upvoted 34 times

✉  **profesorklaus** 1 year, 3 months ago

There is nothing about adding scale condition. You have default scale condition so first configure it then add a rule (85%)

upvoted 5 times

✉  **Evo\_Morales** Most Recent 1 week, 4 days ago

Sloppy answer set - this needs cleanup

upvoted 1 times

✉  **iamstudying** 1 month, 1 week ago

answer is correct. les gettit, buddies. 6 figure here i come

upvoted 1 times

✉  **massnonn** 1 month, 4 weeks ago

Once you enable autoscaling, you can edit the automatically created default scale condition, after you add scale rule  
upvoted 1 times

✉  **oescm** 2 months, 2 weeks ago

Got this one 02/2022. Went with most voted  
upvoted 4 times

✉  **altafpatel1984** 4 months, 4 weeks ago

Given answer is for Monitor auto scale. But question is for Web App auto scale and for this sequence will be as follow:

Configure the web app to the Standard App Service Tier  
Enable autoscaling on the web app

Add a Scale condition  
Add a scale rule

Reference: <https://docs.microsoft.com/en-us/learn/modules/app-service-autoscale-rules/6-autoscale-a-web-app>  
upvoted 6 times

✉  **Pankaj78** 5 months, 1 week ago

Step 1: Configure the web app to the Standard App Service Tier  
The Standard tier supports auto-scaling, and we should minimize the cost.

Step 2: Enable autoscaling on the web app

Step 4: Configure a Scale condition

Step 3: Add a scale rule  
Scale rule is within the Scale condition.  
upvoted 2 times

✉  **Jan91** 5 months, 3 weeks ago

Had this question in my exam this morning. It stated that there are 2 possible orders to answer. Most likely the scale condition and scale rule part i meant with this.  
upvoted 2 times

✉  **catalene** 6 months, 2 weeks ago

I think, you only create "autoscaling rules app" with condition like ">85%" with Premium Plan. IT's Correct?  
upvoted 1 times

✉  **AOE** 8 months, 1 week ago

why not use consumption plan ?  
upvoted 1 times

✉  **MontyKL** 7 months, 1 week ago

I have the same question. I think there is no such a thing as consumption plan for App service. Consumption plan is for Azure Functions. I might be wrong.  
upvoted 3 times

✉  **mlantonis** 10 months, 4 weeks ago

Step 1: Configure the web app to the Standard App Service Tier  
The Standard tier supports auto-scaling, and we should minimize the cost.

Step 2: Enable autoscaling on the web app

Step 3: Add a scale rule

Step 4: Add a Scale condition

Reference:  
<https://docs.microsoft.com/en-us/azure/monitoring-and-diagnostics/monitoring-autoscale-get-started>  
<https://azure.microsoft.com/en-us/pricing/details/app-service/windows>  
upvoted 10 times

✉  **mlantonis** 10 months, 3 weeks ago

Maybe...

Step 1: Configure the web app to the Standard App Service Tier  
The Standard tier supports auto-scaling, and we should minimize the cost.

Step 2: Enable autoscaling on the web app

Step 4: Configure a Scale condition

Step 3: Add a scale rule  
Scale rule is within the Scale condition.

upvoted 8 times

✉️  **Takumak** 10 months, 4 weeks ago

How do people just saying "The Provided Answer is Correct" without any search or explanation then make other people confused?  
upvoted 6 times

✉️  **Takumak** 10 months, 4 weeks ago

I will not accept the given answer due to the this  
<https://www.examtopics.com/discussions/microsoft/view/5596-exam-az-300-topic-1-question-19-discussion/>

<https://www.examtopics.com/discussions/microsoft/view/5596-exam-az-300-topic-1-question-19-discussion/>  
upvoted 2 times

✉️  **glam** 11 months, 1 week ago

correct.  
upvoted 1 times

✉️  **RJR** 1 year, 2 months ago

Condition should be before Rule  
<https://docs.microsoft.com/en-us/azure/azure-monitor/autoscale/tutorial-autoscale-performance-schedule>  
upvoted 6 times

[✉️ !\[\]\(11ddb2451143f44b87b39de88ba13b29\_img.jpg\) \*\*XYZ2\*\* 1 year ago](#)

NOTE: More than one order of answer choices is correct. You will receive credit for any of the correct orders you select.  
upvoted 2 times

✉️  **PoundingCode** 1 year, 2 months ago

The condition has to be met before the rule is applied.  
upvoted 3 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution.

Determine whether the solution meets the stated goals.

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

**Correct Answer: B**

Instead deploy and configure Azure Cache for Redis. Update the web applications.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/best-practices/caching#managing-concurrency-in-a-cache>

✉  **gematsaljoa** Highly Voted  1 year, 4 months ago

B. NoNoNoNo  
upvoted 24 times

✉  **Archimedes** Highly Voted  1 year, 2 months ago

The correct answer is NO. Application Request Routing is for controlling internet traffic in IIS using a proxy server. It doesn't deal with managing state information.  
upvoted 12 times

✉  **clarionprogrammer** 1 year ago

As stated, "No" is the correct answer. Application Request Routing is for scaling and load balancing.  
<https://www.iis.net/downloads/microsoft/application-request-routing>  
upvoted 5 times

✉  **AzureDJ** Most Recent  1 month, 2 weeks ago

B. No. ARR is not for session state. We typically use ARR module to host a reverse proxy on IIS.  
upvoted 1 times

✉  **Freidrich** 1 month, 4 weeks ago

**Selected Answer: B**  
The correct answer is B: No.  
upvoted 1 times

✉  **Baskman** 2 months, 1 week ago

Correct answer: NO

Explanation: "Application Request Routing (ARR) [...] is a proxy-based routing module that forwards HTTP requests to content servers based on HTTP headers"

SOURCE: <https://docs.microsoft.com/en-us/iis/extensions/planning-for-arr/using-the-application-request-routing-module>  
upvoted 1 times

✉  **glam** 11 months, 1 week ago

B. No...  
upvoted 3 times

✉  **AzureAz204Fan** 11 months, 1 week ago

In Azure, you can store ASP.NET Session State in a SQL database, Azure Table Storage or an in-memory distributed cache such as REDIS.  
<https://docs.microsoft.com/en-us/archive/msdn-magazine/2014/august/microsoft-azure-use-distributed-cache-in-microsoft-azure>  
upvoted 5 times

✉  **pac1311** 1 year, 2 months ago

correct!

upvoted 3 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution.

Determine whether the solution meets the stated goals.

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

**Correct Answer: B**

Instead deploy and configure Azure Cache for Redis. Update the web applications.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/best-practices/caching#managing-concurrency-in-a-cache>

□  **venki21** Highly Voted 1 year, 5 months ago

But the question says, does it meet the goal? So using a postgres db to save the session does meet the goal. Any thoughts on this  
upvoted 16 times

□  **Bartimaeus** 1 month, 2 weeks ago

" Each question in the series contains a unique solution" - Redis is a better option.  
upvoted 2 times

□  **Pooochie** 1 year, 1 month ago

Got a simmilar question on udemy, where both soultions were marked as correct. Redis and Postgress  
upvoted 7 times

□  **AshT1** 1 year, 2 months ago

"Save full HTTP responses" so Postgre may will not be a good choice.  
upvoted 4 times

□  **Cornholioz** 1 year, 4 months ago

It will meet the goal, but my take is that it is a huge Overkill to introduce PostgreSQL.  
upvoted 1 times

□  **matejka** 1 year, 3 months ago

I think that it would be better to provide four options and you should pick the best one rather than four questions with YES/NO answers as there is no chance to review the futher options (further questions).  
upvoted 2 times

□  **profesorklaus** Highly Voted 1 year, 2 months ago

The worst solution from a performance and scalability standpoint is to use a database backed session state provider.

<https://docs.microsoft.com/en-us/azure/azure-cache-for-redis/cache-aspnet-session-state-provider>

upvoted 16 times

□  **ferut** 11 months, 1 week ago

Although Postgres will lack the performance compared to Redis, the solution will work. Any thought?  
upvoted 7 times

□  **lugospod** 3 months, 1 week ago

<https://docs.microsoft.com/en-us/azure/azure-cache-for-redis/cache-aspnet-session-state-provider>

Postgresql is not listed as viable option on MS site. So I guess this is why it is not acceptable.

upvoted 5 times

□  **minaritochuck** Most Recent 1 day, 6 hours ago

Sql Server Session State Provider - This provider stores the Session State in Sql Server. Use this provider if you want to store the Session state in persistent storage. You can scale your Web App but using Sql Server for Session has a performance impact on your Web App

upvoted 1 times

✉ **Evo\_Morales** 1 week, 4 days ago

I can't recall anything related to the AZ-204 elaborating on postgres, so that should be a signal to ignor  
upvoted 2 times

✉ **Dev666** 2 weeks ago

**Selected Answer: A**

Not the best solution, but YES, it will meet the goal.

upvoted 1 times

✉ **muilyas** 2 weeks, 4 days ago

I think its NO ==> it should be Redis

upvoted 1 times

✉ **Ayman7wry** 1 month ago

Solution is Yes

upvoted 1 times

✉ **Merdaserd123aszzz** 2 months ago

B is correct as you are also storing HTML response not just the sessionID

upvoted 1 times

✉ **mdronski** 2 months, 3 weeks ago

**Selected Answer: A**

Doc says it is possible to do it, but it will have performance impact:

<https://docs.microsoft.com/en-us/azure/azure-cache-for-redis/cache-aspnet-session-state-provider#aspnet-session-state-options>

upvoted 4 times

✉ **aruni\_mishra** 2 months ago

this refers for "Sql Server" and not Postgres.

upvoted 2 times

✉ **Mal22002** 1 month ago

Whatever you can do in SQL Server, you can do the same in Postgres SQL.

upvoted 2 times

✉ **zhrc** 2 months, 3 weeks ago

**Selected Answer: A**

Not the best solution, but YES, it will meet the goal.

upvoted 3 times

✉ **Molte** 3 months, 1 week ago

**Selected Answer: B**

Had this question in a practise test at measureup.com. There it was cosmos instead of Postgres but the answer was No. I think they just updated it to cosmos.

upvoted 3 times

✉ **leonidn** 3 months, 1 week ago

**Selected Answer: A**

Using DB is an acceptable choice <https://docs.microsoft.com/en-us/azure/azure-cache-for-redis/cache-aspnet-session-state-provider#aspnet-session-state-options>

upvoted 2 times

✉ **ehurfheiz** 3 months, 1 week ago

**Selected Answer: A**

Yes seems to be the good answer. There is a lot of better solution to do it but it will work

upvoted 1 times

✉ **Sukon\_Desknot** 8 months ago

Using postgres will work but not as good as Redis

"Sql Server Session State Provider - This provider stores the Session State in Sql Server. Use this provider if you want to store the Session state in persistent storage. You can scale your Web App but using Sql Server for Session has a performance impact on your Web App. You can also use this provider with an In-Memory OLTP configuration to help improve performance."  
"

<https://docs.microsoft.com/en-us/azure/azure-cache-for-redis/cache-aspnet-session-state-provider#aspnet-session-state-options>

upvoted 3 times

✉ **syfool** 8 months, 1 week ago

The answer is correct: NO

With postgres, application has to implement this requirement "multiple readers and a single writer". But that's the built-in feature of Azure Cache

for Redis

<https://docs.microsoft.com/en-us/azure/architecture/best-practices/caching>

upvoted 4 times

✉️ 🚢 **ScubaDiver123456** 2 months, 3 weeks ago

"With postgres, application has to implement this requirement "multiple readers and a single writer"

But don't databases provide the same capability? One writer and multiple readers?

I think the answer is YES for this question

upvoted 1 times

✉️ 🚢 **ning** 7 months, 3 weeks ago

It is possible not optimal though, redis support 10K concurrent connections, postgresql supports 100 + 15 concurrent connections, not sure the question mention the scale ...

upvoted 1 times

✉️ 🚢 **ning** 8 months, 2 weeks ago

I think this is very possible, not ideal though ... So yes!

upvoted 2 times

✉️ 🚢 **kondapaturi** 10 months ago

Yes is answer - You can use the Azure Cache for Redis service to store session data. Or use a data store such as Azure SQL or Azure PostgreSQL

upvoted 2 times

**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.";
}
```

**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.";
}
```

Correct Answer:

Box 1: `IDatabase cache = connection.GetDatabase();`

Connection refers to a previously configured `ConnectionMultiplexer`.

Box 2: `cache.StringSet("teams", "")`

To specify the expiration of an item in the cache, use the `TimeSpan` parameter of `StringSet`. `cache.StringSet("key1", "value1", TimeSpan.FromMinutes(90));`

Reference:

<https://azure.microsoft.com/sv-se/blog/lap-around-azure-redis-cache-preview/> <https://docs.microsoft.com/en-us/cli/azure/webapp/config/container>

Same question on AZ203

Answer is:

```
IDatabase cache = Connection.GetDatabase();
```

```
cache.KeyDelete("teams")
```

<https://www.examtopics.com/discussions/microsoft/view/12706-exam-az-203-topic-5-question-9-discussion/>

upvoted 83 times

✉️  **BrettusMaximus** 11 months, 4 weeks ago

It is KeyDelete. If you use StringSet you will set Teams to the value of Empty string and a future request to Teams will return an empty string and not null

upvoted 10 times

✉️  **hobob**  1 year, 1 month ago

Answer is incorrect (for the 2nd part).

cache.KeyDelete() is the correct method for removing a key from the redis cache.

upvoted 26 times

✉️  **Sukon\_Desknot** 8 months ago

Kindly provide references if you believe your knowledge is better than exam topics', we are not in the faith business 😊

upvoted 6 times

✉️  **sas12321** 8 months ago

<https://docs.microsoft.com/en-us/azure/azure-cache-for-redis/cache-web-app-cache-aside-leaderboard#update-the-teamscontroller-to-read-from-the-cache-or-the-database>

upvoted 8 times

✉️  **meoukg**  1 month, 1 week ago

Got it on 03/2022, I chose as below:

```
1. IDatabase cache = connection.GetDatabase();
```

```
2. cache.KeyDelete("teams",")
```

upvoted 3 times

✉️  **leonidn** 3 months, 1 week ago

```
IDatabase cache = Connection.GetDatabase();
```

```
cache.KeyDelete("teamsList");
```

<https://docs.microsoft.com/en-us/azure/azure-cache-for-redis/cache-web-app-cache-aside-leaderboard#update-the-teamscontroller-to-read-from-the-cache-or-the-database>

upvoted 3 times

✉️  **BeshoyRomany** 6 months, 4 weeks ago

The Correct answer is

```
IDatabase cache = Connection.GetDatabase();
```

```
cache.KeyDelete("teams")
```

We don't need to use setTeams with "TimeSpan.FromMinutes(90)" becuse the requirement is:

--> You need to invalidate the cache when "team data is changed"

When data is changed only

So we have to cache.KeyDelete("teams") to clear the cach once the "team data is changed"

upvoted 3 times

✉️  **myuv1131** 7 months, 3 weeks ago

The ClearCachedTeams method removes any cached team statistics from the cache.

```
void ClearCachedTeams()
```

```
{
```

```
IDatabase cache = Connection.GetDatabase();
```

```
cache.KeyDelete("teamsList");
```

```
cache.KeyDelete("teamsSortedSet");
```

```
ViewBag.msg += "Team data removed from cache. ";
```

```
}
```

upvoted 3 times

✉️  **aruni\_mishra** 4 months, 3 weeks ago

<https://docs.microsoft.com/en-us/azure/azure-cache-for-redis/cache-web-app-cache-aside-leaderboard#:~:text=The%20ClearCachedTeams%20method%20removes%20any%20cached%20team%20statistics%20from%20the%20cache.>

upvoted 1 times

✉️  **kondapaturi** 10 months ago

```
IDatabase cache = Connection.GetDatabase(); - we need to use the IDatabase interface
```

```
cache.KeyDelete("teams"); - To invalidate or remove the cache item, we can simply delete the key
```

upvoted 3 times

✉️  **mlantonis** 10 months, 4 weeks ago

```
void ClearCachedTeams() {
```

```
IDatabase cache = Connection.GetDatabase();
```

```
cache.KeyDelete("teamsList");
```

```
cache.KeyDelete("teamsSortedSet");
```

```
ViewBag.msg += "Team data removed from cache. ";
```

}

Box 1: IDatabase cache = Connection.GetDatabase();

Box 2: cache.KeyDelete("teams")

Reference:

<https://docs.microsoft.com/en-us/azure/azure-cache-for-redis/cache-web-app-cache-aside-leaderboard#update-the-teamscontroller-to-read-from-the-cache-or-the-database>

upvoted 11 times

✉️  **glam** 11 months, 1 week ago

IDatabase cache = Connection.GetDatabase();  
cache.KeyDelete("teams")

upvoted 5 times

✉️  **vb3d** 1 year, 1 month ago

IDatabase cache = Connection.GetDatabase();  
cache.KeyDelete()

Almost exact code, last code in this section <https://docs.microsoft.com/en-us/azure/azure-cache-for-redis/cache-web-app-cache-aside-leaderboard#update-the-teamscontroller-to-read-from-the-cache-or-the-database>

upvoted 11 times

**DRAG DROP -**

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****Correct Answer:****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**

Create a blank Logic app.

Add a logic app action that fires when one or more messages arrive in the queue.

Add an action that reads IoT temperature data from the Service Bus queue.

Add a condition that compares the temperature against the upper and lower thresholds.

Add an action that sends an email to specified personnel if the temperature is outside of those thresholds.

Step 1: Create a blank Logic app.

Create and configure a Logic App.

Step 2: Add a logical app trigger that fires when one or more messages arrive in the queue.

Configure the logic app trigger.

Under Triggers, select When one or more messages arrive in a queue (auto-complete).

Step 3: Add an action that reads IoT temperature data from the Service Bus queue

Step 4: Add a condition that compares the temperature against the upper and lower thresholds.

Step 5: Add an action that sends an email to specified personnel if the temperature is outside of those thresholds

Reference:

<https://docs.microsoft.com/en-us/azure/iot-hub/iot-hub-monitoring-notifications-with-azure-logic-apps>

✉  **agueda** Highly Voted  1 year, 1 month ago

The 2nd step sholud be "logic app trigger". You need a trigger to fire the logic app

Ref: <https://docs.microsoft.com/en-us/azure/iot-hub/iot-hub-monitoring-notifications-with-azure-logic-apps>

upvoted 60 times

✉  **debanjan10** Highly Voted  6 months, 2 weeks ago

Order:

1. Create blank logic app
2. Add logic app trigger when one or more messages arrive in the queue
3. Action to read IoT Temp data
4. Compare upper and lower temp
5. Send emails

upvoted 19 times

✉  **ivan0590** Most Recent  5 days, 9 hours ago

Admin, please correct the given answer.

The second step is wrong, is a "logic app trigger", not an action.

Even the explanation says is a trigger!

upvoted 1 times

✉  **kondapaturi** 10 months ago

First , we need to create a blank logic app.

Then we need to add a trigger to the logic app which will fire when one or more messages arrives in the queue.

Then we need an action to read the IoT temperature data.

Then we need to have a condition that compares the temperature against the upper and lower thresholds.

And finally, we have to have an action that sends an email to the specified personnel.

upvoted 10 times

✉  **insanewriters** 10 months, 2 weeks ago

Logic apps are supposed to be out of scope as of March 2021. Can anybody confirm they have gotten this question recently?

upvoted 12 times

✉  **glam** 11 months, 1 week ago

Only Step 2 should be - Logic app triggers When one or more messages arrive in a queue .

Rest correct.

upvoted 4 times

✉  **Gajendran** 1 year ago

Steps and Answers are wrong. Steps given below the Answers are correct. Setp 2 should be - Logic app triggers When one or more messages arriv in a queue . Refer - <https://docs.microsoft.com/en-us/azure/iot-hub/iot-hub-monitoring-notifications-with-azure-logic-apps>

upvoted 2 times

✉  **Deputy\_Cartman** 1 year ago

What is with this website and posting incorrect answers to questions and leaving them here?

upvoted 3 times

✉  **catsforthewin** 1 year ago

What is the correct answer for this question?

upvoted 2 times

✉  **jvyas** 1 year ago

Only step 2 needs to be replaced by " Add a trigger that fires when item arrives in queue" the rest of the steps are correct and in the same order as the provided answer.

upvoted 4 times

✉  **hobob** 1 year, 1 month ago

Answer is incorrect for step 2. It should be to add a Service Bus Trigger when items arrive in a queue (ref: <https://docs.microsoft.com/en-us/azure/connectors/connectors-create-api-servicebus#add-service-bus-trigger>)

upvoted 10 times

✉  **pmsiva** 1 year, 1 month ago

You are correct. Logic app must start with a Trigger.

upvoted 3 times

✉  **pmsiva** 1 year, 1 month ago

Add the RSS trigger

Every logic app must start with a trigger, which fires when a specific event happens, or when a specific condition is met. Each time the trigger finds new items, it fires and the Logic Apps engine creates a logic app instance that starts and runs your workflow. If the trigger doesn't find new items, the trigger doesn't fire and doesn't create an instance or run the workflow at this check.

upvoted 1 times

**DRAG DROP -**

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:

<b>Features</b>	<b>Answer Area</b>	<b>Requirement</b>	<b>Feature</b>
Users		Which pages visited by users most often correlate to a product purchase?	Feature
Funnels		How does load time of the product display page affect a user's decision to purchase a product?	Feature
Impact		Which events most influence a user's decision to continue to use the application?	Feature
Retention		Are there places in the application that users often perform repetitive actions?	Feature
User Flows			Feature

**Correct Answer:**

<b>Features</b>	<b>Answer Area</b>	<b>Requirement</b>	<b>Feature</b>
Users		Which pages visited by users most often correlate to a product purchase?	Users
Funnels		How does load time of the product display page affect a user's decision to purchase a product?	Impact
Impact		Which events most influence a user's decision to continue to use the application?	Retention
Retention		Are there places in the application that users often perform repetitive actions?	User Flows
User Flows			

Box 1: Users -

Box 2: Impact -

One way to think of Impact is as the ultimate tool for settling arguments with someone on your team about how slowness in some aspect of your site is affecting whether users stick around. While users may tolerate a certain amount of slowness, Impact gives you insight into how best to balance optimization and performance to maximize user conversion.

Box 3: Retention -

The retention feature in Azure Application Insights helps you analyze how many users return to your app, and how often they perform particular tasks or achieve goals. For example, if you run a game site, you could compare the numbers of users who return to the site after losing a game with the number who return after winning. This knowledge can help you improve both your user experience and your business strategy.

Box 4: User flows -

The User Flows tool visualizes how users navigate between the pages and features of your site. It's great for answering questions like:

- How do users navigate away from a page on your site?
- What do users click on a page on your site?
- Where are the places that users churn most from your site?
- Are there places where users repeat the same action over and over?

Incorrect Answers:

Funnel: If your application involves multiple stages, you need to know if most customers are progressing through the entire process, or if they are ending the process at some point. The progression through a series of steps in a web application is known as a funnel. You can use Azure Application Insights Funnels to gain insights into your users, and monitor step-by-step conversion rates.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/usage-impact>

✉  **Dinima**  1 year, 1 month ago

1st one Funnels  
upvoted 40 times

✉  **clarionprogrammer** 1 year ago

The end-goal of a 'Funnel' is a product purchase. 'Users' is just about how users use your app.  
upvoted 6 times

✉  **kondapaturi**  10 months ago

1.Funnels  
2.Impact  
3.Retention  
4.User flow  
upvoted 22 times

✉  **ivan0590**  5 days, 7 hours ago

After some investigation, I think the given answer is correct.  
The question is "Which pages visited by users most often correlate to a product purchase?".  
So, if I'm right, they want to know how often visiting a page leads to a purchase and in which of those pages this happens more often. Let's say if I have a web app with a catalogue of 500 products and every product has a detail page from which the user has the option to purchase the product. Now, I want to know the top 10 product detail pages that ended up leading to a purchase.  
Maybe I'm wrong, but I don't think that Funnels would be appropriate here. When you create a funnel, you have to specify the steps of the flow. I think that the main goal of a funnel is to analyse the transitions between steps in order to check if users get stuck in a step. Or in other words, how many people completed the flow.  
Funnels are to be used in known and specific flows, like when a user signup. That's not what the question is about. The question is about knowing what pages tend to lead more to a purchase. This is not a specific flow, you don't know the exact steps.

upvoted 1 times

✉  **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22  
upvoted 2 times

✉  **AzureDJ** 1 month, 2 weeks ago

Did you pass and did you go with?  
1.Funnels (Funnels correlate to purchases, not general user events)  
2.Impact  
3.Retention  
4.User flow  
upvoted 2 times

✉  **Manivannan19** 1 month, 3 weeks ago

1. Users  
2. Impact  
3. Retention  
4. User Flows  
upvoted 1 times

✉  **barretowski** 1 month, 1 week ago

ta errado  
upvoted 2 times

✉  **ytingyeu** 2 months ago

Doesn't what Funnels care about is "if users stop somewhere during the whole process", not the correlation between pages and products?

For example, creating a customer ticket takes 5 steps and Funnel shows lots of visitors give up creating one at the 4th step. Then we know the UX in the 4th step might need some enhancement.  
upvoted 1 times

✉  **leonidn** 3 months, 1 week ago

The Users feature does not allow to analyze flows. Funnels allows analyzing conversion rate through the specified flow. It does not allow us to find out what led to the final step. Users flow offers a means to identify user behavior. That is correlate the most to the first point.

1. UserFlow  
2. Impact  
3. Retention  
4. UserFlow  
upvoted 2 times

✉  **phvogel** 5 months, 3 weeks ago

First one funnels: <https://docs.microsoft.com/en-us/azure/azure-monitor/app/usage-funnels>  
To quote: "Before you create your funnel, decide on the question you want to answer. For example, you might want to know how many users are viewing the home page, viewing a customer profile, and creating a ticket." Just replace "creating a ticket" with "buying a product"  
upvoted 6 times

✉  **nonoss** 6 months, 1 week ago

- 1st one can't be "users", because users always returns a number of users verifying a certain condition, see the screenshot here  
<https://docs.microsoft.com/en-us/azure/azure-monitor/app/usage-segmentation>

upvoted 1 times

✉  **HimanshuNankani** 6 months, 1 week ago

I guess it should be

UserFlow  
Impact  
Retention  
UserFlow

The first one asks "Which pages..", how do we get which pages in Users?

And Funnel also signifies on how much customer interaction is there, and for that too it should be following a particular route specified while creating the funnel.

So, I think User Flow should be the right choice. Please correct me if I am wrong.

upvoted 3 times

✉  **myuv1131** 7 months, 3 weeks ago

1. User

Users tool: How many people used your app and its features. Users are counted by using anonymous IDs stored in browser cookies. A single person using different browsers or machines will be counted as more than one user.

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/usage-segmentation>

upvoted 1 times

✉  **ning** 8 months, 2 weeks ago

2, 3, and 4 are clearly correct answers. For 1, user with events might be the best answer. Question does not mention there is a process for step conversion rate; however, user itself does NOT offer the page information either.

upvoted 1 times

✉  **ning** 8 months, 2 weeks ago

Now I am thinking 1 can be impact as well ... For two reasons,

1. purchase is a custom event, which pages can generate most purchase

2. "Under the hood, the Impact analysis workbook relies on the Pearson correlation coefficient" it is clearly stated impact is correlation based calculation

upvoted 1 times

✉  **francis6170** 10 months, 3 weeks ago

got this in the exam :)

upvoted 3 times

✉  **rajtieto** 7 months, 4 weeks ago

so what is the correct answer?

upvoted 1 times

✉  **BeshoyRomany** 6 months, 4 weeks ago

He is here to just say this in every question, and that's all his great contributions for us :D :D

upvoted 4 times

✉  **Alasmindas** 1 month, 3 weeks ago

Guys, dont worry ...He is part of Examtopics team... creates tensions

upvoted 1 times

✉  **glam** 11 months, 1 week ago

Box #1: Funnels

upvoted 5 times

✉  **Mayflower** 12 months ago

1st answer is Funnel - buyer behavior

upvoted 2 times

✉  **PoundingCode** 1 year ago

I'd be surprised if this is on the exam. This is not a developer question. This is an architecture/design question

upvoted 5 times

✉  **NH** 1 year, 1 month ago

Answer is correct, Check below:

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/usage-segmentation>

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/usage-funnels>

upvoted 4 times

✉  **rdemontis** 1 year, 1 month ago

Correct. I'd add the following article that is in my opinion really appropriated to this case: <https://azure.microsoft.com/es-es/blog/new-tools-for-understanding-user-behavior-with-application-insights/>

upvoted 1 times

✉  **vb3d** 1 year, 1 month ago

Why? This is more suited to funnels? Check here  
<https://docs.microsoft.com/en-us/azure/azure-monitor/app/usage-funnels>  
it says "the owners of the Fabrikam Fiber company want to know the percentage of customers who successfully create a customer ticket"  
Very similar to the question  
upvoted 3 times

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

**Correct Answer: D**

New-AzureRmApiManagementBackendProxy creates a new Backend Proxy Object which can be piped when creating a new Backend entity.

Example: Create a Backend Proxy In-Memory Object

```
PS C:\>$secpassword = ConvertTo-SecureString "PlainTextPassword" -AsPlainText -Force
PS C:\>$proxyCreds = New-Object System.Management.Automation.PSCredential ("foo", $secpassword)
PS C:\>$credential = New-AzureRmApiManagementBackendProxy -Url "http://12.168.1.1:8080" -ProxyCredential $proxyCreds
PS C:\>$apimContext = New-AzureRmApiManagementContext -ResourceGroupName "Api-Default-WestUS" -ServiceName "contoso"
PS C:\>$backend = New-AzureRmApiManagementBackend -Context $apimContext -BackendId 123 -Url 'https://contoso.com/awesomeapi' -Protocol http -Title "first backend" -SkipCertificateChainValidation $true -Proxy $credential -Description "backend with proxy server"
```

Creates a Backend Proxy Object and sets up Backend

Incorrect Answers:

- A: The Import-AzureRmApiManagementApi cmdlet imports an Azure API Management API from a file or a URL in Web Application Description Language (WADL), Web Services Description Language (WSDL), or Swagger format.
- B: New-AzureRmApiManagementBackend creates a new backend entity in Api Management.
- C: The New-AzureRmApiManagement cmdlet creates an API Management deployment in Azure API Management.

Reference:

<https://docs.microsoft.com/en-us/powershell/module/azurerm.apimanagement/new-azurermapimanagerbackendproxy?view=azurermps-6.13.0>

✉  **Vano6k** Highly Voted  1 year, 2 months ago

I think the correct answer is A because it is the one that takes advantage of the swagger definition of the API?

upvoted 66 times

✉  **MiraA** 6 months, 3 weeks ago

There is an example of importing an API from an Open API Link using Import-AzApiManagementApi cmdlet:

<https://docs.microsoft.com/en-us/powershell/module/az.apimanagement/import-azapimanagementapi#example-4--import-an-api-from-a-open-api-link>

And as mentioned here:

<https://docs.microsoft.com/en-us/powershell/module/azurerm.apimanagement/import-azurermapimanagerapi>  
the Import-AzureRmApiManagementApi cmdlet is obsoleted by Import-AzApiManagementApi cmdlet.

So I would select answer A.

upvoted 3 times

✉  **zero0** 10 months, 3 weeks ago

Totally agree.

find the 2 line code here.

<https://docs.microsoft.com/en-us/powershell/module/azurerm.apimanagement/import-azurermapimanagerapi?view=azurermps-6.13.0>  
upvoted 3 times

✉  **Eduarv2015** 1 year, 2 months ago

It does not say that the API has swagger, D is correct.

upvoted 3 times



 **fadikh** 1 year, 1 month ago

Swagger and OpenAPI specs are the same  
upvoted 14 times

 **trance13** 1 year ago

They are not the same.  
upvoted 2 times

 **dhishtiyauu** 7 months, 3 weeks ago

OpenAPI = The specification itself, formerly known as Swagger specification. Swagger = Tools used in the implementation of OpenAPI  
upvoted 7 times

 **pac1311** 1 year, 2 months ago

Think so too, the accepted answer has to be wrong.  
upvoted 1 times

 **10x**  1 year, 2 months ago

D should be the answer - it is about accessing API - not creating it (eg based on swagger)  
upvoted 14 times

 **XYZ2** 1 year ago

but you should have one first, that's why you need to create it before able to use  
upvoted 1 times

 **borfavor** 12 months ago

"The news API back end is implemented as a RESTful service and uses an OpenAPI specification." This clearly tells us the API already exists  
upvoted 4 times

 **asdadasg2** 3 months, 2 weeks ago

It exists in reality, but not on API management. API management API != backend API  
upvoted 4 times

 **vavra**  5 days, 1 hour ago

**Selected Answer: C**

It is a creation, and docs <https://docs.microsoft.com/en-us/powershell/module/azurerm.apimanagement/new-azurermapimanagement?view=azurermps-6.13.0> says there are obligatory params

-ResourceGroupName <String>  
-Name <String>  
-Location <String>  
-Organization <String>  
-AdminEmail <String>

It must be C.

upvoted 1 times

 **SivajiTheBoss** 1 month, 2 weeks ago

**Selected Answer: A**

A seems more promising  
upvoted 1 times

 **ReniRechner** 1 month, 3 weeks ago

**Selected Answer: A**

A: Import also creates. Importing also creates an already configured instance (opposed to C)  
B: We don't need another backend, we need a frontend for an existing backend  
C: creates a new APIM, but you would still need to manually configure it.  
D: is meant to proxy a public API (<https://petri.com/how-to-use-the-azure-api-management-to-proxy-a-public-api>)

=> A looks most promising

upvoted 4 times

 **fearoffree** 2 months, 1 week ago

It seems the trick here is to have the knowledge of API Proxy that could be used for verifying the API availability without a need to call the backend APIs. But the question is very vague!  
upvoted 1 times

 **oescm** 2 months, 2 weeks ago

Got this one 02/2022. Went with most voted  
upvoted 3 times

 **lugospod** 3 months ago

Got this one 01/2022. Went with IMPORT  
upvoted 3 times

 **Lucario95** 3 months, 2 weeks ago

**Selected Answer: A**

According to this Link -> Import APIM from Swagger Definition

And yes, OpenID and Swagger should be synonyms from some year  
upvoted 3 times

✉  **hsdave** 5 months, 3 weeks ago

Answer is C according to <https://docs.microsoft.com/en-us/azure/api-management/powershell-create-service-instance>  
upvoted 3 times

✉  **nonoss** 6 months ago

Correct answer is C. New-AzureRmApiManagement -ResourceGroupName \$ResourceGroup -Name \$Name --Location \$Location -Organization \$Org -AdminEmail \$AdminEmail

Whizlabs:

- A is import not create
- B is to create a new backend for the api
- D is used just to create a new backend proxy

<https://docs.microsoft.com/en-us/powershell/module/az.apimanagement/New-AzApiManagement?view=azps-6.5.0&viewFallbackFrom=azps-4.3>.  
upvoted 5 times

✉  **huislaw** 1 month, 4 weeks ago

If create new only without import, still cannot access it?

upvoted 1 times

✉  **lxzhu2013** 7 months ago

I think the answer is A.

see <https://docs.microsoft.com/en-us/powershell/module/azurerm.apimanagement/import-azurermapimanagementapi?view=azurermps-6.13.0>  
AzureRM module does not have OpenAPI as spec. Swagger is used.

and this page <https://docs.microsoft.com/en-us/azure/api-management/backends> says, When importing certain APIs, API Management configures the API backend automatically.

upvoted 4 times

✉  **ning** 8 months, 1 week ago

This is very confusing ...

If the backend API is in azure as web app, then I guess I will go A

If the backend is open public API, you need a proxy for that in order to use inside azure, then possibly D

upvoted 1 times

✉  **AzureLearning** 9 months, 1 week ago

Answer is : A

Since we already have a API back end, we need to import to Azure API Management.

<https://docs.microsoft.com/en-us/azure/api-management/scripts/powershell-import-api-and-add-to-product?toc=/powershell/module/toc.json>  
upvoted 5 times

✉  **kondapaturi** 10 months ago

Answer is A- To use an existing API (which uses an Open API specification) behind the Azure API Management service , you can use the Import-AzApiManagementApi command.

upvoted 5 times

✉  **TakumaK** 10 months, 3 weeks ago

I would go for C.

"The news API back end is implemented as a RESTful service and uses an OpenAPI specification.". This implies that the API is already imported from a Swagger file.

"You need to ensure that you can access the news API by using an Azure API Management service instance.". This implies we need the APIM to use the API which doesn't technically mean the APIM is created yet.

upvoted 1 times

✉  **BabyTechMaggie** 11 months ago

The correct answer is C.

upvoted 2 times

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.

**Correct Answer: AD**

D: CorrelationId: Enables an application to specify a context for the message for the purposes of correlation; for example, reflecting the MessageId of a message that is being replied to.

A: ReplyToSessionId: This value augments the ReplyTo information and specifies which SessionId should be set for the reply when sent to the reply entity.

Incorrect Answers:

B, E: DeliveryCount -

Number of deliveries that have been attempted for this message. The count is incremented when a message lock expires, or the message is explicitly abandoned by the receiver. This property is read-only.

C, F: SequenceNumber -

The sequence number is a unique 64-bit integer assigned to a message as it is accepted and stored by the broker and functions as its true identifier. For partitioned entities, the topmost 16 bits reflect the partition identifier. Sequence numbers monotonically increase and are gapless. They roll over to 0 when the 48-

64 bit range is exhausted. This property is read-only.

Reference:

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-messages-payloads>

 **Kitkit** Highly Voted 1 year, 2 months ago

Answer is correct.

ReplyToSessionId (reply-to-group-id) This value augments the ReplyTo information and specifies which SessionId should be set for the reply when sent to the reply entity.

CorrelationId (correlation-id) Enables an application to specify a context for the message for the purposes of correlation; for example, reflecting the MessageId of a message that is being replied to.

upvoted 34 times

 **rustycables** Highly Voted 8 months, 1 week ago

I have no clue what this is about, but I get the feeling we are supposed to arrive at the correct answer by elimination.

upvoted 17 times

 **meoukg** Most Recent 1 month, 1 week ago

<https://www.examtopics.com/discussions/microsoft/view/44385-exam-az-204-topic-4-question-11-discussion/>  
Got it on 03/2022, I chose as below:

- A. Assign the value of the hazard message SessionID property to the ReplyToSessionId property.
- D. Assign the value of the hazard message MessageId property to the CorrelationId property.

upvoted 1 times

 **ScubaDiver123456** 2 months, 3 weeks ago

Selected Answer: AD

I arrived at A+D using the explanations given here

<https://docs.microsoft.com/en-us/learn/modules/discover-azure-message-queue/5-messages-payloads-serialization>

upvoted 3 times

✉  **ehurfheiz** 3 months, 1 week ago

Selected Answer: AD

Answer seems correct : AD

upvoted 1 times

✉  **glam** 11 months, 1 week ago

correct.

upvoted 2 times

✉  **SnakePlissken** 11 months, 1 week ago

Answer is correct. Nice example to show the purpose of CorrelationId and ReplyToSessionId.

upvoted 4 times

✉  **kwaazaar** 1 year ago

what reply entity? this question makes no sense.

a simple picture of the setup would greatly clarify things

upvoted 4 times

✉  **MrZoom** 1 year, 1 month ago

Also, all the other answers are really kind of obviously wrong...

upvoted 2 times

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

#### **Correct Answer: C**

With the Premium plan the max outbound connections per instance is unbounded compared to the 600 active (1200 total) in a Consumption plan.

Note: The number of available connections is limited partly because a function app runs in a sandbox environment. One of the restrictions that the sandbox imposes on your code is a limit on the number of outbound connections, which is currently 600 active (1,200 total) connections per instance. When you reach this limit, the functions runtime writes the following message to the logs: Host thresholds exceeded: Connections.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/manage-connections> <https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale#service-limits>

✉  **VK7Az204** Highly Voted 1 year, 1 month ago

A is the correct answer

upvoted 54 times

✉  **djffcnhhyyiaigvyvuy** Highly Voted 1 year, 1 month ago

The error shown is a SQL Server error not an Azure functions error.

<https://forums.asp.net/t/2004198.aspx>

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+

The actual issue appears to be that you have too many simultaneous functions running, the solution is to limit the batch size (# functions that can run in parallel)

<https://social.msdn.microsoft.com/Forums/azure/en-US/a2955297-1c14-45f2-b799-6346b340519a/how-does-batchsize-works-in-hostjson?forum=AzureFunctions>

upvoted 20 times

✉  **rdemontis** 1 year, 1 month ago

Correct! We have to consider we are speaking about Azure Function with Azure Storage Queue Trigger. This is a case where execution could happens in parallel based on the queue batchSize property

(see <https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-queue>).

I think this is the batchSize property referred in the question (and not that in the functions aggregator. That's another thing).

Besides, we have to consider the origin of the error message: Azure Sql Database!! So upgrading the plan the problem could only get worse thing.

upvoted 5 times

✉  **meoukg** Most Recent 1 month, 1 week ago

Got it on 03/2022, I chose A. In the host.json file, decrease the value of the batchSize option

upvoted 1 times

✉  **ReniRechner** 1 month, 3 weeks ago

**Selected Answer: C**

A: seems not correct for me.

see: <https://docs.microsoft.com/en-us/azure/azure-functions/functions-host-json#aggregator>

it just seems to affect metrics. Besides an increase would help => more elements per function => less functions => less connections

B: might help (if scaling can be limited), but for itself is not a solution

C: does not help since source of problem (too many incoming connections to SQL Server) unchanged. There is no problem with number of outgoing connections in function

D: searching for "queueScaling" only resulted in AZ-204 question results ;-)

So what should I choose?

While doing research for point B I git to this site

<https://medium.com/microsoftazure/azure-functions-limiting-throughput-and-scalability-of-a-serverless-app-5b1c381491e3>

I found the hint that a premium plan can limit instances, which is verified here:

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-premium-plan?tabs=portal#maximum-function-app-instances>

So I would go with C but for the option to limit scaling and not for the explanation in the result.

upvoted 1 times

✉ **iamstudying** 1 month, 1 week ago

I agree with your reason for not A.. batching is supposed to reduce number of IO requests and thus connections to SQL DB

The Medium post you referenced is outdated. You can actually limit the scaling on both Consumption and Premium plans:

<https://docs.microsoft.com/en-us/azure/azure-functions/event-driven-scaling#limit-scale-out>

I don't think there is a right answer here... pick A and prAy, buddies

upvoted 1 times

✉ **massnnonn** 1 month, 4 weeks ago

**Selected Answer: A**

here: <https://stackoverflow.com/questions/56489553/host-json-meaning-of-batchsize>

upvoted 2 times

✉ **ytingyeu** 2 months ago

If the root cause is Function running out of connections, the message should be "Host thresholds exceeded: Connections"

<https://docs.microsoft.com/en-us/azure/azure-functions/manage-connections?tabs=csharp#connection-limit>

upvoted 2 times

✉ **pandaz** 3 months ago

C is the correct answer according to another test that I did

upvoted 2 times

✉ **leonidn** 3 months, 1 week ago

**Selected Answer: A**

The problem is that number of connections to SQL Server reached the limit.

A different trigger is irrelevant. Changing to the Premium plan does not solve the problem with SQL Server connection pool limits. There is no the queueScaling option.

BatchSize allows to group messages that reduce the number of required connections. This is the only relevant solution.

upvoted 6 times

✉ **ehurfheiz** 3 months, 1 week ago

**Selected Answer: A**

A seems to be the correct answer

upvoted 1 times

✉ **GhostJoe** 3 months, 4 weeks ago

**Selected Answer: A**

A is the correct answer

upvoted 1 times

✉ **kondapaturi** 10 months ago

A is correct - It could be that the batchSize is high, causing more messages to be processed at once. Here the function would run in parallel and each function would create a new connection to the SQL database. You can reduce the batchSize property in the host.json file.

upvoted 7 times

✉ **Kvm1** 10 months ago

as per the <https://docs.microsoft.com/en-us/azure/azure-functions/functions-host-json>

batchSize in host.json is for setting the Maximum number of requests to aggregate for calculating metrics for Application Insights so not sure if it really helps in reducing the maximum no of connections to the db. If this is true then the obvious answer would be to go to premium plan to have more processing power so the each function instance execution will complete fast and db connections will be closed much faster and those connections will be available for new or other function execution instances and can prevent the timeout error.

upvoted 1 times

✉ **Arrqqq** 9 months ago

Authors probably meant the other batchSize which sits in queue settings and tells how many messages can be processed in paralel - then answer A will be correct <https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-queue#host-json>

upvoted 3 times

✉ **kishe** 10 months, 4 weeks ago

A should be the correct answer according to <https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-queue-trigger?tabs=csharp#concurrency>

upvoted 2 times

✉️  **glam** 11 months, 1 week ago

A is the correct  
upvoted 4 times

✉️  **SnakePlissken** 11 months, 1 week ago

Answer A, decreasing batchSize is correct.  
Switching to Premium seems a very bad idea. When the connections are unbounded, you will exceed the maximum sessions on the Azure SQL Database for sure when you don't scale that up too. The max concurrent sessions ranges between 300 (Basic) and 30.000 (Standard S9 or Premium).  
<https://docs.microsoft.com/en-us/azure/azure-sql/database/resource-limits-dtu-single-databases>  
upvoted 12 times

✉️  **SnakePlissken** 11 months ago

Got this question at the exam and scored 100% on Azure Storage, so I'm sure this is correct.  
upvoted 10 times

✉️  **babaryanryhim** 6 months ago

which answer was correct  
upvoted 1 times

✉️  **jvyas** 7 months, 3 weeks ago

Cant get more sure than this. Thank you.  
upvoted 3 times

✉️  **zero0** 10 months, 3 weeks ago

This mean what? A or C ?  
upvoted 1 times

✉️  **windflower555** 8 months, 3 weeks ago

He answered A above  
upvoted 2 times

✉️  **roshansir** 11 months, 2 weeks ago

A is the correct answer  
upvoted 1 times

✉️  **jshah** 11 months, 3 weeks ago

Given answer C is correct answer because reducing batchsize will help only in case of largeRequestSize. here we are talking about number of connection pool  
Error message: Request size is too large  
Symptoms: When you copy data into Azure Cosmos DB with a default write batch size, you receive the following error: Request size is too large.

Cause: Azure Cosmos DB limits the size of a single request to 2 MB. The formula is request size = single document size \* write batch size. If your document size is large, the default behavior will result in a request size that's too large. You can tune the write batch size.

Resolution: In the copy activity sink, reduce the write batch size value (the default value is 10000)  
<https://docs.microsoft.com/en-us/azure/data-factory/connector-troubleshoot-guide>

upvoted 2 times

✉️  **MohmmadFayez** 3 months, 3 weeks ago

your link is about Azure Data factory ,where the question talking about Azure functions and Azure Sql , Don't confuse people's  
upvoted 1 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution.

Determine whether the solution meets the stated goals.

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

#### Correct Answer: A

The session state provider for Azure Cache for Redis enables you to share session information between different instances of an ASP.NET web application.

The same connection can be used by multiple concurrent threads.

Redis supports both read and write operations.

The output cache provider for Azure Cache for Redis enables you to save the HTTP responses generated by an ASP.NET web application.

Note: Using the Azure portal, you can also configure the eviction policy of the cache, and control access to the cache by adding users to the roles provided. These roles, which define the operations that members can perform, include Owner, Contributor, and Reader. For example, members of the Owner role have complete control over the cache (including security) and its contents, members of the Contributor role can read and write information in the cache, and members of the

Reader role can only retrieve data from the cache.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/best-practices/caching>

✉  **Prakash4691** Highly Voted  1 year, 1 month ago

Correct answer

upvoted 24 times

✉  **mattvasc** Most Recent  1 month, 3 weeks ago

**Selected Answer: A**

Redis will do the trick.

upvoted 1 times

✉  **THAMORAY** 11 months, 1 week ago

This question is part of a series of questions that present the same scenario. Each question in the series contains "" a unique solution"". Determine whether the solution meets the stated goals.

This is the unique solution

A: Yes.

upvoted 4 times

✉  **glam** 11 months, 1 week ago

A. Yes

upvoted 4 times

✉  **roshansir** 11 months, 2 weeks ago

A is the correct answer

upvoted 3 times

**HOTSPOT -**

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 Area

```
let startTimestamp = ago(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
```

Box 1: ago(1d)

Box 2: distinct containerID -

Box 3: where ContainerID in (ContainerIDs)

Box 4: summarize Count by Computer

Summarize: aggregate groups of rows

Use summarize to identify groups of records, according to one or more columns, and apply aggregations to them. The most common use of summarize is count, which returns the number of results in each group.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/log-query/get-started-queries> <https://docs.microsoft.com/en-us/azure/azure-monitor/log-query/query-optimization>

✉  **Marusyk** Highly Voted 1 year, 1 month ago

the answer is correct  
upvoted 27 times

✉  **pac1311** Highly Voted 1 year, 3 months ago

Isn't kubernetes out of scope for AZ-204?  
upvoted 9 times

✉  **phuria** 1 year, 2 months ago

You'll notice it really isn't about kubernetes per say, but how to query your logs from Log Analytics  
upvoted 9 times

✉  **Chilred** 1 year, 3 months ago

No, i think there are still some question from az203  
upvoted 3 times

✉  **petitbilly** Most Recent 1 month, 2 weeks ago

Got it in exam 03/22  
upvoted 1 times

✉  **oescm** 2 months, 2 weeks ago

Got this one 02/2022, so this question is NOT out of scope. I went with the provided answer  
upvoted 4 times

✉  **lugospod** 3 months ago

Got this one 01/2022. Went with most voted (to avoid writing answers again)

upvoted 6 times

✉️ **MasterQuestMaster** 3 months ago

I got this as well.

upvoted 2 times

✉️ **glam** 11 months, 1 week ago

correct

upvoted 2 times

✉️ **diligent176** 1 year, 3 months ago

ago(1d) is correct.

date(now()-1d) is not correct syntax (query won't run or compile at all).

upvoted 6 times

✉️ **HimanshuNankani** 6 months, 1 week ago

Should have told the correct syntax as well.

upvoted 1 times

✉️ **m\_siri** 1 year, 4 months ago

I think the answer to the 1st drop should be;

let start Timestamp = date(now() - 1d)

because we need to take the logs occurred within the last 24 hours, not for the previous day

upvoted 4 times

✉️ **stylebc** 1 year, 4 months ago

You are not right, correct is ago(1d), as from ago function description:

<https://docs.microsoft.com/en-us/azure/data-explorer/kusto/query/agofunction>

a\_timespan - Interval to subtract from the current UTC clock time (now()).

upvoted 19 times

✉️ **ALittleBunny** 1 year, 4 months ago

Wrong. It should be ago(1d) as ago(a\_timespan) subtracts the given timespan from the current UTC clock time. <https://docs.microsoft.com/en-us/azure/azure-monitor/log-query/examples#search-application-level-events-described-as-cryptographic>

upvoted 6 times

✉️ **mitcheld** 1 year, 4 months ago

I think it should be ago.

Search for "Summarize: aggregate groups of rows" at <https://docs.microsoft.com/en-us/azure/azure-monitor/log-query/get-started-queries>

upvoted 1 times

**HOTSPOT -**

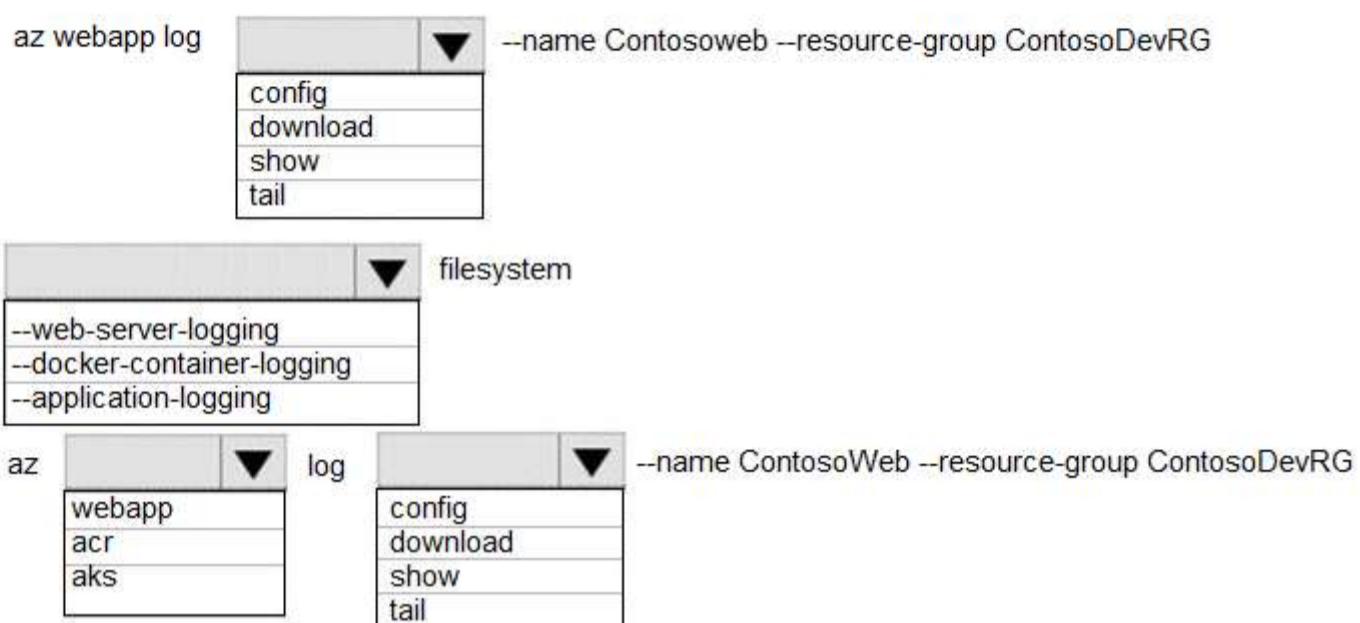
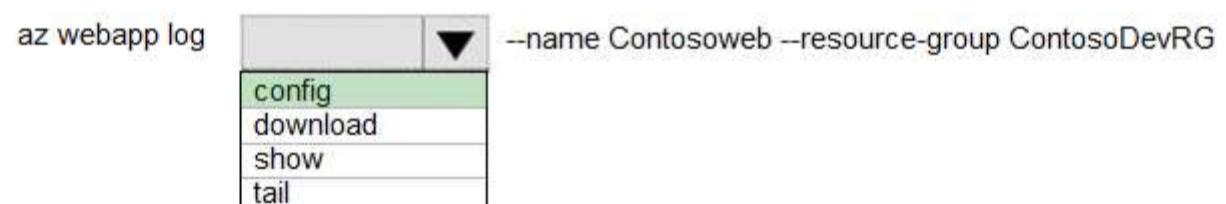
You plan to deploy a web app to App Service on Linux. You create an App Service plan. You create and push a custom Docker image that contains the web app to Azure Container Registry.

You need to access the console logs generated from inside the container in real-time.

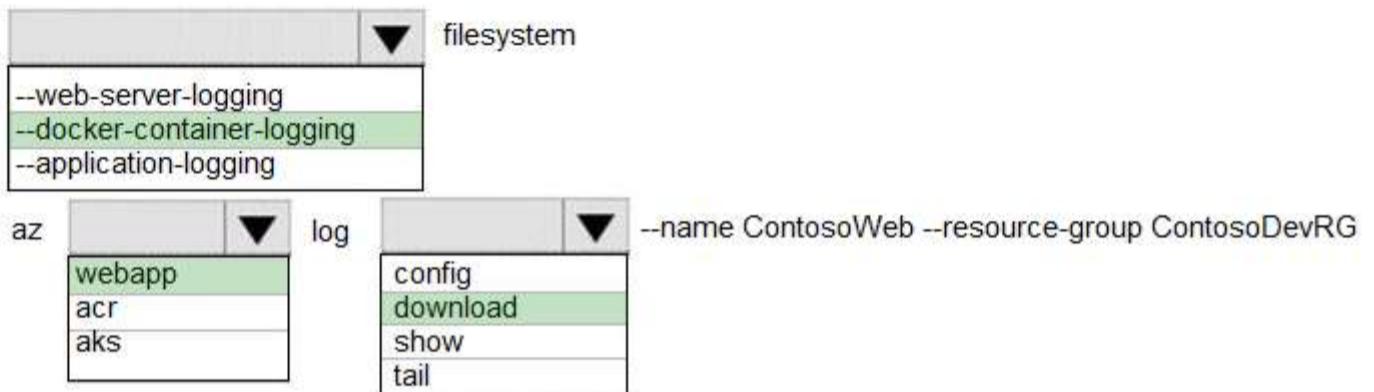
How should you complete the Azure CLI command? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

**Answer Area****Answer Area**

**Correct Answer:**



Box 1: config -

To Configure logging for a web app use the command:

az webapp log config

Box 2: --docker-container-logging

Syntax include:

az webapp log config [-docker-container-logging {filesystem, off}]

Box 3: webapp -

To download a web app's log history as a zip file use the command: az webapp log download

Box 4: download -

Reference:

<https://docs.microsoft.com/en-us/cli/azure/webapp/log>

**granitoula** Highly Voted 1 year, 5 months ago

It never said dowload, it says "access real time"

Will go with TAIL:

[https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#az\\_webapp\\_log\\_tail](https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#az_webapp_log_tail)

upvoted 121 times

✉ **monniq** 1 year, 2 months ago

It says "This command may not work with web apps running on Linux." on [https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#az\\_webapp\\_log\\_tail](https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#az_webapp_log_tail)  
So, it can't be the answer.

upvoted 8 times

✉ **Robert12345Robert** 9 months, 3 weeks ago

az webapp log download  
Download a web app's log history as a zip file.  
This command may not work with web apps running on Linux.

It is download that may not work, not tail.

upvoted 8 times

✉ **jay158** 10 months ago

"This command may not work with web apps running on Linux." is removed [https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#az\\_webapp\\_log\\_tail](https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#az_webapp_log_tail).  
Warning is only for 'az webapp log download'

upvoted 5 times

✉ **rdemontis** 1 year, 1 month ago

I think TAIL is correct because it is the only way to access console log in real time. The sentence "This command may not work with web app running on Linux" is present for every option, even for download, see [https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#az\\_webapp\\_log\\_download](https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#az_webapp_log_download)

upvoted 2 times

✉ **Adol** 1 year, 3 months ago

You're right and it's tail according to a course in Udemy for the exact question

upvoted 9 times

✉ **AfroYeti** 1 year, 2 months ago

No see, that interesting becasue there is a notice on the port itself and it reads "tail might not be available for linux containers"

Now the question is, is that answer the "safe" answer based on the possibility that it might not be available?

upvoted 1 times

✉ **DSK** 1 year, 2 months ago

The suggested download command will not work because download needs a local file system location.

upvoted 1 times

✉ **Kellyb85** 1 year, 5 months ago

I think download

in the question--> You plan to deploy a web app to App Service on Linux.

az-webapp-log-tail --> [https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#az\\_webapp\\_log\\_tail](https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#az_webapp_log_tail) --> This command may not work with web apps running on Linux.

upvoted 6 times

✉ **TakumaK** 10 months, 3 weeks ago

See the MSDN doc again. It obviously says the download is also "This command may not work with web apps running on Linux.". And the question clearly mentions "in real-time". Ok. let's think do you want to download the log zip file in real time? How?

upvoted 1 times

✉ **iiiihhhh** 1 year, 3 months ago

There is a request for clarification on github:

WebApp:az webapp log tail and insufficient information about linux <https://github.com/Azure/azure-cli/issues/16203>

But there is no answer.

upvoted 1 times

✉ **Ave** 1 year, 5 months ago

It says the same for download.

upvoted 9 times

✉ **RaviKS** Highly Voted 1 year, 3 months ago

Correct Answers are

config

docker-container-logging

webapp

tail

upvoted 59 times

✉ **petitbilly** Most Recent 1 month, 2 weeks ago

Got it in exam 03/22

upvoted 1 times

✉  **KhaiHoang** 1 month, 2 weeks ago

the last answer should be "tail"

Start live log tracing for a web app.

<https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#az-webapp-log-tail>

upvoted 1 times

✉  **iamdamzy** 3 months, 3 weeks ago

Definitely got be \*tail\* - "access in real-time is the keyword"

[https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#az\\_webapp\\_log\\_tail](https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#az_webapp_log_tail)

upvoted 1 times

✉  **sauravgarg001** 7 months, 2 weeks ago

tail should be the answer for last as it says "logs generated from inside the container in real time"

<https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#:~:text=webapp%20log%20tail-,Start%20live%20log%20tracing%20for%20a%20web%20app.,-az%20webapp%20log>

upvoted 1 times

✉  **[Removed]** 8 months, 2 weeks ago

az webapp log tail: Start live log tracing for a web app

az webapp log download: Download a web app's log "history" as a zip file

upvoted 1 times

✉  **MK22** 8 months, 2 weeks ago

az webapp log download does not work with webapps running on linux. Tail should be the correct option.

<https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest>

upvoted 1 times

✉  **Rafaelfp** 8 months, 2 weeks ago

config

--docker-container-logging

webapp

tail

<https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest>

upvoted 2 times

✉  **kondapaturi** 10 months ago

config

--docker-container-logging

webapp

tail

upvoted 3 times

✉  **glam** 11 months, 1 week ago

Correct Answers are

config

docker-container-logging

webapp

tail

upvoted 4 times

✉  **anandhprakash** 11 months, 2 weeks ago

TAIL will be the correct answer for the last box.

Because, Download a web app's log history as a zip file. This command may not work with web apps running on Linux.

[https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#az\\_webapp\\_log\\_download](https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#az_webapp_log_download)

upvoted 3 times

✉  **HiAitme** 1 year, 1 month ago

Yes will go with 'tail' for real time logs. This is what is asked here.

upvoted 3 times

✉  **Sylph** 1 year, 1 month ago

I also think it should be tail.

<https://github.com/Azure/azure-cli/issues/16203>

upvoted 3 times

✉  **cbn** 1 year, 2 months ago

Looks like MS is taking fun out of making the questions confusing.

upvoted 5 times

✉  **JulienYork** 1 year, 3 months ago

I tested this properly, both download and show works on cloud shell.

It depends on where you run those commands.

Download may work, show works either.

upvoted 1 times

✉  **bhushan\_786** 1 year, 3 months ago

TAIL is applicable at 2 places.  
Can someone summarize the answer please?  
I think it should be:-  
1)config  
2)--docker-container-logging  
3)webapp  
4)tail

upvoted 12 times

✉  **pmsiva** 1 year, 3 months ago

The question states that you need access the logs in real time which can be done through tail  
[https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#az\\_webapp\\_log\\_tail](https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest#az_webapp_log_tail)

upvoted 2 times

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

**Correct Answer: BC**

There are three types of availability tests:

- ☞ URL ping test: a simple test that you can create in the Azure portal.
- ☞ Multi-step web test: A recording of a sequence of web requests, which can be played back to test more complex scenarios. Multi-step web tests are created in Visual Studio Enterprise and uploaded to the portal for execution.
- ☞ Custom Track Availability Tests: If you decide to create a custom application to run availability tests, the `TrackAvailability()` method can be used to send the results to Application Insights.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/monitor-web-app-availability>

✉  **Ash111** Highly Voted 1 year, 5 months ago

Given answer is correct

upvoted 33 times

✉  **Secure01** 1 year, 5 months ago

True:

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/monitor-web-app-availability>

There are three types of availability tests:

URL ping test

Multi-step web test

Custom Track Availability Tests

upvoted 7 times

✉  **pac1311** Highly Voted 1 year, 2 months ago

Correctemundo!

upvoted 7 times

✉  **oescm** Most Recent 2 months, 2 weeks ago

Got this one 02/2022. Went with the given answers

upvoted 3 times

✉  **lugospod** 3 months ago

Got similar one 01/2022. But tests needed to also test for SSL and custom headers.. went with multistep and Standard test (not ping or custom track).

upvoted 5 times

✉  **Henksc** 3 months, 1 week ago

Correct, however Multi-step web test is deprecated.

Source:

Multi-step web tests have been deprecated. We recommend using `TrackAvailability()` to submit custom availability tests instead of multi-step web tests. With `TrackAvailability()` and custom availability tests, you can run tests on any compute you want and use C# to easily author new tests.

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/availability-multistep>

upvoted 2 times

✉  **ehurfheiz** 3 months, 1 week ago

**Selected Answer: BC**

Answer seems to be correct : BC

upvoted 1 times

✉  **glam** 11 months, 1 week ago

correct

upvoted 3 times

✉  **roshansir** 11 months, 2 weeks ago

correct answer  
upvoted 3 times

✉  **paru123456789** 1 year, 1 month ago

Answer:  
Multi-step  
Url ping  
upvoted 4 times

✉  **10x** 1 year, 2 months ago

b. and c.  
upvoted 2 times

**DRAG DROP -**

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:

Targets	Answer Area
Expect	<code>&lt;policies&gt;</code>
Public	<code>&lt;inbound&gt;</code>
Private	<code>&lt;base /&gt;</code>
Internal	<code>&lt;cache-lookup caching-type="</code> <span style="border: 1px solid black; padding: 2px;">Target</span> <code>" downstream-caching-type = "</code> <span style="border: 1px solid black; padding: 2px;">Target</span> <code">&gt;</code">
External	<code>&lt;vary-by-header&gt;</code> <span style="border: 1px solid black; padding: 2px;">Target</span>
Authorization	<code>&lt;/vary-by-header&gt;</code> <code>&lt;/cache-lookup&gt;</code> <code>&lt;/inbound&gt;</code> <code>&lt;/policies&gt;</code>

**Correct Answer:**

Targets	Answer Area
Expect	<code>&lt;policies&gt;</code>
Public	<code>&lt;inbound&gt;</code>
Private	<code>&lt;base /&gt;</code>
Internal	<code>&lt;cache-lookup caching-type="</code> <span style="border: 1px solid black; padding: 2px;">Internal</span> <code>" downstream-caching-type = "</code> <span style="border: 1px solid black; padding: 2px;">Private</span> <code">&gt;</code">
External	<code>&lt;vary-by-header&gt;</code> <span style="border: 1px solid black; padding: 2px;">Authorization</span>
Authorization	<code>&lt;/vary-by-header&gt;</code> <code>&lt;/cache-lookup&gt;</code> <code>&lt;/inbound&gt;</code> <code>&lt;/policies&gt;</code>

Box 1: internal -

caching-type

Choose between the following values of the attribute:

- internal to use the built-in API Management cache,
- external to use the external cache as Azure Cache for Redis prefer-external to use external cache if configured or internal cache otherwise.

.

Box 2: private -

downstream-caching-type

This attribute must be set to one of the following values.

- none - downstream caching is not allowed.
- private - downstream private caching is allowed.
- public - private and shared downstream caching is allowed.

Box 3: Authorization -

`<vary-by-header>Authorization</vary-by-header>`

`<!-- should be present when allow-private-response-caching is "true"-->`

Note: Start caching responses per value of specified header, such as Accept, Accept-Charset, Accept-Encoding, Accept-Language, Authorization, Expect, From,

Host, If-Match -

Reference:

<https://docs.microsoft.com/en-us/azure/api-management/api-management-caching-policies>

✉  **cgreene** Highly Voted 1 year, 5 months ago

Internal Cache isn't available for Consumption plan. So shouldn't it be External (using Redis)?

upvoted 67 times

✉  **Egger1992** 1 year, 5 months ago

Yes, you are right. In the feature-based comparison of the tiers, it says that built-in cache is not available. <https://docs.microsoft.com/en-us/azure/api-management/api-management-features>

And here it says that "internal" would be using the built-in cache. <https://docs.microsoft.com/en-us/azure/api-management/api-management-caching-policies>

upvoted 15 times

✉  **Ananth2020** Highly Voted 1 year, 5 months ago

Consumption Pricing Tier of API Management does not support Built-in Cache. Therefore caching-type should be set to "external".

Reference: <https://docs.microsoft.com/en-us/azure/api-management/api-management-features>

upvoted 29 times

✉  **adone** Most Recent 1 month, 2 weeks ago

I don't find any example with private downstream and a vary by header. For me the vary by header only make sense for public downstream. I opt for:

External

Public

Authorization

In normal situation, I would have put private downstream without a vary by header.

upvoted 1 times

✉  **oescm** 2 months, 2 weeks ago

Got this one 02/2022. Went with:

External

Private

Authorization

upvoted 9 times

✉  **leonidn** 3 months, 1 week ago

Private is because cached data is isolated between customers

External is because internal is not a feature of the Consumption plan

Authorization to enable caching responses per value of specified header

upvoted 5 times

✉  **Gautam47** 7 months, 1 week ago

Cache should be external

upvoted 2 times

✉  **chandru1dev** 9 months ago

internal

caching-type Choose between the following values of the attribute:

- internal to use the built-in API Management cache,
- external to use the external cache as described in Use an external Azure Cache for Redis in Azure API Management,
- prefer-external to use external cache if configured or internal cache otherwise.

<https://docs.microsoft.com/en-us/azure/api-management/api-management-caching-policies>

upvoted 2 times

✉  **kondapaturi** 10 months ago

External - When you look at the pricing plans for the Azure API management, when it comes to the Consumption plan, it only supports external cache.

Private - we need to ensure that the data is not available to other customers, we need to use the cache type of Private caching.

Authorization - the calls are being authenticated by OAuth, the caching can vary by the Authorization header.

upvoted 11 times

✉  **glam** 11 months, 1 week ago

Answers are:

External

Private

Authorization

upvoted 15 times

✉  **anandhprakash** 11 months, 2 weeks ago

Internal cache is not supported in consumption plan, so the cache type should be External.

Answers are:

External  
Private  
Authorization  
upvoted 5 times

✉  **roshansir** 11 months, 2 weeks ago

External  
Private  
Authorization  
upvoted 1 times

✉  **paru123456789** 1 year, 1 month ago

External  
Private  
Authorization  
upvoted 8 times

✉  **clarionprogrammer** 1 year ago

Expect. Not Authorization.  
allow-private-response-caching is undefined.  
<https://docs.microsoft.com/en-us/azure/api-management/api-management-caching-policies#StoreToCache>  
upvoted 1 times

✉  **Archimedes** 1 year, 2 months ago

It shoudl to External (as Consumption tier does not support internal), Private, Authorization.  
upvoted 3 times

✉  **GaryZ** 1 year, 4 months ago

The caching-type needs to be set to "external" as "internal" is not available in the Consumption tier of Azure API Management.  
Reference: <https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-cache>  
upvoted 7 times

✉  **gunencali** 1 year, 4 months ago

Which is the correct answer?  
upvoted 2 times

✉  **Adol** 1 year, 3 months ago

external  
upvoted 2 times

✉  **homimi6115** 1 year, 5 months ago

Should be external. Ref: <https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-cache-external>  
upvoted 4 times

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.

**Correct Answer: D**

You can monitor a recorded sequence of URLs and interactions with a website via multi-step web tests.

Incorrect Answers:

A: Selenium is an umbrella project for a range of tools and libraries that enable and support the automation of web browsers.

It provides extensions to emulate user interaction with browsers, a distribution server for scaling browser allocation, and the infrastructure for implementations of the W3C WebDriver specification that lets you write interchangeable code for all major web browsers.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/availability-multistep>

✉  **kishe** Highly Voted 10 months, 4 weeks ago

IMO, B is correct, a URL ping test is enough.

upvoted 44 times

✉  **mattvasc** 1 month, 3 weeks ago

And how a URL ping will meet the requirement:

"☞ Verify that the websites respond within a specified time threshold. Dependent requests such as images and JavaScript files must load properly." ?

Definitely not B.

upvoted 2 times

✉  **ezelans** 1 month, 1 week ago

please, read this article and you will check it. There is a setting called "Test timeout"

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/monitor-web-app-availability>

upvoted 2 times

✉  **jay158** Highly Voted 10 months, 3 weeks ago

The Given Answer D is correct.

Ping URL, does not satisfies : Verify that the websites respond within a specified time threshold. Dependent requests such as images and JavaScript files must load properly

upvoted 21 times

✉  **jay158** 10 months, 2 weeks ago

Second thought

Correct answer is B. ie URL Ping Test

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/monitor-web-app-availability>

upvoted 13 times

✉  **anirbanzeus** 10 months, 2 weeks ago

Not really, all the objectives can be achieved through Ping-test. Multi-step test is a complex solution requiring more effort and dives into much deeper details than requested in the question.

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/monitor-web-app-availability#create-a-test> : All the options listed here map 1-1 with the question requirements.

upvoted 9 times

✉  **FuckYouAll34** Most Recent 1 week, 3 days ago

**Selected Answer: E**

E

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/availability-multistep>

upvoted 2 times

✉ **Netspud** 2 months ago

**Selected Answer: B**

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/monitor-web-app-availability>

upvoted 2 times

✉ **Vantirup** 2 months ago

**Selected Answer: B**

url ping seems to be the answer

upvoted 4 times

✉ **Nina2022** 2 months, 3 weeks ago

Should be customTruckAvailability, multipstep is no longer supported

upvoted 4 times

✉ **fearoffree** 2 months, 1 week ago

Agreed:

Microsoft recommend using TrackAvailability() to submit custom availability tests instead of multi-step web tests.

upvoted 1 times

✉ **leonidn** 3 months, 1 week ago

**Selected Answer: B**

1. Retries
2. Parse dependent requests
3. Test frequency
4. Test Timeout

All are the features of URL ping.

upvoted 6 times

✉ **altafpatel1984** 5 months ago

As per following article, Multi-step web tests have been deprecated. So now D is out of scope for answer.

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/availability-multistep>

upvoted 4 times

✉ **clownzilla** 6 months, 1 week ago

The answer is only correct for now - so this is quite a confusing question.

See here: <https://docs.microsoft.com/en-us/azure/azure-monitor/app/availability-multistep>

Important

Multi-step web tests have been deprecated. We recommend using TrackAvailability() to submit custom availability tests instead of multi-step web tests. With TrackAvailability() and custom availability tests, you can run tests on any compute you want and use C# to easily author new tests.

upvoted 5 times

✉ **lxzhu2013** 7 months ago

B is correct.

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/monitor-web-app-availability>

URL ping supports "Test frequency", "Parse dependent requests" and "Enable retries".

upvoted 3 times

✉ **ewertonews** 7 months, 1 week ago

Provided answer is correct. Note that it says "websites", in plural. A ping test is just for one site. A multi-step web test is for a sequence of URLs.  
<https://docs.microsoft.com/en-us/azure/azure-monitor/app/availability-multistep>

upvoted 2 times

✉ **ning** 8 months, 1 week ago

B, URL Ping is not just a ping, it has other configurations, which can satisfy all needs here.

upvoted 2 times

✉ **Krzysztof1543** 8 months, 2 weeks ago

The requirement says: If a website fails to load, the system must attempt to reload the site three more times. I believe it means that we test for the first time and then if it fails we try additionally 3 more times so 4 in total to mark test as failure. And that might eliminate URL ping test as it is able to mark test as a failure after 3 three successive attempts fail:

Enable retries - When the test fails, it's retried after a short interval. A failure is reported only if three successive attempts fail. Subsequent tests are then performed at the usual test frequency. Retry is temporarily suspended until the next success. This rule is applied independently at each test location. We recommend this option. On average, about 80 percent of failures disappear on retry.

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/monitor-web-app-availability>

With that being said I believe the answer is correct.

upvoted 1 times

✉ **antares5403** 8 months, 3 weeks ago

answer must be URL ping

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/monitor-web-app-availability>

"They measure the performance associated with that response. They also add the ability to set custom success criteria, coupled with more advanced features like parsing dependent requests and allowing for retries."

upvoted 1 times

✉ **Frankthraway** 9 months, 1 week ago

Why would an Azure Function and TrackAvailability() not work in this scenario?

upvoted 1 times

✉ **argoth** 9 months ago

You need to implement this process with the least amount of effort.

upvoted 1 times

✉ **Helpnosense** 9 months, 3 weeks ago

Ping is for web server is responsive. Slightly different from the website is responsive. To test a website response ping is not enough, need application-level query like curl etc.

upvoted 3 times

✉ **manojchavan** 10 months, 1 week ago

I think the correct answer should be B: URL ping. All the requirements mentioned is met by both tests: URL Ping and multi-step. But the "to implement this process in least amount of effort", we will need to use URL ping.

upvoted 2 times

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.

**Correct Answer: B**

You can create an Azure Function with TrackAvailability() that will run periodically according to the configuration given in TimerTrigger function with your own business logic. The results of this test will be sent to your Application Insights resource, where you will be able to query for and alert on the availability results data.

This allows you to create customized tests similar to what you can do via Availability Monitoring in the portal. Customized tests will allow you to write more complex availability tests than is possible using the portal UI, monitor an app inside of your Azure VNET, change the endpoint address, or create an availability test even if this feature is not available in your region.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/availability-azure-functions>

✉  **mlantonis** Highly Voted 10 months, 3 weeks ago

Based on the doc, I believe B is correct.

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/availability-azure-functions>

upvoted 21 times

✉  **qzrkfrcglkzzvfrcro** Highly Voted 9 months, 1 week ago

I think the answer should be URL Ping Test.

It can send an alert when the website is unavailable or unresponsive. See test timeouts and alerts in the link.

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/monitor-web-app-availability>

upvoted 16 times

✉  **iamstudying** Most Recent 1 month, 1 week ago

**Selected Answer: A**

I would go with A - URL Ping satisfy all the requirements. It does not check SSL validity BUT there is no requirement to do so, buddies

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/availability-standard-tests>

upvoted 2 times

✉  **adone** 2 months, 2 weeks ago

This scenario does not make any sense.

Consumption plans are not intended for high availability because the app may scale to zero when idle which may lead to cold start of some minute(s) so it makes no sense to monitor it for availability. With URL Ping, you will pay for the compute resources generated by your monitoring request to your URL Ping which makes this option ridiculous with consumption plan. But monitoring your application with an URL Ping might keep your function app up and running if this is what you expect :D

The option B is the less worse but keep in mind that consumption plan are not intended for high availability (does not need to be monitored). They are intended for asynchronous executions, even high workloads and parallel executions, which does not require to be highly available. For high availability, choose Premium/Dedicated plans.

upvoted 4 times

✉  **leonidn** 3 months, 1 week ago

**Selected Answer: B**

I guess an SSL validity check is required. URL ping does not provide this feature. There is no Standard test option. So then, option B is the only one that is viable.

upvoted 3 times

✉  **ScubaDiver123456** 2 months, 3 weeks ago

I'm confused. I don't see a requirement to test SSL validity. It only says the API is protected by SSL.

upvoted 1 times

✉  **HiteshRamnani** 3 months, 4 weeks ago

B is correct  
upvoted 1 times

✉ **avenger34** 4 months, 2 weeks ago

"Standard tests are a single request test that is similar to the URL ping test but more advanced. In addition to validating whether an endpoint is responding and measuring the performance, Standard tests also includes SSL certificate validity, proactive lifetime check, HTTP request verb (for example GET,HEAD,POST, etc.), custom headers, and custom data associated with your HTTP request."

URL Ping doesn't support checking SSL certificate

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/monitor-web-app-availability>

upvoted 5 times

✉ **avenger34** 4 months, 2 weeks ago

The ref url:

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/availability-standard-tests>

upvoted 2 times

✉ **Amza93** 6 months ago

The correct answer is B because:

1. TrackAvailability() sends results to Application Insights. Application Insights can test if your application isn't responding or responds too slowly (reference: <https://docs.microsoft.com/en-us/azure/azure-monitor/app/availability-overview>)

2. URL ping test can test endpoint availability, but it cannot test if the application is responding too slowly.

upvoted 2 times

✉ **Chiboy** 2 months, 2 weeks ago

URL Ping can test if applications are responding slowly by continually tuning the "Time Out" period for the website url to respond to pings. Moreover, I still don't know why anyone will want to monitor a Functions App that is on a Consumption Plan, given that it goes to sleep during periods of inactivity and takes close to ten minutes to wake up. If your functions are important to you, you'd switch to an App Service Plan.

upvoted 1 times

✉ **NiceGuyAlberto** 4 months, 3 weeks ago

Success criteria for URL ping test

Setting: Test timeout

Explanation: Decrease this value to be alerted about slow responses. The test is counted as a failure if the responses from your site have not been received within this period. If you selected Parse dependent requests, then all the images, style files, scripts, and other dependent resources must have been received within this period.

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/monitor-web-app-availability>

=> URL ping test can indeed test if the application is responding too slowly => A

upvoted 3 times

✉ **sauravgarg001** 7 months, 2 weeks ago

Given Answer is correct as URL Ping Test doesn't check for SSL Validation

upvoted 7 times

✉ **Maharaja** 6 months, 4 weeks ago

Any reference of the same? MS documentations? Thank you

upvoted 2 times

✉ **ning** 8 months, 1 week ago

Unless this http has to be POST ... then URL ping is the correct answer ... easy to implement and auto send alert ...

For availability tracking, you have to set up more things inside application insights, in order to send email alerts ...

upvoted 5 times

✉ **finnishr** 8 months, 2 weeks ago

I would 100% go for URL ping test. First of all you would have to add a criteria for the website responding too slowly and secondly you need send an automatic alert which is not possible with B.

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/monitor-web-app-availability>

upvoted 3 times

✉ **HimanshuNankani** 6 months, 1 week ago

It is possible with B. Just as create test for url ping, select custom option.

upvoted 1 times

✉ **Frankthraway** 9 months, 1 week ago

Why would the URL Ping Test not work in this scenario?

upvoted 5 times

✉ **Robert12345Robert** 9 months, 3 weeks ago

B does not automatically send a alert. A does. I would go for A.

upvoted 5 times

✉ **goatlord** 10 months ago

Correct Answer. Completely Correct!

upvoted 1 times

**DRAG DROP -**

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 GraphServiceClient.	
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.	

<
>
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**Correct Answer:**

Actions	Answer Area
	Register the application with the Microsoft identity platform.
	Build a client by using the client app ID.
	Create an authentication provider.
	Create a new instance of the GraphServiceClient.
	Invoke the request to the Microsoft Graph API.

<
>
↑
↓

Step 1: Register the application with the Microsoft identity platform.

To authenticate with the Microsoft identity platform endpoint, you must first register your app at the Azure app registration portal

Step 2: Build a client by using the client app ID

Step 3: Create an authentication provider

Create an authentication provider by passing in a client application and graph scopes.

Code example:

```
DeviceCodeProvider authProvider = new DeviceCodeProvider(publicClientApplication, graphScopes);
```

```
// Create a new instance of GraphServiceClient with the authentication provider.
```

```
GraphServiceClient graphClient = new GraphServiceClient(authProvider);
```

Step 4: Create a new instance of the GraphServiceClient

Step 5: Invoke the request to the Microsoft Graph API

Reference:

<https://docs.microsoft.com/en-us/graph/auth-v2-service>

<https://docs.microsoft.com/en-us/graph/sdks/create-client>

  **kishe** Highly Voted  10 months, 4 weeks ago

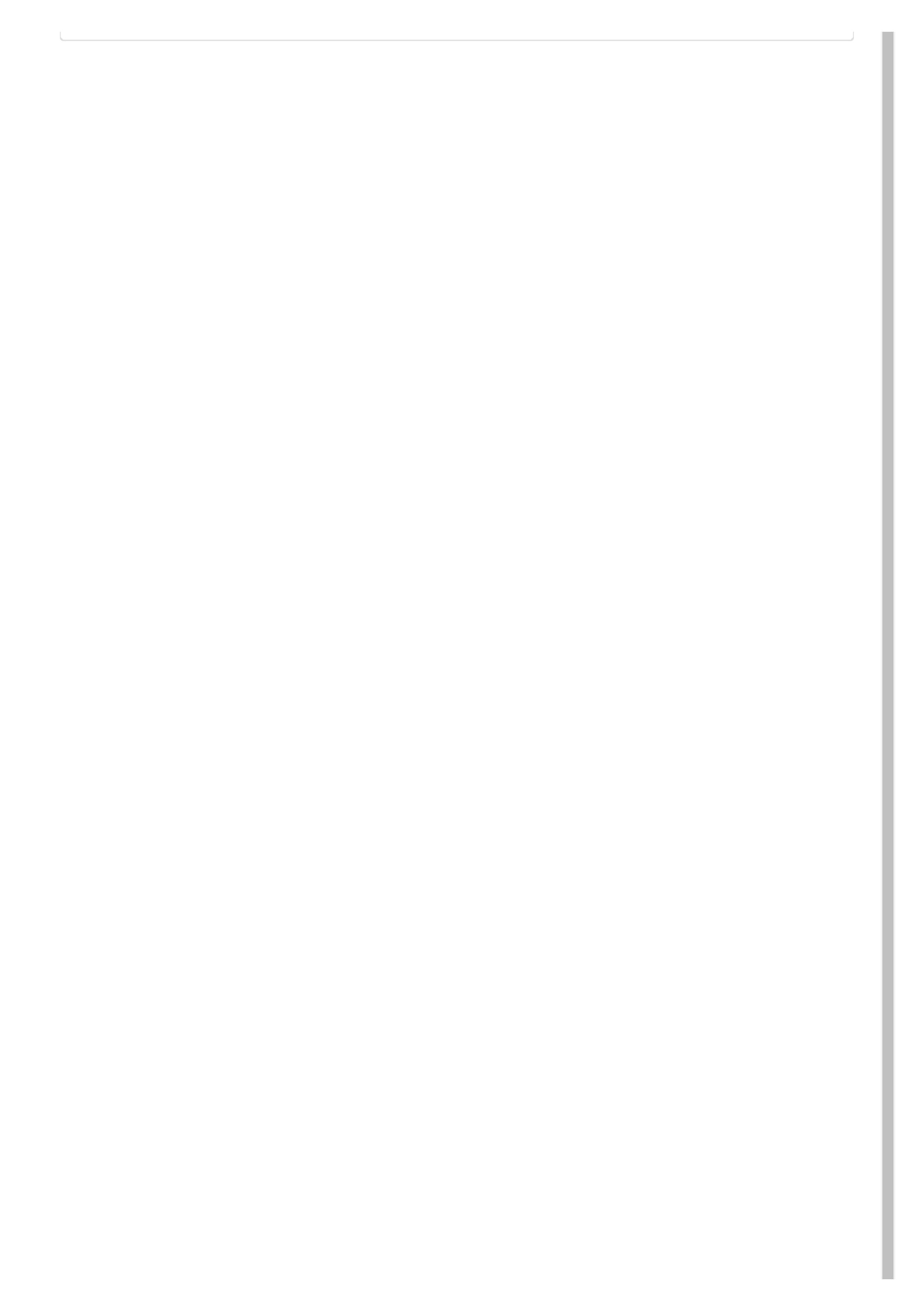
Answer is correct

upvoted 25 times

  **BishopeL** Highly Voted  8 months ago

I got this in my exam this morning. The provided answer is correct.

upvoted 20 times



**DRAG DROP -**

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**

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.

**Answer Area****Correct Answer:****Actions**

Create action groups and alert rules.

Add a diagnostic setting to the Azure Function App.

Create an Azure storage account.

**Answer Area**

Create a Log Analytics workspace.

Install the Logic Apps Management solution.

Add a diagnostic setting to the Azure Logic App.

Step 1: Create a Log Analytics workspace

Before you start, you need a Log Analytics workspace.

Step 2: Install the Logic Apps Management solution

To set up logging for your logic app, you can enable Log Analytics when you create your logic app, or you can install the Logic Apps Management solution in your

Log Analytics workspace for existing logic apps.

Step 3: Add a diagnostic setting to the Azure Logic App

Set up Azure Monitor logs -

1. In the Azure portal, find and select your logic app.
2. On your logic app menu, under Monitoring, select Diagnostic settings > Add diagnostic setting.

Reference:

<https://docs.microsoft.com/en-us/azure/logic-apps/monitor-logic-apps-log-analytics>

  **jadda** Highly Voted  10 months, 1 week ago

After the March 26 changes, Logic apps are out of scope for the AZ-204 exam  
upvoted 22 times

✉️  **HiteshRamnani** 3 months, 4 weeks ago

thank you  
upvoted 1 times

✉️  **mandusya** 4 months ago

confirmed  
<https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RE4oZ7B>  
upvoted 2 times

✉️  **dhishkiyaa** 7 months, 3 weeks ago

Can you refer the source?  
upvoted 2 times

✉️  **jay158**  9 months, 3 weeks ago

Answer is correct  
<https://docs.microsoft.com/en-us/azure/logic-apps/monitor-logic-apps-log-analytics>  
upvoted 6 times

✉️  **learner06**  7 months, 1 week ago

don't we need to create Azure storage account in order to store logs in blob?  
upvoted 1 times

✉️  **xahah22222** 5 months, 4 weeks ago

Such an account is already there  
upvoted 2 times

✉️  **Jurgen1234** 9 months, 3 weeks ago

First one should Azure storage account as you need to store them in a blob storage  
upvoted 1 times

✉️  **Jurgen1234** 9 months, 3 weeks ago

Nevermind you already have a storage account  
upvoted 1 times

✉️  **markra** 10 months, 3 weeks ago

The given answer is correct. See the reference provided in a solution.  
upvoted 3 times

**DRAG DROP -**

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**

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 Area****Correct Answer:****Actions**

Send console logs.

**Answer Area**

Create a Log Analytics workspace.

Add a VMInsights solution.

Install agents on the VM and VM scale set to be monitored.

Create an Application Insights resource.

Step 1: Create a Log Analytics workspace.

First create the workspace.

Step 2: Add a VMInsights solution.

Before a Log Analytics workspace can be used with VM insights, it must have the VMInsights solution installed.

Step 3: Install agents on the VM and VM scale set to be monitored.

Prior to onboarding agents, you must create and configure a workspace. Install or update the Application Insights Agent as an extension for Azure virtual machines and VM scale sets.

Step 4: Create an Application Insights resource

Sign in to the Azure portal, and create an Application Insights resource.

## Application Insights

Monitor web app performance and usage

Basics Tags Review + create

Create an Application Insights resource to monitor your live web application. With Application Insights, you have full observability into your application across all components and dependencies of your complex distributed architecture. It includes powerful analytics tools to help you diagnose issues and to understand what users actually do with your app. It's designed to help you continuously improve performance and usability. It works for apps on a wide variety of platforms including .NET, Node.js and Java EE, hosted on-premises, hybrid, or any public cloud. [Learn More](#)

### PROJECT DETAILS

Select a 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 \* ⓘ

My\_Resource\_Group

[Create new](#)

### INSTANCE DETAILS

Name \* ⓘ

My\_AppInsights\_Resource

Region \* ⓘ

(US) West US 2

Resource Mode \* ⓘ

Classic **Workspace-based**

### WORKSPACE DETAILS

Subscription \* ⓘ

Visual Studio Enterprise

Log Analytics Workspace \* ⓘ

my-workspace-name [westus2]

[Review + create](#)

[« Previous](#)

[Next : Tags >](#)

Once a workspace-based Application Insights resource has been created, configuring monitoring is relatively straightforward.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/vm/vminsights-configure-workspace> <https://docs.microsoft.com/en-us/azure/azure-monitor/app/create-workspace-resource>

✉ **aradice** Highly Voted 9 months, 3 weeks ago

correct <https://docs.microsoft.com/en-us/azure/azure-monitor/vm/vminsights-configure-workspace?tabs=CLI>  
<https://docs.microsoft.com/en-us/azure/azure-monitor/app/create-workspace-resource>

upvoted 16 times

✉ **vilainchien** 2 months ago

correct <https://docs.microsoft.com/en-us/azure/azure-monitor/vm/vminsights-overview#configuring-vm-insights>  
upvoted 1 times

✉ **finnishr** Highly Voted 8 months, 2 weeks ago

100% correct <https://docs.microsoft.com/en-us/azure/azure-monitor/vm/vminsights-overview>  
upvoted 6 times

✉ **wsguruprasath** Most Recent 1 month ago

Create Log Analytics workspace.  
Add VMInsights solution to workspace.  
Install agents on virtual machine and virtual machine scale set to be monitored.

<https://docs.microsoft.com/en-us/azure/azure-monitor/vm/vminsights-overview>  
upvoted 1 times

✉ **RajMasilamani** 7 months ago

Configuring VM insights  
The steps to configure VM insights are as follows. Follow each link for detailed guidance on each step:

1.Create Log Analytics workspace.

2.Add VMInsights solution to workspace.  
3.Install agents on virtual machine and virtual machine scale set to be monitored.  
upvoted 4 times

✉ **ning** 8 months, 1 week ago

Why application insights???  
upvoted 1 times

✉ **nyanko** 2 months, 2 weeks ago

Is VMInsights required to monitor application log ?  
<https://docs.microsoft.com/en-us/azure/azure-monitor/app/azure-vm-vmss-apps>  
upvoted 1 times

✉ **ning** 7 months, 2 weeks ago

After lots of research ...

1. Log analytics name space
2. Application insights
3. VM solutions
4. Install agents

Question #20

Topic 5

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 analyse app uptime for each month.

Which two solutions will achieve the goal? Each correct answer presents part of the 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

**Correct Answer:** BD

Reference:

<https://azure.microsoft.com/en-us/blog/creating-a-web-test-alert-programmatically-with-application-insights/>

**DRAG DROP -**

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		
set	Send messages through a high-performance publisher/subscriber mechanism	Feature

**Correct Answer:****Answer Area**

Features	Requirement	Feature
horizontal partitioning	Create a data structure for storing collections of related items	set
channel	Create a data structure for the most recently accessed cache items	list
list		
set	Send messages through a high-performance publisher/subscriber mechanism	channel

**Reference:**

<https://www.red-gate.com/simple-talk/development/dotnet-development/overview-of-azure-cache-for-redis/> <https://docs.microsoft.com/en-us/azure/architecture/best-practices/caching>

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

**Correct Answer:** BD

Example:

```
public async Task Enqueue(string payload)
{
 // StartOperation is a helper method that initializes the telemetry item
 // and allows correlation of this operation with its parent and children. var operation = telemetryClient.StartOperation<DependencyTelemetry>
 ("enqueue " + queueName);

 operation.Telemetry.Type = "Azure Service Bus";
 operation.Telemetry.Data = "Enqueue " + queueName;
 var message = new BrokeredMessage(payload);
 // Service Bus queue allows the property bag to pass along with the message.
 // We will use them to pass our correlation identifiers (and other context)
 // to the consumer.
 message.Properties.Add("ParentId", operation.Telemetry.Id);
 message.Properties.Add("RootId", operation.Telemetry.Context.Operation.Id);
```

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/custom-operations-tracking>

✉️  **cyberbull** Highly Voted  1 year, 6 months ago

the Given answer is correct IMHO

upvoted 37 times

✉️  **10x** 1 year, 2 months ago

Yes. Makes sense to me too.

upvoted 6 times

✉️  **mlantonis** Highly Voted  10 months, 4 weeks ago

Correct Answer: B and D

```
message.Properties.Add("ParentId", operation.Telemetry.Id);
message.Properties.Add("RootId", operation.Telemetry.Context.Operation.Id);
```

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/custom-operations-tracking#enqueue>

upvoted 14 times

✉️  **AzureDJ** Most Recent  1 month, 1 week ago

Answer is correct

upvoted 1 times

✉️  **Ravindu** 6 months, 1 week ago

The given answer is correct.

upvoted 1 times

✉️  **glam** 11 months, 1 week ago

Correct

upvoted 1 times

✉️  **Immy\_08** 11 months, 3 weeks ago

The given answer is correct, also available on udemy course  
upvoted 3 times

✉️  **vb3d** 1 year, 1 month ago

Options form the answer mentioned in the code on <https://docs.microsoft.com/en-us/azure/azure-monitor/app/custom-operations-tracking#enqueue>  
upvoted 2 times

✉️  **paru123456789** 1 year, 1 month ago

Answer:  
Telemetry.Id  
Telemetry.Context.Operation.Id  
upvoted 3 times

**HOTSPOT -**

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.	<input type="radio"/>	<input type="radio"/>
Edge nodes must be purged of all cache assets.	<input type="radio"/>	<input type="radio"/>
The compression type is supported.	<input type="radio"/>	<input type="radio"/>

## Answer Area

Statement	Yes	No
Correct Answer: The file MIME type is supported by the service.	<input type="radio"/>	<input checked="" type="radio"/>
Edge nodes must be purged of all cache assets.	<input checked="" type="radio"/>	<input type="radio"/>
The compression type is supported.	<input checked="" type="radio"/>	<input type="radio"/>

Box 1: No -

Front Door can dynamically compress content on the edge, resulting in a smaller and faster response to your clients. All files are eligible for compression.

However, a file must be of a MIME type that is eligible for compression list.

Box 2: No -

Sometimes you may wish to purge cached content from all edge nodes and force them all to retrieve new updated assets. This might be due to updates to your web application, or to quickly update assets that contain incorrect information.

Box 3: Yes -

These profiles support the following compression encodings: Gzip (GNU zip), Brotli

Reference:

<https://docs.microsoft.com/en-us/azure/frontdoor/front-door-caching>

 **bensagar10** Highly Voted 1 year, 5 months ago

1.Yes

2.No Refer - <https://docs.microsoft.com/en-us/azure/frontdoor/front-door-caching>, You don't need to purge the cache assets. Here the issue is that the file size needs to be less than 8MB

3.Yes

upvoted 143 times

 **Juanlu** 1 year, 1 month ago

I Agree !  
upvoted 3 times

 **AfroYeti** 1 year, 2 months ago

You could argue that compression isn't supported due to the file size

"Additionally, the file must also be between 1 KB and 8 MB in size, inclusive."

upvoted 2 times

 **jkes80** 9 months, 2 weeks ago

Compression isn't but the answer states "compression TYPE". And Brotli is supported.  
upvoted 3 times

 **profesorklaus** 1 year, 3 months ago

I agree also.  
upvoted 1 times

 **Tealon** 1 year, 4 months ago

I agree with this answer.  
upvoted 1 times

 **AakashNeedsEmAll** Highly Voted  1 year, 5 months ago

application/xml is a MIME type and therefore, is supported. Answer 1 should be yes.

upvoted 24 times

 **minaritochuck** Most Recent  1 week, 1 day ago

<https://docs.microsoft.com/en-us/azure/frontdoor/standard-premium/how-to-compression>

In Azure Front Door, only eligible files are compressed. To be eligible for compression, a file must:

Be of a MIME type  
Be larger than 1 KB  
Be smaller than 8 MB

These profiles support the following compression encodings:

gzip (GNU zip)  
brotli  
If the request supports more than one compression type, brotli compression takes precedence.

I guess the root cause is because xml is 9MB in size.

1. YES : xml = MIME type
  2. NO : I don't think purging cache is necessary..
  3. YES - brotli is supported
- upvoted 1 times

 **Azprep** 2 weeks, 3 days ago

1. Yes
  2. No
  3. Yes
- upvoted 1 times

 **Prasu69** 1 month ago

1. NO - the file must be of a MIME type to be eligible for compression. application/xml or text/xml are not supported.
  2. Yes - size should be in 1- 8MB chunks. ( 9 MB divides into 8MB chunk and 1 MB chunk )
  3. Yes - Brotli Compression method is supported.
- upvoted 1 times

 **Prasu69** 1 month ago

1. NO - the file must be of a MIME type to be eligible for compression. application/xml or text/xml are not supported.
  2. No - size should be in 1- 8MB chunks.
  3. Yes - Brotli Compression method is supported.
- upvoted 1 times

 **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22  
upvoted 2 times

 **SivajiTheBoss** 1 month, 2 weeks ago

Question: What is the root cause for the issue, So  
Answer:  
1. No  
2. No  
3. Yes (because the file size greater than 8 mb)  
upvoted 1 times

✉  **kozchris** 1 month, 3 weeks ago

no - the files are getting stored, there is no blocking of the XML files  
yes - maybe files were cached prior to some setting getting configured  
yes - you need to make sure the compression is supported.

upvoted 1 times

✉  **exnaniantwort** 3 months, 2 weeks ago

I think Azure Front Door is out of syllabus  
upvoted 4 times

✉  **leonidn** 3 months, 2 weeks ago

Yes - The file MIME type application/xml is supported  
No - The root cause is that file must be between 1 KB and 8 MB in size, inclusive. No need to purge all cached assets.  
Yes - Brotli compression type is supported

<https://docs.microsoft.com/en-us/azure/frontdoor/front-door-caching#file-compression>

Don't be confused by the phrase "the Front Door environment requests the file from the backend in chunks of 8 MB.". It is irrelevant to compression

upvoted 6 times

✉  **kiran\_pro** 4 months ago

NO, NO, Yes is the correct ans  
upvoted 3 times

✉  **UDevelop** 7 months, 3 weeks ago

NO, NO, YES.  
upvoted 2 times

✉  **ning** 8 months, 2 weeks ago

The question is asking how to determine the root cause not what is the root cause, I would say, you need check  
1. mime type  
2. compression method  
3. file size

So, my guess will be yes / no / yes, though I think the root cause is that file size is NOT between 1K and 8M inclusive  
upvoted 2 times

✉  **mkrizevnik** 9 months, 2 weeks ago

Another unclear question from MS... You know what the problem is (file size) but it's unclear which answers are correct because you can interpret the question/answers in to different ways.  
upvoted 4 times

✉  **francis6170** 10 months, 3 weeks ago

got this in the exam :)  
upvoted 6 times

✉  **cpalacios** 8 months, 3 weeks ago

What did you put?  
upvoted 2 times

✉  **mlantonis** 10 months, 4 weeks ago

Box 1: Yes  
Front Door can dynamically compress content on the edge, resulting in a smaller and faster response to your clients. All files are eligible for compression. However, a file must be of a MIME type that is eligible for compression list.

Box 2: No  
You don't need to purge the cache assets. Here the issue is that the file size needs to be less than 8MB.

Box 3: Yes  
These profiles support the following compression encodings: Gzip (GNU zip), Brotli.

Reference:

<https://docs.microsoft.com/en-us/azure/frontdoor/front-door-caching>  
upvoted 21 times

**HOTSPOT -**

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	<ul style="list-style-type: none"><li>Bypass cache</li><li>Override</li><li>Set if missing</li></ul>
Cache expiration duration	<ul style="list-style-type: none"><li>1 second</li><li>1 minute</li><li>1 hour</li><li>1 day</li></ul>
Query string caching behavior	<ul style="list-style-type: none"><li>Ignore query strings</li><li>Bypass caching for query strings</li><li>Cache every unique URL</li></ul>

## Answer Area

Setting	Action				
Caching behavior	<table border="1"><tr><td>Bypass cache</td></tr><tr><td>Override</td></tr><tr><td>Set if missing</td></tr></table>	Bypass cache	Override	Set if missing	
Bypass cache					
Override					
Set if missing					
Correct Answer: Cache expiration duration	<table border="1"><tr><td>1 second</td></tr><tr><td>1 minute</td></tr><tr><td>1 hour</td></tr><tr><td>1 day</td></tr></table>	1 second	1 minute	1 hour	1 day
1 second					
1 minute					
1 hour					
1 day					
Query string caching behavior	<table border="1"><tr><td>Ignore query strings</td></tr><tr><td>Bypass caching for query strings</td></tr><tr><td>Cache every unique URL</td></tr></table>	Ignore query strings	Bypass caching for query strings	Cache every unique URL	
Ignore query strings					
Bypass caching for query strings					
Cache every unique URL					

Box 1: Override -

Override: Ignore origin-provided cache duration; use the provided cache duration instead. This will not override cache-control: no-cache.

Set if missing: Honor origin-provided cache-directive headers, if they exist; otherwise, use the provided cache duration.

Incorrect:

Bypass cache: Do not cache and ignore origin-provided cache-directive headers.

Box 2: 1 hour -

All media content must expire from the cache after one hour.

Box 3: Cache every unique URL -

Cache every unique URL: In this mode, each request with a unique URL, including the query string, is treated as a unique asset with its own cache. For example, the response from the origin server for a request for example.ashx?q=test1 is cached at the POP node and returned for subsequent caches with the same query string. A request for example.ashx?q=test2 is cached as a separate asset with its own time-to-live setting.

Incorrect Answers:

Bypass caching for query strings: In this mode, requests with query strings are not cached at the CDN POP node. The POP node retrieves the asset directly from the origin server and passes it to the requestor with each request.

Ignore query strings: Default mode. In this mode, the CDN point-of-presence (POP) node passes the query strings from the requestor to the origin server on the first request and caches the asset. All subsequent requests for the asset that are served from the POP ignore the query strings until the cached asset expires.

Reference:

<https://docs.microsoft.com/en-us/azure/cdn/cdn-query-string>

✉  **RaviKS**  1 year, 3 months ago

Given Answers are correct

upvoted 51 times

✉  **mlantonis**  10 months, 4 weeks ago

Box 1: Override

Override: Ignore origin-provided cache duration; use the provided cache duration instead. This will not override cache-control: no-cache.

Set if missing: Honor origin-provided cache-directive headers, if they exist; otherwise, use the provided cache duration.

Bypass cache: Do not cache and ignore origin-provided cache-directive headers.

Box 2: 1 hour

All media content must expire from the cache after one hour.

upvoted 14 times

✉  **mlantonis** 10 months, 4 weeks ago

Reference:

<https://docs.microsoft.com/en-us/azure/cdn/cdn-query-string>

<https://docs.microsoft.com/en-us/azure/cdn/cdn-caching-rules>

upvoted 5 times

✉ **mlantonis** 10 months, 4 weeks ago

Box 3: Cache every unique URL

Cache every unique URL: In this mode, each request with a unique URL, including the query string, is treated as a unique asset with its own cache. For example, the response from the origin server for a request for example.ashx?q=test1 is cached at the POP node and returned for subsequent caches with the same query string. A request for example.ashx?q=test2 is cached as a separate asset with its own time-to-live setting.

Bypass caching for query strings: In this mode, requests with query strings are not cached at the CDN POP node. The POP node retrieves the asset directly from the origin server and passes it to the requestor with each request.

Ignore query strings: Default mode. In this mode, the CDN point-of-presence (POP) node passes the query strings from the requestor to the origin server on the first request and caches the asset. All subsequent requests for the asset that are served from the POP ignore the query strings until the cached asset expires.

upvoted 12 times

✉ **petitbilly** Most Recent 1 month, 2 weeks ago

Got it in exam 03/22

upvoted 2 times

✉ **HimanshuNankani** 6 months, 1 week ago

1. Override - because we are explicitly defining the duration to be 1 hour .

We DO NEED Cache ( hence it cannot be bypass cache)

We need EXACT 1 HOUR ( so can't use Set If Missing which could change the specific value)

2. 1 Hour as required

3. We do need to 'Cache every unique url' because we need to provide cache for different qualities that is specified in the query parameter.

upvoted 8 times

✉ **MK22** 8 months, 2 weeks ago

Provided answer is correct

upvoted 2 times

✉ **glam** 11 months, 1 week ago

correct.

upvoted 1 times

✉ **rakelcoelho** 1 year ago

Didn't understand. On the first box it can be «override» or «set if missing»?

upvoted 4 times

✉ **titombo** 1 year ago

Me too, but according MS page the concepts are:

Override: Ignore origin-provided cache duration; use the provided cache duration instead. This will not override cache-control: no-cache.  
Set if missing: Honor origin-provided cache-directive headers, if they exist; otherwise, use the provided cache duration.

What I don't understand is:

origin-provided cache duration: is the cache provided in Azure, right?

So in other words it would something like:

Override cache means that it will always use the cache provided in Azure.

Set if missing, this means it can use the client cache request in the request header property.

Am I wrong?

upvoted 3 times

✉ **Crickester** 1 year ago

Not really, origin means your backend servers

upvoted 1 times

✉ **profesorklaus** 1 year, 3 months ago

What hasn't been mentioned here is when you try to do on azure portal you should use cdn from Akamai or Verizon but not from Microsoft.  
Microsoft has default caching rules which can not be changed using portal

upvoted 1 times

✉ **yerisof** 1 year, 4 months ago

why is this not ignore query string

upvoted 1 times

✉ **TakumaK** 10 months, 4 weeks ago

As the item in the question. the query has the quality field. this is intended to maintain the cache based on the quality.

upvoted 2 times

**HOTSPOT -**

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": [
 {
 "criterionType": ",
SingleResourceMultipleMetricCriteria"
 }
],
 "metricName": "
Http5xx",
 "alertSensitivity": "
High"
}
}
```

```
"type": "Microsoft.Insights/metricAlerts",
"properties": {
 "criteria": [
 {
 "criterionType": ",
SingleResourceMultipleMetricCriteria"
 }
],
 "metricName": "
Http4xx",
 "alertSensitivity": "
High"
}
}
```

**Correct Answer:**

```
"type": "Microsoft.Insights/metricAlerts",
"properties": {
 "criteria": [
 {
 "criterionType": ",
SingleResourceMultipleMetricCriteria"
 }
],
 "metricName": "
Http4xx",
 "alertSensitivity": "
High"
}
}
```

Box 1: DynamicThresholdCriterion

Box 2: Http5xx -

Server errors are in the 5xx range.

Client errors are in the 4xx range

Box 3: Low -

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/alerts/alerts-dynamic-thresholds>

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. noeviction
- B. allkeys-lru
- C. volatile-lru
- D. allkeys-random
- E. volatile-ttl
- F. volatile-random

**Correct Answer:** BC

B: The allkeys-lru policy evict keys by trying to remove the less recently used (LRU) keys first, in order to make space for the new data added.

Use the allkeys-lru policy when you expect a power-law distribution in the popularity of your requests, that is, you expect that a subset of elements will be accessed far more often than the rest.

C: volatile-lru: evict keys by trying to remove the less recently used (LRU) keys first, but only among keys that have an expire set, in order to make space for the new data added.

Note: The allkeys-lru policy is more memory efficient since there is no need to set an expire for the key to be evicted under memory pressure.

Reference:

<https://redis.io/topics/lru-cache>

**Topic 6 - Question Set 6**

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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

#### Correct Answer: A

A message is raw data produced by a service to be consumed or stored elsewhere. The Service Bus is for high-value enterprise messaging, and is used for order processing and financial transactions.

Reference:

<https://docs.microsoft.com/en-us/azure/event-grid/compare-messaging-services>

✉  **kabs** Highly Voted  1 year, 9 months ago

Answer should be event hub

upvoted 25 times

✉  **xofowi5140** 1 year, 9 months ago

The event hub message size limit is 1MB.

upvoted 26 times

✉  **Adol** 1 year, 3 months ago

Message size of 1MB has no conflict with 2MB of messages in 24 hours! So still Event hub when it comes to IoT or when many devices sending data with device id as identifier

upvoted 4 times

✉  **profesorklaus** 1 year, 2 months ago

Of course it has a conflict. One store can send message as a batch with size 2MB.

upvoted 8 times

✉  **TalesFromEarth** 1 year, 9 months ago

So is in service hub. Maximum message size: 256 KB for Standard tier, 1 MB for Premium tier.

upvoted 2 times

✉  **Dirk** 1 year, 9 months ago

256 KB is the max size of the message queue, But this is not about the messages delivered per 24 hours.

<https://stackoverflow.com/questions/22384193/azure-service-bus-message-size-technology-limit-and-pricing/22384741#:~:text=1%20Answer&text=Service%20Bus%20queues%20support%20a,messages%20held%20by%20a%20queue.>  
In the question it's about the size in 24 hours.

upvoted 4 times

✉  **MaheshBeeravelli** 1 year, 9 months ago

I agree with xofowi5140. Given answer is correct.

upvoted 12 times

✉  **Tmm58** 1 year, 4 months ago

Why Event Hub? This is clearly about delivering messages (with the actual data) and not events.

upvoted 22 times

✉  **Spooky7** Highly Voted  10 months, 4 weeks ago

First of all - that question is not about THE BEST solution but about THE VALID solution. So responses like "Event Hub is the best choice" doesn't bring anything to the table.

That being said - is the provided solution valid? I would say NO, because:

- topics allows multiple subscribers, and here we need to process each event once
- correlation filter is for subscriptions, not topics
- even when assuming there is typo in the question and correlation filter is defined on the subscription level - it still is not a valid solution, because

new stores can be opened in the future with many new device identifiers which you can't know in advance. Besides that filter make no sense in this scenario whatsoever, you just need to save data in storage account and basically partition it by device identifier.

upvoted 20 times

✉  **Netspud** Most Recent ⓘ 2 months ago

**Selected Answer: B**

Answer is no.

upvoted 3 times

✉  **leonidn** 3 months, 1 week ago

**Selected Answer: B**

Filters can be applied to a subscription level. Each topic is limited to 2000 subscriptions. Since we are expecting to exceed that value in the future, then we need to have >2000 filters, hence > 2000 subscriptions. Consequently, that is not a solution.

upvoted 10 times

✉  **ReniRechner** 1 month, 3 weeks ago

they have 2000+ producers not 2000+ consumers.

upvoted 1 times

✉  **khursheeda** 6 months, 1 week ago

Can anyone please confirm the Answer? Is should be Service bus or Event Hub?

upvoted 3 times

✉  **ReniRechner** 1 month, 3 weeks ago

it doesn't have to OR. It could be one of them, both or even none.

upvoted 1 times

✉  **ning** 8 months, 1 week ago

Answer is NO ...

Service bus cannot handle that much volume ...

Even with partition it has a hard stop at 80G, without partition the hard stop is 5 G ...

You have already 2000 POS, each generate 2M every day, and usually topic has TTL 7 days, so that is well over 80G, and with future expansion, clearly NO

upvoted 4 times

✉  **[Removed]** 3 months, 3 weeks ago

Just about the ning calculation:  $2000 \times 2MB \times 7 = 28GB$ , so < 80GB.

upvoted 1 times

✉  **ning** 8 months, 1 week ago

2000 stores not POS, not sure how many POS per store, anyway size is clear an issue for service bus

upvoted 1 times

✉  **j888** 8 months ago

I believe the Blob storage is the receiving end, and the service bus is just the handler.

I think it is right for using a Service bus but I disagree with the Topic statement, therefore I would say no

upvoted 1 times

✉  **wolf\_lu** 9 months ago

i think choose yes

upvoted 2 times

✉  **Frakandel** 11 months, 1 week ago

I think, this solution will work but is not optimal... Optimality is not the issue here, so answer is: Yes

upvoted 3 times

✉  **rdemontis** 1 year, 1 month ago

In my opinion EventHub is the best choice for the following reason:

1. Faster in elaborating millions of data every day.
2. No problem for future expansions of POS as assumed in the question
3. It is a slender system than Service bus
4. It is not required advanced features like transactions, ordering, duplicate detection, and instantaneous consistency as service bus provide
5. The requirement here is to manage huge quantity of streaming data

In a similar question (i don't remember whether on udemy or testpreptraining web site) the correct answer is Event Hub.

upvoted 1 times

✉  **atomicicebreaker** 1 year ago

Service bus is recommended for financial data.

upvoted 2 times

✉  **paru123456789** 1 year, 1 month ago

Answer: Yes

upvoted 7 times

✉  **terences** 1 year, 1 month ago

answer is no

upvoted 2 times

✉  **PauloSilesiano** 1 year, 2 months ago

"Configure a topic to receive the device data by using a correlation filter" - filter conditions are specified on subscriptions, not on topics. So NO.  
upvoted 14 times

✉  **Udoyen** 8 months, 2 weeks ago

This is indeed the deal breaker, nice observe!

upvoted 2 times

✉  **jkes80** 9 months, 2 weeks ago

While Service Bus could be a good solution, this sentence is the culprit in this case. You are right that a correlation filter isn't configurable on the topic. The topic receives all the data and using the subscription you can filter out those messages you want. That's why the correct answer should be "NO".

upvoted 3 times

✉  **fesioche** 4 months, 1 week ago

Service Bus offers "Correlation Filters" capability.

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-filter-examples#correlation-filter-using-correlationid>

upvoted 1 times

✉  **jkes80** 9 months, 2 weeks ago

Although subscriptions are in fact configured on topics, so it depends how strict we should take this... Trick question I guess..

upvoted 3 times

✉  **cbn** 1 year, 2 months ago

Using a service bus is fine. The issue is "Configure a topic to receive the device data by using a correlation filter". Device id is supposed to be the correlation id, and that makes the correlation filter impractical in this scenario.

I would say 'NO'

upvoted 2 times

✉  **cbn** 1 year, 2 months ago

Even if the correlation filter uses some other property, I'm not sure how the topic will cope with the stores that are to be opened in future.

upvoted 2 times

✉  **danielcr** 1 year, 2 months ago

Answer should be event hub, devices send events, and you don't have any specific expectations of how they ought to be handled

<https://azure.microsoft.com/es-es/blog/events-data-points-and-messages-choosing-the-right-azure-messaging-service-for-your-data/>

upvoted 1 times

✉  **AfroYeti** 1 year, 2 months ago

I would go with EventHub, seeing that they do not specify request rate p/m, in the quota section for service bus it states

Number of concurrent receive requests on a queue, topic, or subscription entity Entity Subsequent receive requests are rejected, and an exception is received by the calling code.

\*\*This quota applies to the combined number of concurrent receive operations across all subscriptions on a topic. 5,000\*\*

Granted that it's unlikely on that scale to happen but seeing that there could possibly be 10000 devices active at any given time, you will have rejected requests on the Service Bus API

upvoted 2 times

✉  **TinusTrotylus** 1 year, 3 months ago

IMHO Answer should be Event Hub. More scalable. Can also benefit from capturing events automatically to Azure Storage.

upvoted 2 times

✉  **BananaYummy** 1 year, 3 months ago

Message-based == Service Bus

upvoted 5 times

✉  **Don11** 1 year, 3 months ago

So is the answer No

upvoted 1 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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

#### **Correct Answer: B**

Instead use an Azure Service Bus, which is used for order processing and financial transactions.

Note: An event is a lightweight notification of a condition or a state change. Event hubs are usually used reacting to status changes.

Reference:

<https://docs.microsoft.com/en-us/azure/event-grid/compare-messaging-services>

✉  **xRiot007** Highly Voted 1 year, 10 months ago

For the ones above me. Sensors do not send events, they send messages containing specific data that has been gathered. This makes automaticall the solution incorrect, because you need a Service Bus to collect them. Event Grids and Event Hubs won't do the job here.  
upvoted 38 times

✉  **Nabeelcp** Highly Voted 1 year, 7 months ago

Event Grid and Event Hubs are basically for event based communication . here the scenario is more suited to Message based communication . so the answer is correct  
upvoted 14 times

✉  **ferut** 11 months, 1 week ago

The question doesn't mention 'message', it's just plain 'data'. Events can also be data.  
upvoted 2 times

✉  **meoukg** Most Recent 1 month, 1 week ago

Got it on 03/2022, chose B. No  
upvoted 1 times

✉  **Netspud** 2 months ago

Selected Answer: B  
Answer is no.  
upvoted 1 times

✉  **Aratilra** 3 months, 2 weeks ago

What is the right ans ??????????  
upvoted 3 times

✉  **chingdm** 1 month, 3 weeks ago

I would go for Service Bus because it supports transactional data. POS usually connects to inventory at real time, so make sense for a transaction.  
upvoted 1 times

✉  **ning** 8 months, 1 week ago

No, for any subs, you can have max 100 event grid topics, but there are 2000 stores and 5 POS for each store, for each topic, you can have max 50 subs. The only possible way, is to multiple those, to generate 50,000 subs for 100 topics. But, this would be a horrible situation  
upvoted 1 times

✉  **Ram0202** 8 months, 3 weeks ago

max size allowed in service bus is 1 mb ,ques is for 2 mb so go for event hub  
<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted>  
upvoted 1 times

✉  **altafpatel1984** 5 months ago

max size allowed for event hub is 1 MB

upvoted 1 times

✉  **kondapaturi** 10 months ago

Answer – No, The Azure Event Grid service is used to receiving events and would not fit the purpose of the requirement.

upvoted 1 times

✉  **Hamg** 11 months, 1 week ago

I think many of clarionprogrammer's answers can be very confusing

upvoted 1 times

✉  **eobo** 1 year ago

Correct Answer is : B

Reference: <https://azure.microsoft.com/en-us/blog/events-data-points-and-messages-choosing-the-right-azure-messaging-service-for-your-data/>  
A sale recorded in a point-of-sale solution is both a financial record and an inventory tracking record, and not a mere event. It's recorded in a ledger, which will eventually be merged into a centralized accounting system, often via several integration bridges, and the information must not be lost on the way. The sales information, possibly expressed as separate messages to keep track of the stock levels at the point of sale, and across the sales region, may be used to initiate automated resupply orders with order status flowing back to the point of sale. Service Bus queues or topic subscriptions are ideal for this use-case

upvoted 6 times

✉  **paru123456789** 1 year, 1 month ago

Answer: No

upvoted 3 times

✉  **agcertif** 1 year, 3 months ago

An Event is a lightweight notification that indicates that something happened.

A Message contains the data itself (not just a reference to that data)

=> Correct answer

upvoted 2 times

✉  **Cornholioz** 1 year, 4 months ago

Just curious: what if IoT Hub or Event Hub was provided as a possible option.

Agree that the scenario is messages based and not event based.

But wouldn't the use case still hold good to have maybe the IoT Hub be the right pick too?

upvoted 1 times

✉  **Elecktrus** 1 year, 7 months ago

Answer is correct, because EventGrid only support 25 filters as maximum. You can't filter by deviceid, they are a lot more of 25 device

upvoted 3 times

✉  **sebainones** 1 year, 6 months ago

As the question mentions :"Device data must be correlated based on a device identifier":

Service Bus offers "Correlation Filters" capability.

On the other hand, with Event Grid you could use Advanced filtering you have this limitation:

"Evt-Grid: 5 advanced filters and 25 filter values across all the filters per event grid subscription" . So, I guess it has to be Service Bus and thus NO, Event Grid won't solve this.

reference: <https://docs.microsoft.com/en-us/azure/event-grid/event-filtering>

upvoted 4 times

✉  **anandk203** 1 year, 8 months ago

Comparison of services

COMPARISON OF SERVICES

Service Purpose Type When to use

Event Grid Reactive programming Event distribution (discrete) React to status changes

Event Hubs Big data pipeline Event streaming (series) Telemetry and distributed data streaming

Service Bus High-value enterprise messaging Message Order processing and financial transactions

upvoted 5 times

✉  **Camios** 1 year, 9 months ago

The question doesn't even mention order or financial related data. My assumption is it is device telemetry Poorly worded question and explanation

upvoted 3 times

✉  **Codenob** 1 year, 7 months ago

Agree with contososo Point-of-sale (POS) already implies that these are financial transactions. Thus Service Bus is best fit to use in this scenario.

upvoted 4 times

✉  **clarionprogrammer** 1 year ago

I also misread this earlier.... The focus is on the POS device data--not the financial transactions being processed. So, Event Hub makes more sense.

upvoted 1 times

✉  **contososo** 1 year, 9 months ago

I think the reason they say Point-of-sale is to imply it's financial data

upvoted 10 times

 **Charlie80** 1 year, 10 months ago

The answer is correct but it mentions Event Hub being used to react to status messages. This should read 'Event Grid', per the referenced link in the answer. Event Hubs, are used for telemetry and distributed data streaming.

upvoted 8 times

**DRAG DROP -**

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 Area**

Tools	Functionality	Tool
Correct Answer: Logic Apps Designer	Edit B2B workflows	Enterprise Integration Pack
Code View Editor	Edit definitions in JSON	Code View Editor
Enterprise Integration Pack	Visually add functionality	Logic Apps Designer

**Box 1: Enterprise Integration Pack**

For business-to-business (B2B) solutions and seamless communication between organizations, you can build automated scalable enterprise integration workflows by using the Enterprise Integration Pack (EIP) with Azure Logic Apps.

**Box 2: Code View Editor -****Edit JSON - Azure portal -**

1. Sign in to the Azure portal.
2. From the left menu, choose All services. In the search box, find "logic apps", and then from the results, select your logic app.
3. On your logic app's menu, under Development Tools, select Logic App Code View.
4. The Code View editor opens and shows your logic app definition in JSON format.

**Box 3: Logic Apps Designer -****Reference:**

<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-enterprise-integration-overview> <https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-author-definitions>

✉  **Marusyk**  1 year, 1 month ago

The answer is correct

upvoted 31 times

✉  **kimalto452**  11 months, 1 week ago

start from march 2021 no logic apps in the exam!

upvoted 29 times

✉  **olowoyinka**  3 months, 3 weeks ago

Correct answer 🔥

upvoted 1 times

 **Jsrikant** 7 months ago

That's correct Answer  
upvoted 1 times

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)
```

#### Correct Answer: A

A service bus instance has already been created (Step 2 below). Next is step 3, Create a Service Bus queue.

Note:

Steps:

Step 1: # Create a resource group

```
resourceGroupName="myResourceGroup"
```

```
az group create --name $resourceGroupName --location eastus
```

Step 2: # Create a Service Bus messaging namespace with a unique name namespaceName=myNameSpace\$RANDOM az servicebus namespace create --resource-group \$resourceGroupName -name \$namespaceName --location eastus

Step 3: # Create a Service Bus queue

```
az servicebus queue create --resource-group $resourceGroupName --namespace-name $namespaceName --name BasicQueue
```

Step 4: # Get the connection string for the namespace

```
connectionString=$(az servicebus namespace authorization-rule keys list --resource-group $resourceGroupName --namespace-name $namespaceName --name
```

```
RootManageSharedAccessKey --query primaryConnectionString --output tsv)
```

Reference:

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-quickstart-cli>

✉️  **SnakePlissken** Highly Voted 11 months, 1 week ago

I think the Service Bus has already been created and now they ask you to complete the configuration. The next step is creating the queue. In fact, all the steps are shown:

- B. Create group.
- C. Create Service Bus.
- A. Create Queue. <-- Correct answer.
- D. Get connectionstring.

upvoted 42 times

✉️  **SnakePlissken** 11 months, 1 week ago

Got this question at the exam and scored 100% on Azure Storage, so I'm sure this is correct.

upvoted 12 times

✉️  **SnakePlissken** 11 months ago

I'm really sorry, Service Bus falls in another section where I scored 85%, so I can't be sure if this is the correct answer.

upvoted 10 times

✉️  **RavindraDevkhile** Highly Voted 1 year, 1 month ago

It Ask for create an Azure Service Bus instance by providing not the Service bus Queue

So correct Answes should be C

upvoted 21 times

✉ **rcamara32** Most Recent ⓘ 3 months, 1 week ago

C is the correct answer

upvoted 4 times

✉ **tigertag2000** 4 months, 1 week ago

C is the correct answer

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-tutorial-topics-subscriptions-cli>

upvoted 2 times

✉ **tigertag2000** 4 months, 1 week ago

I take that back, the service bus is already created, so A is the right answer

upvoted 2 times

✉ **hinoue** 5 months, 3 weeks ago

question says You create an Azure Service Bus instance by providing a name, pricing tier, subscription, resource group, and location

pricing tier(sku) can be set at the creation of namespace, not queue

So, I think answer is C.

[https://docs.microsoft.com/en-us/cli/azure/servicebus/namespace?view=azure-cli-latest#az\\_servicebus\\_namespace\\_create](https://docs.microsoft.com/en-us/cli/azure/servicebus/namespace?view=azure-cli-latest#az_servicebus_namespace_create)

[https://docs.microsoft.com/en-us/cli/azure/servicebus/queue?view=azure-cli-latest#az\\_servicebus\\_queue\\_create](https://docs.microsoft.com/en-us/cli/azure/servicebus/queue?view=azure-cli-latest#az_servicebus_queue_create)

upvoted 4 times

✉ **noro5** 3 months, 1 week ago

It says also 'You need to complete the configuration.' so I assume the Service Bus instance is in place

upvoted 3 times

✉ **Franz22** 6 months ago

Answer A is correct, because if we look at the documentation of Microsoft where are listed all the steps to create a Service Bus:

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-quickstart-portal>

We can see that when we create a Service Bus, we MUST specify a namespace so the ServiceBus instance is the namespace itself and the question says "You create a service bus instance... You need to complete the configuration" --> So, in order to complete the configuration, we have to create a Queue.

upvoted 6 times

✉ **RajMasilamani** 7 months, 1 week ago

The answer should be A.

connection string and the queue name. You use them to send and receive messages.

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-quickstart-cli>

upvoted 1 times

✉ **ning** 8 months, 1 week ago

No idea what this question is asking ...

upvoted 9 times

✉ **mc0re** 8 months, 2 weeks ago

According to Microsoft, the namespace must be created before the queue. So the correct answer must be C.

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-quickstart-cli>

upvoted 2 times

✉ **Mr\_X** 9 months ago

Commands B&C have set wrong location this will throw an error.

D does not make sense to me at all. Thats nonsense.

upvoted 4 times

✉ **Helpnosense** 9 months, 3 weeks ago

--location fridge-loc is definitely wrong for az servicebus namespace create command. Whoever thinks C is right, just try the command to see if CL will succeed or not.

A is correct.

upvoted 6 times

✉ **Laaptu** 10 months ago

Option A is correct, az servicebus queue create --resource-group myresourcegroup --namespace-name mynamespace --name myqueue  
[https://docs.microsoft.com/en-us/cli/azure/servicebus/queue?view=azure-cli-latest#az\\_servicebus\\_queue\\_create](https://docs.microsoft.com/en-us/cli/azure/servicebus/queue?view=azure-cli-latest#az_servicebus_queue_create)

upvoted 2 times

✉ **manojchavan** 10 months, 1 week ago

Question is poorly worded. I think what is asked here is that service bus instance is already created and now you need to complete the configuration to start using the bus. In this case, you will need to create Queue and hence correct answer is A.

upvoted 2 times

✉ **ferut** 11 months, 1 week ago

Comparing to other questions, each time it says "You create...." it actually means that you haven't created it yet.  
I'd say in this case, the answer should be C.

upvoted 1 times

✉  **PaulMD** 12 months ago

If you change the wording to: "You createD a service bus..." , the question is not ambiguous anymore. Maybe a simple typo here.  
upvoted 3 times

✉  **jvyas** 1 year ago

Question clearly doesn't say that the service bus already been created. So all the steps are needed to design the solution.  
upvoted 1 times

✉  **Zidimirite** 1 year ago

An Azure Service Bus instance is a namespace, and a namespace holds a queue, so A is correct.  
upvoted 5 times

**HOTSPOT -**

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 type="radio"/>
The last message read remains in the queue after the code runs.	<input type="radio"/>	<input type="radio"/>
The storage queue remains in the storage account after the code runs.	<input type="radio"/>	<input type="radio"/>

Correct Answer:

**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 checked="" type="radio"/>	<input type="radio"/>

Box 1: No -

The QueueDescription.LockDuration property gets or sets the duration of a peek lock; that is, the amount of time that the message is locked for other receivers.

The maximum value for LockDuration is 5 minutes; the default value is 1 minute.

Box 2: Yes -

You can peek at the message in the front of a queue without removing it from the queue by calling the PeekMessage method.

Box 3: Yes -

Reference:

<https://docs.microsoft.com/en-us/azure/storage/queues/storage-dotnet-how-to-use-queues> <https://docs.microsoft.com/en-us/dotnet/api/microsoft.servicebus.messaging.queuedescription.lockduration>

✉  **rajwit**  1 year, 3 months ago

Given answer is correct

upvoted 28 times

✉  **igorole**  1 year, 4 months ago

GetMessageAsync:

Gets a message from the queue using the default request options. This operation marks the retrieved message as invisible in the queue for the default visibility timeout period.

Only marks the message is invisible but does not delete.

upvoted 21 times

✉  **Miroshi**  2 months, 3 weeks ago

2nd answer is No

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.queue.cloudqueue.getmessageasync?view=azure-dotnet-legacy>

You Take the msg after you peeked.

upvoted 2 times

✉  **ReniRechner** 1 month, 3 weeks ago

peek: get the message, don't lock, don't delete

get: get the message, lock the message (make it invisible for some seconds)

delete: delete the message

intention is: if get would also delete the message from the queue, an error in the function would render the message unhandled. Thus first get, process than delete.

"at least handled once"

upvoted 4 times

✉  **Netspud** 2 months ago

Your link appears to imply that the message is not deleted unless additional params are included. Which would suggest the answer is as quoted yes. (Not no as you suggest)

upvoted 2 times

✉  **Yazhu** 3 months, 2 weeks ago

I dont understand here.. its a repetitive of 9th question.. its a copy paste question  
why diff answers? can someone clarify me?

upvoted 1 times

✉  **Yazhu** 3 months, 2 weeks ago

commented in wrong window..sorry

upvoted 1 times

✉  **nonoss** 6 months ago

Box 3 : Correct answer

<https://docs.microsoft.com/en-us/azure/storage/queues/storage-dotnet-how-to-use-queues?tabs=dotnet#delete-a-queue>

upvoted 1 times

✉  **paru123456789** 1 year, 1 month ago

Answer:

No

Yes

Yes

upvoted 11 times

✉  **bhushan\_786** 1 year, 3 months ago

Can someone confirm if the given answers are correct or not??

upvoted 2 times

✉  **diligent176** 1 year, 3 months ago

They are correct, N, Y, Y.

The code does not configure lock duration.

The message will remain because GetMessageAsync does not remove it.

The queue will also remain after execution.

upvoted 14 times

✉  **igorole** 1 year, 4 months ago

Previous comment can be ignored, sorry, the right interface is here:  
<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.queue.cloudqueue.getmessageasync?view=azure-dotnet-legacy>  
upvoted 2 times

✉ **igorole** 1 year, 4 months ago

LastLine, GetMessageAsync() is not even part of the interface, this code just won't compile.  
<https://docs.microsoft.com/en-us/dotnet/api/azure.storage.queues.queueclient?view=azure-dotnet>  
upvoted 1 times

✉ **Kobee** 1 year, 4 months ago

You're wrong. It's CloudQueue, not QueueClient  
upvoted 4 times

✉ **gematsaljoa** 1 year, 4 months ago

1. X  
2. O  
3. O  
upvoted 5 times

✉ **JVTM** 1 year, 5 months ago

2) explanation comments a peekMessage (which leave message in queue). But the last command is getMessageAsync() which reads the message out of the queue. So, it is not in queue anymore.  
upvoted 3 times

✉ **Magneton** 1 year, 5 months ago

GetMessageAsync() does not get out the message from the queue  
upvoted 31 times

✉ **thomas204** 1 year, 5 months ago

According to me you need to call DeleteMessageAsync() to remove the message from the queue.  
upvoted 21 times

✉ **ashuyop** 1 year, 5 months ago

thats right  
<https://docs.microsoft.com/en-us/azure/storage/queues/storage-dotnet-how-to-use-queues?tabs=dotnet#de-queue-the-next-message>  
upvoted 8 times

✉ **nonoss** 6 months ago

Dequeue a message from a queue in two steps. When you call ReceiveMessages, you get the next message in a queue. A message returned from ReceiveMessages becomes invisible to any other code reading messages from this queue. By default, this message stays invisible for 30 seconds. To finish removing the message from the queue, you must also call DeleteMessage. This two-step process of removing a message assures that if your code fails to process a message due to hardware or software failure, another instance of your code can get the same message and try again. Your code calls DeleteMessage right after the message has been processed.

upvoted 1 times

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 $true
```

D.

```
az servicebus namespace create
--resource-group fridge-rg
--name fridge-rg
--location fridge-loc
```

#### Correct Answer: C

A service bus instance has already been created (Step 2 below). Next is step 3, Create a Service Bus queue.

Note:

Steps:

Step 1: # Create a resource group

```
resourceGroupName="myResourceGroup"
```

```
az group create --name $resourceGroupName --location eastus
```

Step 2: # Create a Service Bus messaging namespace with a unique name namespaceName=myNameSpace\$RANDOM az servicebus namespace create --resource-group \$resourceGroupName --name \$namespaceName --location eastus

Step 3: # Create a Service Bus queue

```
az servicebus queue create --resource-group $resourceGroupName --namespace-name $namespaceName --name BasicQueue
```

Step 4: # Get the connection string for the namespace

```
connectionString=$(az servicebus namespace authorization-rule keys list --resource-group $resourceGroupName --namespace-name $namespaceName --name RootManageSharedAccessKey --query primaryConnectionString --output tsv)
```

Reference:

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-quickstart-cli>

  **manojchavan** Highly Voted  10 months, 1 week ago

Question is poorly worded. I think what is asked here is that service bus instance is already created and now you need to complete the configuration to start using the bus. In this case, you will need to create Queue and hence correct answer is C

upvoted 16 times

  **Franz22** Highly Voted  6 months ago

This question is equal to the question #9, the ONLY difference here is that we have to pick the Powershell answer, because it's the only that has the creation of the service bus queue. Go to the question #9 to see my answer why we should create the queue.

upvoted 8 times

  **frostbeard** Most Recent  1 week, 3 days ago

Agree with the accepted answer but given question 9, this seems less like it is testing your knowledge and more an attempt to trick you.

upvoted 2 times

  **edengoforit** 3 months ago

The description is almost the same as the question #9. Hence, after creating a namespace, we should create a Service Bus Queue thus provided answer is correct. Answer should be C

upvoted 3 times

✉  **Richard2021** 6 months, 4 weeks ago

the correction answer is B.  
upvoted 1 times

✉  **Illumielle** 8 months ago

This is a repeat of question 9. But it seems to have different answers.  
upvoted 2 times

✉  **ReniRechner** 1 month, 3 weeks ago

this is because there is more than 1 way to do it...  
upvoted 1 times

✉  **ning** 8 months, 1 week ago

No idea what question is this ...

Steps should be 1. create a resource group 2. create a service bus namespace 3. create a service bus queue 4. get connection string for the queue  
upvoted 2 times

✉  **ning** 8 months, 1 week ago

There is no such thing called service bus instance ...

Only Service Bus Namespace, Service Bus Queue Or Service Bus Topic

upvoted 1 times

✉  **ReniRechner** 1 month, 3 weeks ago

namespace = instance  
upvoted 1 times

✉  **mc0re** 8 months, 2 weeks ago

A namespace must be created before creating a queue. So why not B or D?

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-quickstart-cli>

upvoted 1 times

✉  **asdasdasg2** 4 months, 1 week ago

The question states that you have already created the service bus, which is what "creating a namespace" does. So therefore the next step is to create the queue

upvoted 2 times

✉  **if54uran** 10 months, 1 week ago

This question does not seem to make much sense

upvoted 3 times

✉  **jokergester** 1 year ago

There is a requirement to provide an instance and yet the correct answer does not have the prior creation of the namespace. "C" would be ideal if the namespace is created prior to the script.

upvoted 2 times

✉  **Zidimirite** 1 year ago

"You create an Azure Service Bus instance by providing a name, pricing tier, subscription, resource group, and location."

They seem to ask you to do this, but in this case I think they mean that you've done that and next "You need to complete the configuration.", which is adding a queue to the just created namespace. So C is right.

It has to be right, A makes no sense and B and D both do the same thing.

upvoted 14 times

✉  **rustycables** 8 months, 1 week ago

I don't know but guessed D. D seems more like a CLI command, and it also has location - which is specified in the question. C does not have location and does not look like a typical CLI command that begins AZ.

upvoted 2 times

✉  **satyadharma** 6 months, 2 weeks ago

It is a powershell command which is mentioned in question as well. C is correct answer

upvoted 2 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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

**Correct Answer: B**

Create an Azure Function App that uses an Azure Service Bus Queue trigger.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-create-storage-queue-triggered-function>

✉  **Laaptu** Highly Voted 10 months ago

Answer is B (NO),  
Becz FIFO is supported by Service bus queue and Service bus queue should be use for data less than 80GB  
<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted>  
upvoted 14 times

✉  **heisenberg33** Most Recent 2 months, 3 weeks ago

**Selected Answer: B**  
Answer is No. Ref: <https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted>  
upvoted 1 times

✉  **lugospod** 3 months ago

Got this one 01/2022. Went with NO  
upvoted 3 times

✉  **kondapaturi** 10 months ago

Answer is No  
upvoted 3 times

✉  **idrisfl** 1 year, 1 month ago

Shouldn't this be Yes? I'm not sure where "Service Bus" came into the picture in their answer.  
upvoted 3 times

I take back my previous comment. 'No' is the correct answer. It says 'Queue size should not grow larger than 80 GB'

upvoted 8 times

✉  **Franz22** 6 months ago

I think that here, the size is not the thing that should let you think "oh, it's not the right answer", because you can use storage queue even with less than 80gb of data. The answer "No" should be given because the storage queue doesn't support FIFO.  
upvoted 5 times

✉  **Didi123** 1 year ago

agreed, also FiFo is only guaranteed in Service Bus Queues and not in Azure Storage Queues  
upvoted 11 times

**DRAG DROP -**

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****Correct Answer:****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**

Create a single Service Bus Namespace.

Create a Service Bus topic for each restaurant for which a driver can receive messages.

Create a Service Bus subscription for each restaurant for which a driver can receive orders.

Box 1: Create a single Service Bus Namespace

To begin using Service Bus messaging entities in Azure, you must first create a namespace with a name that is unique across Azure. A namespace provides a scoping container for addressing Service Bus resources within your application.

Box 2: Create a Service Bus Topic for each restaurant for which a driver can receive messages.

Create topics.

Box 3: Create a Service Bus subscription for each restaurant for which a driver can receive orders.

Topics can have multiple, independent subscriptions.

Reference:

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

  **NH** Highly Voted  1 year, 1 month ago

Create a single Service Bus Namespace.

Create a single Service Bus Topic.

Create a Service Bus subscription for each restaurant for which a driver can receive orders.

upvoted 110 times

  **lugospod** 3 months, 3 weeks ago

One thing to note in this scenario if we have 20 drivers... and 19 of them are busy (talking to their spouse, ...) it will take 19 timeouts for that one order to finally get picked up by the 20th driver. So yes, this is less evil than the resto of the options, but still I would rather use queues so that

each driver SEES all of the orders... by using subscriptions the driver doesn't have a list..s/he only sees the current message that was delegated by the round robin algorithm.

upvoted 1 times

✉ **MiraA** 6 months, 3 weeks ago

Note there is a limit of "Number of subscriptions per topic" set to "2,000 per-topic for the Standard tier and Premium tier.". <https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/azure-subscription-service-limits#service-bus-limits>

Does this mean 2.000 restaurants at most? :-)))

upvoted 2 times

✉ **sashasasha** 10 months, 3 weeks ago

If you create a single Service Bus Topic, two different drivers who subscribed to the same restaurant will each receive a copy of the order that could process independently and it's in conflict with the condition: "4. The first driver to accept an order removes it from the list of available orders."

upvoted 2 times

✉ **jay158** 10 months, 2 weeks ago

In fact all the drivers, who have subscribed to restaurant will get notification.

The first driver, who accepts it, will click the order, and it shall be dequeued.

upvoted 7 times

✉ **lugospod** 3 months, 3 weeks ago

No it won't get dequeued because this is not a queue.

There is no option for SUBSCRIPTION PER DRIVER, only PER RESTAURANT or a SINGLE subscription. So only SINGLE listener will receive the notification and until s/he accepts it, rejects it or it times out no one else will see the message. If this were a QUEUE than it would be as you described. This question sucks on so many levels - too many open questions arise to be able to give a valid response, plus, the final one, I would rather use queues for this problem then subscriptions...

upvoted 2 times

✉ **hstml** 7 months, 1 week ago

That is completely correct. This question is also in Whizlabs where the explanation is the same as jay158s.

upvoted 1 times

✉ **BrettusMaximus** 11 months, 3 weeks ago

If you create a single topic, why bother creating a topic at all as it has all the data

upvoted 5 times

✉ **ferut** 11 months, 1 week ago

I agree with BrettusMaximus.

Although one topic is workable but multiple topics are more efficient.

Consider the 1 topic scenario. On the driver's application, it will remember the restaurants it subscribes. Because there's only one topic, the app will receive all messages from all restaurants, and the app should filter out messages not in interest.

When using multiple topics, the driver's queue will be much cleaner, receiving only messages of interest.

All drivers subscribe to the same restaurant will receive the same message. Basically each driver will have their own queue and the message will be deleted from the queue once it's processed.

I think the 'removing' part should be a separate message sent to all subscribers (finally only the restaurant can remove it from the list upon accepting a driver's request).

upvoted 3 times

✉ **lugospod** 3 months, 3 weeks ago

in this case you get a concurrency problem.. because now you introduced an additional layer of deciding which DRIVER clicked first, and additional component that has to notify the rest of the drivers that the message they received is no longer valid or introduce a new API to check if the order is still valid.. all in all, smells...

upvoted 1 times

✉ **SnakePlissken** 11 months, 1 week ago

Sorry BrettusMaximus, but I think you have to read the documentation about Service Bus first... There's a good reason that NH is highly voted!

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

upvoted 1 times

✉ **kimalto452** 11 months, 1 week ago

SnakePlissken you need read better documentation) There no reason for have only one topic...

upvoted 2 times

✉ **Opimer** Highly Voted 1 year, 1 month ago

Correct. If you create only one topic there won't be any filtering of messages depending on the restaurant. So every driver will have access to all the the orders. With a topic by restaurant, message from one restaurant will go to only one topic, from which the driver can choose to subscribe.

upvoted 14 times

✉ **Phenr** 1 year, 1 month ago

I don't think that's correct. You can filter the messages on subscription, so the subscription can get a message from a specific restaurant even with just one topic created.

upvoted 8 times

✉  **rdemontis** 1 year, 1 month ago

Exactly and creating one topic for each restaurant doesn't cover two of the four requirements:

- "Orders are sent to all available drivers in an area"
- "The first driver to accept an order removes it from the list of available orders"

This means that one restaurant can be served by more drivers. So how can you think to manage order acceptance from one driver if you duplicate the same in more topics? It's a big deal that causes a lot of overwork not necessary.

It's all simpler by managing all orders with a topic and using the filters for each subscription to allow drivers to view only the orders that compete with them. I also inform you that on a paid test platform such as <https://www.testpretraining.com/> there is the same question and the correct answer requires only one topic.

upvoted 6 times

✉  **mandynotmandy** 1 month, 2 weeks ago

exactly, you can't have each driver on their own sub because that duplicates the orders into each sub queue, meaning one guy accepts the order, another guy still sees it in their own sub queue. The subs has to be on restaurant level, and you can do that by filters on the sub

upvoted 1 times

✉  **kwaazaar** 1 year ago

so how would the driver remove the order if he has his own subscription? The order would still be visible in other subscriptions.

upvoted 1 times

✉  **anvimi** 11 months, 3 weeks ago

multiple drivers can share a single restaurant subscription thus only one driver will handle an order

upvoted 3 times

✉  **AZ204Cert** Most Recent 1 week, 5 days ago

Got this on 04/05/22

upvoted 1 times

✉  **iamstudying** 1 month, 1 week ago

BUDDIES, listen listen..

1. Single Service Bus Namespace
2. Topic per restaurant (10k limit of restaurants).

(A single topic would work, but requires subscription filters or another component to decide which drivers receive which restaurant orders. But this isn't specified so imo not an option)

3. Single subscription per topic. Each driver who wants to deliver for a restaurant will periodically peek the subscription for messages (no lock, message not removed). Once they decide they want to deliver the order, they dequeue the message and away they go, other drivers who attempt to do so will not be able to.

(At first, I also thought multiple subscriptions - but this introduces another complexity of syncing the orders across all the subscriptions if someone accepts the order delivery first... how can we notify other subscriptions? we can't.)

All in all, agree the solution sucks a\$\$ but this is the best bet.

upvoted 3 times

✉  **petitbilly** 1 month, 2 weeks ago

Got it in exam 03/22

upvoted 1 times

✉  **leonidn** 3 months, 1 week ago

Single topic is less complex and more flexible solution from the client applications which submit orders. A single topic is less complex from the perspective of infrastructure management effort.

Create a single Service Bus Namespace.

Create a single Service Bus Topic.

Create a Service Bus subscription for each restaurant for which a driver can receive orders.

upvoted 3 times

✉  **altafpatel1984** 5 months ago

I guess options are incomplete. There should be an option to have a subscription for each driver. So in that case a topic for each restaurant with a subscription for each driver will make sense to have pub-sub architecture.

upvoted 4 times

✉  **altafpatel1984** 5 months ago

I guess options are incomplete. There should be an option to have a subscription for each driver. So in that case a topic for each restaurant with a subscription for each driver will make sense to have pub-sub architecture.

upvoted 1 times

✉  **altafpatel1984** 5 months ago

I guess options are incomplete. There should be option to have subscription for each driver. So in that case topic for each restaurant with subscription for each driver will make sense to have pub-sub architecture.

upvoted 1 times

✉ **debanjan10** 6 months, 2 weeks ago

Single Bus Namespace > Single Bus Topic > Service Bus subscription for each resto

upvoted 2 times

✉ **[Removed]** 8 months, 1 week ago

This answer is correct!

Instead, if you create a single Service Bus Topic but don't apply a filter...

"Each newly created topic subscription has an initial default subscription rule. If you don't explicitly specify a filter condition for the rule, the applied filter is the true filter that enables all messages to be selected into the subscription. The default rule has no associated annotation action."

upvoted 1 times

✉ **xortan** 7 months, 1 week ago

It is not.

"A driver selects the restaurants for which they will deliver orders." -> You set up the filter.

upvoted 2 times

✉ **[Removed]** 8 months, 1 week ago

This answer is correct!

Instead, if you create a single Service Bus Topic but don't apply a filter...

"Each newly created topic subscription has an initial default subscription rule. If you don't explicitly specify a filter condition for the rule, the applied filter is the true filter that enables all messages to be selected into the subscription. The default rule has no associated annotation action."

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/topic-filters#filters>

upvoted 1 times

✉ **ning** 8 months, 1 week ago

I think one namespace, one topic, then multiple subs, each sub can filter on restaurant id / name, so one sub is denoted to one restaurant. No need for each restaurant to have its own topic, though it might work as well.

upvoted 3 times

✉ **ning** 8 months, 1 week ago

Drivers only see messages from subs, not from topic directly ...

As long as the subs can filter for restaurant, we are all good ...

upvoted 4 times

✉ **mariodarken** 2 months, 3 weeks ago

Nice explanation

upvoted 1 times

✉ **GigaCaster** 8 months, 4 weeks ago

to me, this "You are developing a mobile app that users can use to order from a restaurant in their area" plays a role in the many topics part as it would be easier to have area topics and under them the current restaurant in that area .

upvoted 2 times

✉ **GigaCaster** 8 months, 4 weeks ago

Or you can have a restaurant as a topic and all the areas they are established under it like the answer provided.

upvoted 1 times

✉ **somenkr** 9 months, 2 weeks ago

It should be topic for each restaurant. Please focus to Point 3. Only orders for the selected restaurants will appear for the driver. All restaurants are not dealing with very drivers. To put this choice we need to go with multiple topic and relevant subscribers.

upvoted 2 times

✉ **sujitwarrier11** 9 months, 3 weeks ago

A single topic should be created with multiple subscriptions with filter for restaurant Id. the moment any driver accepts its take out of the queue. If you need to create a topic for each restaurant I think registering of new restaurants would have to include topic creation as a process. which means additional payment. Creating only one topic means only subscriptions need to be created which are free.

upvoted 3 times

✉ **kondapaturi** 10 months ago

Create a single Service Bus namespace

Create a Service Bus topic for each restaurant for which the driver can receive messages

Create a Service Bus subscription for each restaurant for which each driver can receive orders

upvoted 3 times

**HOTSPOT -**

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

.
.
.

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.
(windowsToastPayload);

SendWindowsNativeNotificationAsync
SubmitNotificationHubJobAsync
ScheduleNotificationAsync
SendAppleNativeNotificationAsync
...
}
catch (System.Exception ex)
{
...
}
...
```

Correct Answer:

## Answer Area

```
string notificationHubName = "contoso_hub";
string notificationHubConnection = "connection_string";
hub =
NotificationHubClient
NotificationHubClientSettings
NotificationHubJob
NotificationDetails

NotificationHubClient
NotificationHubClientSettings
NotificationHubJob
NotificationDetails

(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(windowsToastPayload);
}
catch (System.Exception ex)
{
...
}
...
Box 1: NotificationHubClient -
```

Box 2: NotificationHubClient -

Box 3: CreateClientFromConnectionString

// Initialize the Notification Hub

NotificationHubClient hub = NotificationHubClient.CreateClientFromConnectionString(listenConnString, hubName);

Box 4: SendWindowsNativeNotificationAsync

Send the push notification.

var result = await hub.SendWindowsNativeNotificationAsync(windowsToastPayload);

Reference:

<https://docs.microsoft.com/en-us/azure/notification-hubs/notification-hubs-push-notification-registration-management>

<https://github.com/MicrosoftDocs/azure-docs/blob/master/articles/app-service-mobile/app-service-mobile-windows-store-dotnet-get-started-push.md>

✉ sumitg Highly Voted 1 year ago

Answer is correct.

upvoted 23 times

✉ Tom87 Highly Voted 1 year ago

The answer is correct, but the first reference is not very helpful and the second one doesn't even exists. Here are references of the methods used in the answer:

[https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.notificationhubs.notificationhubclient.createclientfromconnectionstring?view=azure-dotnet#Microsoft\\_Azure\\_NotificationHubs\\_NotificationHubClient\\_CreateClientFromConnectionString\\_System\\_String\\_System\\_String\\_](https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.notificationhubs.notificationhubclient.createclientfromconnectionstring?view=azure-dotnet#Microsoft_Azure_NotificationHubs_NotificationHubClient_CreateClientFromConnectionString_System_String_System_String_)

[https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.notificationhubs.notificationhubclient.sendwindowsnativenotificationasync?view=azure-dotnet#Microsoft\\_Azure\\_NotificationHubs\\_NotificationHubClient\\_SendWindowsNativeNotificationAsync\\_System\\_String\\_](https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.notificationhubs.notificationhubclient.sendwindowsnativenotificationasync?view=azure-dotnet#Microsoft_Azure_NotificationHubs_NotificationHubClient_SendWindowsNativeNotificationAsync_System_String_)

upvoted 15 times

✉ florodevops Most Recent 2 months, 1 week ago

1- NotificationHubClient 2 - NotificationHubClient 3- CreateClientFromConnectionString 4- SendWindowsNativeNotificationAsync

upvoted 2 times

You are developing an Azure messaging solution.

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

**Correct Answer: AB**

The Azure Service Bus Queue and Topic has duplicate detection.

Enabling duplicate detection helps keep track of the application-controlled MessageId of all messages sent into a queue or topic during a specified time window.

Incorrect Answers:

C: There is just no mechanism that can query a Storage queue and find out if a message with the same contents is already there or was there before.

D: Azure Event Hub does not have duplicate detection

Reference:

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/duplicate-detection>

✉  **matejka** Highly Voted 1 year, 2 months ago

Answer is correct. Queue Storage does not provide transactional support and Event Hub can't be configured to store events for infinite time.  
upvoted 32 times

✉  **mvr** 1 year, 2 months ago

Event Hub can be configured to store events, with Event Hub Capture.  
Makes the answer still correct though.

<https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-capture-overview>

upvoted 1 times

✉  **ferut** 11 months, 1 week ago

The stress is on 'messaging' which Event Hub is not (it's eventing)  
upvoted 3 times

✉  **cbn** 1 year, 2 months ago

Event hubs (with capture) are not supposed to retain data forever.  
<https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-faq#what-is-the-maximum-retention-period-for-events>  
upvoted 3 times

✉  **[Removed]** Most Recent 3 months ago

Does C not become an option because of unlimited storing?  
Because < 80gb queue storage can only be used.  
upvoted 2 times

✉  **[Removed]** 3 months ago

\* > 80gb (more than 80gb)  
upvoted 1 times

✉  **Lucario95** 3 months, 2 weeks ago

**Selected Answer: AB**

Answer is correct  
upvoted 3 times

**DRAG DROP -**

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	
	Configuration parameter	Value
Azure Resource	Target	<input type="text"/>
HTTP(s) endpoint	Gateway credentials	<input type="text"/>
Basic		
Client cert		

**Correct Answer:**

Values	Answer Area	
	Configuration parameter	Value
<input type="text"/>	Target	Azure Resource
HTTP(s) endpoint	Gateway credentials	Client cert
Basic		
<input type="text"/>		

Box 1: Azure Resource -

Box 2: Client cert -

API Management allows to secure access to the back-end service of an API using client certificates.

Reference:

<https://docs.microsoft.com/en-us/rest/api/apimanagement/apimanagementrest/azure-api-management-rest-api-backend-entity>

✉  **Kuna\_Lambo**  1 year, 1 month ago

#1 Http ?

upvoted 28 times

✉  **AzureAz204Fan** 11 months, 1 week ago

Yes. Target has only two options: 1) Azure Logic App 2) HTTP(s) endpoint. In the question it is given that backend is a REST API which means Target has to be HTTP

upvoted 7 times

✉  **ning** 8 months ago

On the API level there are two targets, Logic App and HTTPS endpoint, on the operation level two targets are Azure Resource and HTTPS endpoint. So sure what level is this question asking, if API level then HTTPS, if operation level that will be azure resource, since it is hosted in Azure.

upvoted 3 times

✉  **tevivi8222** 1 year, 1 month ago

You might be right: <https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-mutual-certificates#configure-an-api-to-use-client-certificate-for-gateway-authentication>

upvoted 20 times

✉  **Molte** 3 months, 3 weeks ago

but why cert and not basic?

upvoted 1 times

✉  **Laaptu** 10 months ago

agreed

1. Https(s) endpoint,

2. Client cert

upvoted 7 times

✉  **Gregoryhouse2020** Highly Voted  10 months, 3 weeks ago

Answer :

1. Https(s) endpoint,

2. Client cert

Reference : <https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-mutual-certificates#configure-an-api-to-use-client-certificate-for-gateway-authentication>

upvoted 17 times

✉  **Azprep** Most Recent  2 weeks, 1 day ago

1.Http End point

2. Client certificate

<https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-mutual-certificates#configure-an-api-to-use-client-certificate-for-gateway-authentication>

upvoted 1 times

✉  **lugospod** 3 months ago

Got this one 01/2022. Went with http and certificate. but from my perspective basic should also fit.

upvoted 4 times

✉  **debanjan10** 6 months, 2 weeks ago

Target: HTTP endpoints

Gateway creds: Client cert

upvoted 3 times

✉  **ning** 8 months, 1 week ago

This question is valid? It is so poorly worded. Not sure what is this asking for?

I guess for the first on HTTP(S), for the second one, either basic or certificate is accepted by azure. Nothing is mentioned in the question which one is preferred.

upvoted 5 times

✉  **cool\_tool** 8 months, 2 weeks ago

1. HTTPS

2. CLIENT CERT

<https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-mutual-certificates#configure-an-api-to-use-client-certificate-for-gateway-authentication>

upvoted 5 times

✉  **kondapaturi** 10 months ago

1. Https(s) endpoint,

2. Client cert

upvoted 5 times

✉  **silva\_831** 10 months, 1 week ago

Is there anybody who is considering Azure Function Apps can be act as backend API and wrap up in API management. So can I say that the first option is Azure resource?

upvoted 2 times

✉  **Frakandel** 11 months, 1 week ago

HttpEndPoint & Client cert... Is literally taken from [@ Configure an API to use client certificate for gateway authentication](https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-mutual-certificates)

upvoted 5 times

✉  **BrettusMaximus** 11 months, 4 weeks ago

As discussed, there are multiple possible correct answers. However the purpose of the question is to think of the best solution that MS would recommend. Thus answer is correct.

Azure Resource and Client Cert

upvoted 1 times

✉  **eobo** 1 year ago

While importing the API into APIM, if we select Azure App Service, then backend is preselected to Azure Resource and Gateway Credentials option was disabled. Now I changed it to https(s) endpoint from Azure Resource, Gateway Credentials option is enabled with 3 options none, Basic and Client Certificate.

for 1st box both Azure Resource Http(s) endpoint are valid.

for 2nd box, based on the first option multiple answers possible.

So its not clear. I believe this question should have more than one answer.

upvoted 7 times

✉️  **MrZoom** 1 year ago

I don't understand why managed identities aren't mentioned here, since both target and gateway are Azure components. Choosing certificate authentication seems to be a bad choice, albeit the most secure in the list of available options...

upvoted 1 times

✉️  **jay158** 1 year ago

I think 'Azure Resource' here implies Azure AD , with is managed identity.

It is the only good choice for backend protection.

Both Basic and Certificate can be used for Gateway Authentication.

I will choose Basic. Why? because if you have thousands of customers, each one will not buy certificate to your API. Key is inexpensive

upvoted 1 times

✉️  **SnakePlissken** 11 months, 1 week ago

Azure Resource doesn't imply Azure AD, nor Managed Identity. MS never calls it that way. And they don't ask about the credential type for thousands of end-users, just for one gateway.

upvoted 3 times

✉️  **rdemontis** 1 year, 1 month ago

I think http(s) is correct for the first answer. I don't see Azure Resource among the possible options when configuring backend settings in you API. You can choose it if you create a backend apart, but that's seems to be another feature.

upvoted 5 times

**HOTSPOT -**

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;"> <input type="checkbox"/> SAS tokens  <input type="checkbox"/> Key authentication  <input type="checkbox"/> Management Access Control         </div>
Topic publishing	<div style="border: 1px solid black; padding: 5px;"> <input type="checkbox"/> ValidationCode handshake  <input type="checkbox"/> ValidationURL handshake  <input type="checkbox"/> JWT token         </div>

**Answer Area**

Option	Value
WebHook event delivery	<div style="border: 1px solid black; padding: 5px; background-color: #e0f2e0;"> <input checked="" type="checkbox"/> SAS tokens  <input type="checkbox"/> Key authentication  <input type="checkbox"/> Management Access Control         </div>
Topic publishing	<div style="border: 1px solid black; padding: 5px; background-color: #e0f2e0;"> <input type="checkbox"/> ValidationCode handshake  <input checked="" type="checkbox"/> ValidationURL handshake  <input type="checkbox"/> JWT token         </div>

Box 1: SAS tokens -

Custom topics use either Shared Access Signature (SAS) or key authentication. Microsoft recommends SAS, but key authentication provides simple programming, and is compatible with many existing webhook publishers.

In this case we need the expiration time provided by SAS tokens.

Box 2: ValidationCode handshake -

Event Grid supports two ways of validating the subscription: ValidationCode handshake (programmatic) and ValidationURL handshake (manual).

If you control the source code for your endpoint, this method is recommended.

Incorrect Answers:

ValidationURL handshake (manual): In certain cases, you can't access the source code of the endpoint to implement the ValidationCode handshake. For example, if you use a third-party service (like Zapier or IFTTT), you can't programmatically respond with the validation code.

Reference:

<https://docs.microsoft.com/en-us/azure/event-grid/security-authentication>

 **jay158** Highly Voted  10 months, 3 weeks ago

Dropdowns placement in Answer area is incorrect  
 WebHook Event Delivery ---ValidationCode handsShake  
 Topic publishing --- SAS Tokens

<https://docs.microsoft.com/en-us/azure/event-grid/concepts>  
<https://docs.microsoft.com/en-us/azure/event-grid/webhook-event-delivery>  
upvoted 27 times

✉️ **Alex\_Wackoo** 10 months, 1 week ago

Agreed and your last link is not working so here:  
<https://docs.microsoft.com/en-us/azure/event-grid/webhook-event-delivery>  
upvoted 7 times

✉️ **jvyas [Most Recent]** 6 months, 2 weeks ago

Below link for Authenticating clients that publish events to Azure Event Grid topics using access key or Shared Access Signature (SAS) token.  
<https://docs.microsoft.com/en-us/azure/event-grid/authenticate-with-access-keys-shared-access-signatures>  
upvoted 2 times

✉️ **Simbetie** 8 months ago

Topic publishing to be matched with the 1st dropdown....the answer must be Management Access Control. Azure Event Grid allows you to control the level of access given to different users to do various management operations such as list event subscriptions, create new ones, and generate keys. Event Grid uses Azure's role-based access control (RBAC).  
upvoted 2 times

✉️ **ning** 8 months, 1 week ago

This question is worded poorly, the handshake only happens when subscription is setup ...

If you are talking about how subscription should be authenticated when receiving messages, then webhook should use jwt  
upvoted 1 times

✉️ **ning** 8 months ago

For web hook delivery <https://docs.microsoft.com/en-us/azure/event-grid/secure-webhook-delivery>  
upvoted 2 times

✉️ **ning** 8 months ago

For Topic Publishing <https://docs.microsoft.com/en-us/azure/event-grid/authentication-overview>  
upvoted 3 times

**HOTSPOT -**

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 http://contoso.com/api/9.2/, the policy will retain the higher version.	<input type="radio"/>	<input type="radio"/>

Correct Answer:

**Answer Area**

Statement	Yes	No
The XML segment belongs in the <inbound> section of the policy.	<input checked="" type="radio"/>	<input type="radio"/>
If the body size is >256k, an error will occur.	<input type="radio"/>	<input checked="" type="radio"/>
If the request is http://contoso.com/api/9.2/, the policy will retain the higher version.	<input type="radio"/>	<input checked="" type="radio"/>

Box 1: Yes -

Use the set-backend-service policy to redirect an incoming request to a different backend than the one specified in the API settings for that operation. Syntax:

```
<set-backend-service base-url="base URL of the backend service" />
```

Box 2: No -

The condition is on 512k, not on 256k.

Box 3: No -

The set-backend-service policy changes the backend service base URL of the incoming request to the one specified in the policy.

Reference:

<https://docs.microsoft.com/en-us/azure/api-management/api-management-transformation-policies>

Answer:

Yes

No

No

upvoted 45 times

✉️ **clarionprogrammer** 1 year ago

This is correct.

upvoted 2 times

✉️ **Cornholioz** Highly Voted 1 year, 4 months ago

It's doing nothing in the When condition. So if msg is <512, it does nothing. The otherwise gets executed only for >512 ??? So it will set backend service only for msgs >512? Question doesn't talk about this case.

Also, like someone said in the other discussion for this question:  
technically >256k can be >512k

Poorly framed question!!!

upvoted 12 times

✉️ **MiraA** 6 months, 3 weeks ago

I think that no action in <when> means nothing needs to be changed (for requests with body < 512000) so the back-end service URL remains as specified in the policy.

And only large requests (> 512000) will be redirected to API 9.1 using <set-backend-service> in <otherwise> branch.

<https://docs.microsoft.com/en-us/azure/api-management/api-management-transformation-policies#SetBackendService>

upvoted 4 times

✉️ **edengoforit** Most Recent 3 months ago

I think the first question should be backend instead of inbound?

Backend service: <!-- statements to be applied before the request is forwarded to the backend service go here -->

upvoted 3 times

✉️ **gabavo** 1 month ago

rewrite-uri policy can appear only in inbound scope, so the answer is correct

<https://docs.microsoft.com/en-us/azure/api-management/api-management-transformation-policies#usage-8>

upvoted 1 times

✉️ **mattvasc** 1 month, 3 weeks ago

Makes sense and if we check the set-var docs on Microsoft we can see that it can be used under inbound, outbound or backend scope:

<https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-mutual-certificates#configure-an-api-to-use-client-certificate-for-gateway-authentication>

upvoted 1 times

✉️ **lugospod** 3 months ago

Got this one 01/2022. Went with yes no no

upvoted 3 times

✉️ **Pomphard** 1 year ago

For statements 2 & 3, I think they try to emphasize whether something will happen or may happen

>256K may be larger than 512K, so it may happen but there's no guarantee as the size might be in between these values

The base URL may be retained if the condition is met, but there's no guarantee as it might be rewritten

So I'll go with yes, no, no

upvoted 3 times

✉️ **Araneus** 1 year, 5 months ago

I would say "it depends" for the third question. Since the set-backend-service policy is in the otherwise block, it would only rewrite the URL for requests with a body size of >=512000. Or am I missing a clue here?

upvoted 8 times

✉️ **ahadjithoma** 1 year, 4 months ago

Use the set-backend-service policy to redirect an incoming request to a different backend than the one specified in the API settings for that operation. This policy changes the backend service base URL of the incoming request to the one specified in the policy.

Ref: <https://docs.microsoft.com/en-us/azure/api-management/api-management-transformation-policies>

So it looks like why don't even care if any of the WHEN / OTHERWISE conditions are met, since the 9.2 is not specified anywhere in the given code snippet

upvoted 4 times

✉️ **iiiihhhh** 1 year, 4 months ago

There is another discussion for the question: <https://www.examtopics.com/discussions/microsoft/view/23300-exam-az-204-topic-5-question-8-discussion/>

upvoted 3 times

✉️ **Cornholioz** 1 year, 4 months ago

I think Araneus is right. Easy to miss. Looks like a basic WHEN / OTHERWISE condition to me. If bodysize limit is not hit, it will never reach the OTHERWISE scope and hence will not retain a higher version. I think.

upvoted 4 times

 **Zidimirite** 1 year ago

You mean will retain a higher version, right? Since the OTHERWISE scope doesn't get executed hence the set-backend-service isn't set to 9.1  
9.1 is the lower version.

upvoted 5 times

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

**Correct Answer: AC**

It is strongly recommended to use available messaging products and services that support a publish-subscribe model, rather than building your own. In Azure, consider using Service Bus or Event Grid. Other technologies that can be used for pub/sub messaging include Redis, RabbitMQ, and Apache Kafka.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/patterns/publisher-subscriber>

✉  **Amankothari** Highly Voted 1 year, 9 months ago

Correct Ans is A & C

<https://docs.microsoft.com/en-us/azure/architecture/patterns/publisher-subscriber#issues-and-considerations>

upvoted 43 times

✉  **rrongcheng** 1 year, 9 months ago

"In Azure, consider using Service Bus or Event Grid."

upvoted 8 times

✉  **lion2k6** Highly Voted 1 year, 2 months ago

The article has been updated, the new text says "In Azure, consider using Service Bus, Event Hubs or Event Grid."

So A, B and C should be all correct.

<https://docs.microsoft.com/en-us/azure/architecture/patterns/publisher-subscriber#issues-and-considerations>

upvoted 37 times

✉  **meoukg** Most Recent 1 month, 1 week ago

Got it on 03/2022, I chose A. Service Bus & C. Event Grid

upvoted 1 times

✉  **heisenberg33** 2 months, 2 weeks ago

**Selected Answer: AC**

Correct answer is A and C Ref: <https://docs.microsoft.com/en-us/azure/architecture/patterns/publisher-subscriber#issues-and-considerations>.

Wrong answer B (eliminate the need for constant polling)Ref: <https://docs.microsoft.com/en-us/azure/connectors/connectors-create-api-azure-event-hubs#trigger-polling-behavior>

upvoted 6 times

✉  **wk\_** 3 months ago

It seems that the selected answers are correct: "Existing technologies. It is strongly recommended to use available messaging products and service that support a publish-subscribe model, rather than building your own. In Azure, consider using Service Bus, Event Hubs or Event Grid. Other technologies that can be used for pub/sub messaging include Redis, RabbitMQ, and Apache Kafka."

<https://docs.microsoft.com/en-us/azure/architecture/patterns/publisher-subscriber>

upvoted 2 times

✉  **lugospod** 3 months ago

Got this one 01/2022. Went with most voted (to avoid writing answers again)

upvoted 3 times

✉  **kondapaturi** 10 months ago

Service bus

Event Grid

upvoted 3 times

✉  **mprokopy** 11 months, 1 week ago

A & C

Triggers of Event hub are long-polling, so B is not correct.

<https://docs.microsoft.com/en-us/azure/connectors/connectors-create-api-azure-event-hubs#trigger-polling-behavior>

upvoted 6 times

✉ **Frakandel** 11 months, 1 week ago

I believe MS is rather picky about the distinction between events and messages, that why I go for Service Bus and Queues... However Event Hubs and Grid are also capable of delivering the requested functionality (as far as I understand them... but I'm still studying on them :))

upvoted 5 times

✉ **ferut** 11 months, 1 week ago

Agree, see:

<https://docs.microsoft.com/en-us/azure/event-grid/compare-messaging-services?toc=https%3A%2F%2Fdocs.microsoft.com%2Fen-us%2Fazure%2Fservice-bus-messaging%2Ftoc.json&bc=https%3A%2F%2Fdocs.microsoft.com%2Fen-us%2Fazure%2Fbread%2Ftoc.json>

upvoted 2 times

✉ **iamstudying** 1 month, 1 week ago

Buddies, although there is a distinction between events and messages, all of these services (Service Bus Topics, Service Bus Queues, Event Grid, Event Hubs) are under the "Azure Messaging" umbrella.

Queues do not satisfy the pub-sub model and Event Hub is long polling <https://docs.microsoft.com/en-us/azure/connectors/connectors-create-api-azure-event-hubs#trigger-polling-behavior>

upvoted 1 times

✉ **wtkwsk** 1 year ago

A, B and C are all correct:

Existing technologies. It is strongly recommended to use available messaging products and services that support a publish-subscribe model, rather than building your own. In Azure, consider using Service Bus, Event Hubs or Event Grid. Other technologies that can be used for pub/sub messaging include Redis, RabbitMQ, and Apache Kafka.

(<https://docs.microsoft.com/en-us/azure/architecture/patterns/publisher-subscriber>)

upvoted 4 times

✉ **Dnyaneshwar** 1 year ago

A & C correct answer

upvoted 2 times

✉ **vb3d** 1 year, 1 month ago

The link provided in the answer says that Event Grid, Event Hub and Service bus all support pub/sub

upvoted 5 times

✉ **paru123456789** 1 year, 1 month ago

Answer:

Service bus  
event grid

upvoted 1 times

✉ **khoant** 1 year, 3 months ago

sorry A,C., the answer is correct.

upvoted 2 times

✉ **khoant** 1 year, 3 months ago

B.C correct.

upvoted 2 times

✉ **heisenberg33** 2 months, 2 weeks ago

B is incorrect Ref: <https://docs.microsoft.com/en-us/azure/connectors/connectors-create-api-azure-event-hubs#trigger-polling-behavior>

upvoted 2 times

✉ **27close** 1 year, 3 months ago

the service bus is 1-1 subscriber, while the SB- Topic, Event grid and event hub fit into multiple subscribers (publish and subscribe)

upvoted 1 times

✉ **27close** 1 year, 5 months ago

In Azure, consider using Service Bus or Event Grid. Other technologies that can be used for pub/sub messaging include Redis, RabbitMQ, and Apache Kafka.

A & C- clearly defined in MS DOC

upvoted 3 times

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);

**Correct Answer: D**

Using topic client, call RegisterMessageHandler which is used to receive messages continuously from the entity. It registers a message handler and begins a new thread to receive messages. This handler is waited on every time a new message is received by the receiver.

```
subscriptionClient.RegisterMessageHandler(ReceiveMessagesAsync, messageHandlerOptions);
```

Reference:

<https://www.c-sharpcorner.com/article/azure-service-bus-topic-and-subscription-pub-sub/>

✉  **Ritesh073** Highly Voted 1 year, 8 months ago

Agreed on D

Clientsubscriber object initialization is done, so B incorrect.

Here Nothing to do with Rule and closeclient so A and C incorrect

upvoted 46 times

✉  **paru123456789** Highly Voted 1 year, 1 month ago

Answer: D

upvoted 5 times

✉  **meoukg** Most Recent 1 month, 1 week ago

Got it on 03/2022, I chose D. subscriptionClient.RegisterMessageHandler(ProcessMessagesAsync, messageHandlerOptions);

upvoted 1 times

✉  **vulht** 1 month, 3 weeks ago

Agreed on D when we use Microsoft.Azure.ServiceBus package.

Furthermore, with the new version (Azure.Messaging.ServiceBus), we use a processor to receive/handle messages.

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-dotnet-get-started-with-queues#add-the-code-to-receive-messages-from-the-queue>

upvoted 2 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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

**Correct Answer: B**

Don't use a VM, instead create an Azure Function App that uses an Azure Service Bus Queue trigger.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-create-storage-queue-triggered-function>

✉  **Lkk51** Highly Voted 1 year, 10 months ago

the reason that the solution is service bus because of this message "Use first-in-first-out (FIFO) ordering of messages."

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted#foundational-capabilities>

Storage account does not have ordering guarantee

upvoted 45 times

✉  **xRiot007** 1 year, 10 months ago

I also think the explanation should be corrected. Size <80GB + FIFO guarantee is what makes Service Bus a good option, not the existence of a VM or not.

upvoted 16 times

✉  **lautaro\_sw** 1 year, 9 months ago

I think the reason for not using a VM is the 'Minimize Azure costs' requirement

upvoted 17 times

✉  **rdemontis** 1 year, 1 month ago

I totally agree with you all. Only a doubt for VM usage: In addition to save costs I think it's not possible to interact with a service bus queue. in that case i believe you have to use a storage queue.

upvoted 1 times

✉  **edengoforit** 3 months ago

Absolutely correct. There are so many questions related to this. FIFO and business transactions. If anything related, it seems to be the Service Bus

upvoted 2 times

✉  **Nabeelcp** Highly Voted 1 year, 7 months ago

Answer is correct . but explanation is confusing ..

upvoted 7 times

✉  **Codenob0b** 1 year, 7 months ago

It is confusing indeed. But the reason the explanation pointed out about VMs is because of VMs are expensive and won't match with the "Minimize azure costs" requirement. Azure Functions is the best way to handle Service Bus Queue events by utilizing its trigger functionality and providing minimal costs to it.

upvoted 5 times

✉  **PoTermin** 8 months, 2 weeks ago

Your explanation sounds good.

upvoted 1 times

 **Udoyen** Most Recent 8 months, 2 weeks ago

This is the kind of question we need ...

upvoted 2 times

 **paru123456789** 1 year, 1 month ago

Answer: NO

upvoted 1 times

 **svaza** 1 year, 1 month ago

I think the given option of using Azure Storage queue is right, refer this document

<https://docs.microsoft.com/en-us/azure/storage/queues/scalability-targets#scale-targets-for-queue-storage>

- You can store upto 500TB of data in queue, queue works in FIFO.

The approach of using VM for processing the queue messages is overkill. So given question the answer is B.

Still its a stilly question

upvoted 1 times

 **Tom87** 1 year ago

Queues in general should be FIFO. But not Azure Storage Queue. Ordering is not guaranteed. See this:

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted#foundational-capabilities>

upvoted 1 times

 **\_nma** 1 year, 4 months ago

Answer: A. Yes

1.Your solution requires the queue to provide a guaranteed first-in-first-out (FIFO) ordered delivery.

2.Your queue size won't grow larger than 80 GB.

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted#consider-using-service-bus-queues>

upvoted 1 times

 **\_nma** 1 year, 4 months ago

Apologies, wrong discussion. This was meant for the net question.

upvoted 1 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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

**Correct Answer: B**

Don't use a VM, instead create an Azure Function App that uses an Azure Service Bus Queue trigger.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-create-storage-queue-triggered-function>

✉  **cbn** Highly Voted 1 year, 2 months ago

Using Service bus is fine, however having a Windows VM does not address the cost requirement.

Answer is 'NO'

upvoted 33 times

✉  **Udoyen** 8 months, 2 weeks ago

So if I may ask, if the cost wasn't an issue would Windows VM be okay?

upvoted 5 times

✉  **dohnalr** 5 months, 3 weeks ago

Yes. It would be ok

upvoted 3 times

✉  **neosri** Highly Voted 1 year, 11 months ago

answer explanation is wrong. It should be azure service bus queues and not storage queues trigger for Azure functions

upvoted 22 times

✉  **Dev666** Most Recent 1 week, 3 days ago

**Selected Answer: B**

I choose B as think A will be expensive

upvoted 1 times

✉  **meoukg** 1 month, 1 week ago

Got it on 03/2022, I chose B. No

upvoted 1 times

✉  **altafpatel1984** 5 months ago

Here I guess following line meant to mention that VM will unnecessarily increase cost.

"Messages may not be sent to the service consistently."

upvoted 2 times

✉  **altafpatel1984** 5 months ago

If B is answer then question is confusing because theriotically VM is not bad idea since there is no mentioned of cost saving etc.

upvoted 1 times

✉  **grappigekarel** 2 months ago

Requirement clearly says minimize Azure costs

upvoted 1 times

✉️  **Idkhow** 10 months, 1 week ago

why do we need the Azure Windows VM for? Service bus is already fine

upvoted 2 times

✉️  **silva\_831** 10 months, 1 week ago

The given answer is incorrect. Service Bus queue meets the requirements

upvoted 1 times

✉️  **Cholo981** 10 months, 3 weeks ago

StorageQueue doesn't guarantee FIFO. Must be ServiceBus.

upvoted 1 times

✉️  **paru123456789** 1 year, 1 month ago

Answer: NO

upvoted 2 times

✉️  **\_nma** 1 year, 4 months ago

Answer: A. Yes

1.Your solution requires the queue to provide a guaranteed first-in-first-out (FIFO) ordered delivery.

2.Your queue size won't grow larger than 80 GB.

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted#consider-using-service-bus-queues>

upvoted 1 times

✉️  **Cornholioz** 1 year, 3 months ago

Wrong because of the VM use in the solution which is an overkill and increases cost.

upvoted 10 times

✉️  **javayung** 1 year, 5 months ago

Answer is No:

As a solution architect/developer, you should consider using Storage queues when:

Your application must store over 80 GB of messages in a queue.

upvoted 2 times

✉️  **Dirk** 1 year, 9 months ago

Yes - I think explanation is wrong, but answer is correct.

See this link: <https://www.serverless360.com/blog/azure-storage-queue-vs-service-bus-queue#:~:text=Message%20Size,incoming%20messages%20throwing%20an%20exception>.

upvoted 3 times

✉️  **cloud\_exam1** 1 year, 5 months ago

I think the answer is wrong. In the requirement, said 'Queue size must not grow larger than 80 gigabytes (GB)'. And FIFO. So should be Service Bus Queue.

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted>

upvoted 1 times

✉️  **Cornholioz** 1 year, 4 months ago

In the famous words of Gandalf, "cloud\_exam1, you shall not pass"!

upvoted 7 times

✉️  **axaptaMaster** 1 year, 10 months ago

According to this:

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted>

Shouldn't the answer be: B. No?

There is an explanation:

As a solution architect/developer, you should consider using Storage queues when:

Your application must store over 80 GB of messages in a queue.

Your application wants to track progress for processing a message inside of the queue. This is useful if the worker processing a message crashes. A subsequent worker can then use that information to continue from where the prior worker left off.

You require server side logs of all of the transactions executed against your queues.

upvoted 2 times

✉️  **xRiot007** 1 year, 10 months ago

"Queue size must not grow larger than 80 gigabytes (GB)" + FIFO order guarantee means you need an Azure Service Bus Queue.

upvoted 4 times

✉️  **nazzzu** 1 year, 10 months ago

No, requirement is <80GB and FIFO - so Service Bus is fine.

upvoted 13 times

**DRAG DROP -**

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**

server  
context  
on-error  
set-status  
when-error  
override-status

**Answer Area**

```
< Policy segment >
<base />
<choose>
 <when condition = " @ Policy segment .Response.StatusCode == 500
 && Policy segment .LastError.Message.Contains
 <return-response>
 < Policy segment >
 </return-response>
 </when>
 <otherwise />
 </choose>
< Policy segment >
```

**Correct Answer:****Policy segments**

server  
context  
on-error  
set-status  
when-error  
override-status

**Answer Area**

```
< on-error >
<base />
<choose>
 <when condition = " @ context .Response.StatusCode == 500
 && context .LastError.Message.Contains
 <return-response>
 < set-status >
 </return-response>
 </when>
 <otherwise />
 </choose>
< on-error >
```

Box 1: on-error -

Policies in Azure API Management are divided into inbound, backend, outbound, and on-error.

If there is no on-error section, callers will receive 400 or 500 HTTP response messages if an error condition occurs.

Box 2: context -

Box 3: context -

Box 4: set-status -

The return-response policy aborts pipeline execution and returns either a default or custom response to the caller. Default response is 200 OK with no body.

Custom response can be specified via a context variable or policy statements.

Syntax:

```
<return-response response-variable-name="existing context variable">
<set-header/>
```

```
<set-body/>
<set-status/>
</return-response>
```

Box 5: on-error -

Reference:

<https://docs.microsoft.com/en-us/azure/api-management/api-management-error-handling-policies> <https://docs.microsoft.com/en-us/azure/api-management/api-management-transformation-policies>

✉  **jokergester** Highly Voted 1 year ago

Just want to add that "set-status" also has code and reason (e.g. set-status code="409" reason="Conflict").

<https://docs.microsoft.com/en-us/azure/api-management/api-management-advanced-policies#SetStatus>  
upvoted 25 times

✉  **SnakePlissken** 11 months, 1 week ago

Thanks. set-status on its own seemed a bit strange.  
Minor detail: Last on-error must be preceded by a slash.  
upvoted 6 times

✉  **armoniyem** Highly Voted 5 months, 3 weeks ago

THE ANSWER IS CORRECT.

upvoted 6 times

**DRAG DROP -**

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**

raw  
windows  
windowsphone  
application/xml  
application/json  
application/octet-stream

**Answer Area**

```
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);
```

**Correct Answer:****Code segments**

raw  
  
windowsphone  
application/xml  
application/json

**Answer Area**

```
var endpoint = "...";
var payload = "...";
var request = new HttpRequestMessage(HttpMethod.Post, endpoint);
request.Headers.Add("X-WNS-Type", "wns/raw");
request.Headers.Add("ServiceBusNotification-Format", "windows");
request.Content = new StringContent(payload, Encoding.UTF8, "application/octet-stream");
var client = new HttpClient();
await client.SendAsync(request);
```

Box 1: windows -

Example code:

```
var request = new HttpRequestMessage(method, $"{resourceUri}?api-version=2017-04"); request.Headers.Add("Authorization", createToken(resourceUri, KEY_NAME, KEY_VALUE));
request.Headers.Add("X-WNS-Type", "wns/raw");
request.Headers.Add("ServiceBusNotification-Format", "windows"); return request;
```

Box 2: application/octet-stream -

Example code capable of sending a raw notification:

```
string resourceUri = $"https://{{NH_NAMESPACE}}.servicebus.windows.net/{{HUB_NAME}}/messages/"; using (var request = CreateHttpRequest(HttpStatusCode.Post, resourceUri))
{
 request.Content = new StringContent(content, Encoding.UTF8, "application/octet-stream");
 request.Content.Headers.ContentType.CharSet = string.Empty;
 var httpClient = new HttpClient();
 var response = await httpClient.SendAsync(request);
```

```
Console.WriteLine(response.StatusCode);
}

Reference:
https://stackoverflow.com/questions/31346714/how-to-send-raw-notification-to-azure-notification-hub/31347901
```

✉  **markra** Highly Voted 10 months, 3 weeks ago

Answer is correct.

<https://docs.microsoft.com/en-us/rest/api/notificationhubs/send-wns-native-notification>

upvoted 24 times

✉  **lugospod** Highly Voted 3 months ago

Got this one 01/2022. Went with most voted (to avoid writing answers again)

upvoted 6 times

✉  **Mev4953** Most Recent 3 months, 2 weeks ago

about second box:

Set to application/json;charset=utf-8 or application/xml.

If the notification type (X-WNS-Type) is wns/raw, set to application/octet-stream

upvoted 2 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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

**Correct Answer: A**

Reference:

<https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-programming-guide>

✉  **jay158** Highly Voted 10 months, 1 week ago

Answer is NO

How many partitions event hub can have? NOT MORE than 1024

<https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-quotas>

upvoted 15 times

✉  **troy89** 2 months ago

But when you use Event Hubs cluster then you can purchase up to 20 Capacity Units and every Capacity Unit can have 2000 partitions.  
upvoted 1 times

✉  **DefaultName2** 6 months ago

Answer is YES :)

Why do you want to have so many partitions? For me, it would be pretty strange to have so many concurrent groups.

In the Event HUB output group you can have whether you want a Service bus, account storage, stream analytics (to aggregate data) and more .  
upvoted 6 times

✉  **AndresCH** 6 months, 3 weeks ago

"does not reach goal". See topic5 / question 5

upvoted 2 times

✉  **Mev4953** 3 months, 2 weeks ago

Question 5 is not the same. Asking about "Provision an Azure Notification Hub. Register all devices with the hub."

upvoted 1 times

✉  **jkes80** 9 months, 2 weeks ago

Indeed, strong reasoning! On a dedicated plan it is max 1024 partitions, on lower plans even less. Because you want to partition per device id, and you have 2000 stores with 1-5 devices per store, you need at least 2000 partitions. So Event Hub is not gonna work. Answer: NO.  
upvoted 7 times

✉  **silva\_831** Highly Voted 10 months, 1 week ago

The given answer is incorrect. Service Bus is used to provision order process and transactional log.

upvoted 7 times

✉  **sazaang** 8 months, 1 week ago

Answer is incorrect, but it does not mentioned provision order process and transactional log. can I ask why you mentioned it.  
upvoted 4 times

✉  **Snekerus** Most Recent 1 month, 2 weeks ago

**Selected Answer: B**

I think the answer is NO, based on this article:

<https://azure.microsoft.com/en-gb/blog/events-data-points-and-messages-choosing-the-right-azure-messaging-service-for-your-data/>

"Service Bus queues or topic subscriptions are ideal for this use-case, where the core of the business application lives in the cloud or even an on-site datacenter, branch-offices, work-sites, or service tenants spread across the world. This model is particularly popular with SaaS providers in health care, tax and legal consulting, restaurant services, and retail."

upvoted 1 times

✉ **JohnKK** 1 month, 3 weeks ago

Answer is NO - already answered as service bus in #6.

upvoted 1 times

✉ **heisenberg33** 2 months, 1 week ago

**Selected Answer: B**

Answer is No Ref: <https://docs.microsoft.com/en-us/azure/event-grid/compare-messaging-services>

upvoted 1 times

✉ **xavi1** 2 months, 1 week ago

**Selected Answer: B**

<https://docs.microsoft.com/en-us/azure/event-grid/compare-messaging-services#comparison-of-services>

upvoted 1 times

✉ **edengoforit** 3 months ago

When the question comes in the exam, then we need to pray to God

upvoted 5 times

✉ **huislaw** 2 months ago

Let's pray the question doesn't appear.

upvoted 1 times

✉ **leonidn** 3 months, 1 week ago

**Selected Answer: A**

Partition key causes only how messages are partitioned and it does not influence the number of partitions. So, the Event Hub partitions limit does not make sense here.

EventHub is the best option for messages ingestion, so, the answer is correct.

upvoted 5 times

✉ **eMax** 3 months, 1 week ago

The Event Hub is meant for processing events - the question is talking about device data - which is more likely a data message - then the answer is Service Bus.

upvoted 2 times

✉ **PhilLI** 3 months, 2 weeks ago

**Selected Answer: B**

It seems the correlation per DeviceId is not possible.

Some people mention correlation filters but I haven't found them for Event Hub.

And when Event Hub stores the data in Azure Storage, it is stored in this structure, no place for DeviceId:

{Namespace}/{EventHub}/{PartitionId}/{Year}/{Month}/{Day}/{Hour}/{Minute}/{Second}

upvoted 2 times

✉ **koolexam** 4 months, 1 week ago

**Selected Answer: B**

Service Bus is the correct answer.

A sale recorded in a point-of-sale solution is both a financial record and an inventory tracking record, and not a mere event. It's recorded in a ledger, which will eventually be merged into a centralized accounting system, often via several integration bridges, and the information must not be lost on the way. The sales information, possibly expressed as separate messages to keep track of the stock levels at the point of sale, and across the sales region, may be used to initiate automated resupply orders with order status flowing back to the point of sale.

<https://azure.microsoft.com/en-us/blog/events-data-points-and-messages-choosing-the-right-azure-messaging-service-for-your-data/>

upvoted 4 times

✉ **altafpatel1984** 5 months ago

There is no requirement mentioned here for high throughput so Event Hub is obviously not good choice. Instead should use Event Grid for such scenarios.

upvoted 1 times

✉ **altafpatel1984** 5 months ago

Event hub is used to broker events, not data. For data, Service bus Queue/Topic are best choice.

upvoted 1 times

✉ **jvyas** 5 months, 2 weeks ago

I think answer is yes. Please refer to this article, to better understand how partition are created based on throughput and not just simply based on simply total number of devices that emit event data.

<https://www.linkedin.com/pulse/azure-event-hub-understanding-designing-partitions-unit-kamal-pathak>

upvoted 1 times

✉ **MiraA** 6 months, 3 weeks ago

"The number of partitions is specified at the time of creating an event hub. It must be between 1 and the maximum partition count allowed for each pricing tier."

<https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-features#number-of-partitions>

We have 2.000 stores now and additional stores are expected to open in the future.

Plus the limit on "Number of partitions per event hub" - for dedicated tier it is "1024 per event hub 2000 per CU".

<https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-quotas#basic-vs-standard-vs-premium-vs-dedicated-tiers>

upvoted 3 times

✉️ **Jan91** 5 months, 3 weeks ago

It is never stated the each device must have its own partition. The requirement is 'Device data must be correlated based on a device identifier'. I think a correlation filter can be used for this. Therefore your argument is not valid for this question.

upvoted 2 times

✉️ **wolf\_lu** 6 months, 4 weeks ago

10000000% is right

upvoted 3 times

✉️ **windflower55** 7 months ago

Yes. Azure Event Hubs is an ingestion service. You can also use the data capture system to send data to an Azure storage account. Azure Event Hub capture can be used to get the messages from the various devices. Azure Event Hub capture can then be used to persist the events to Azure Blob storage.

upvoted 1 times

**DRAG DROP -**

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			

**Correct Answer:**

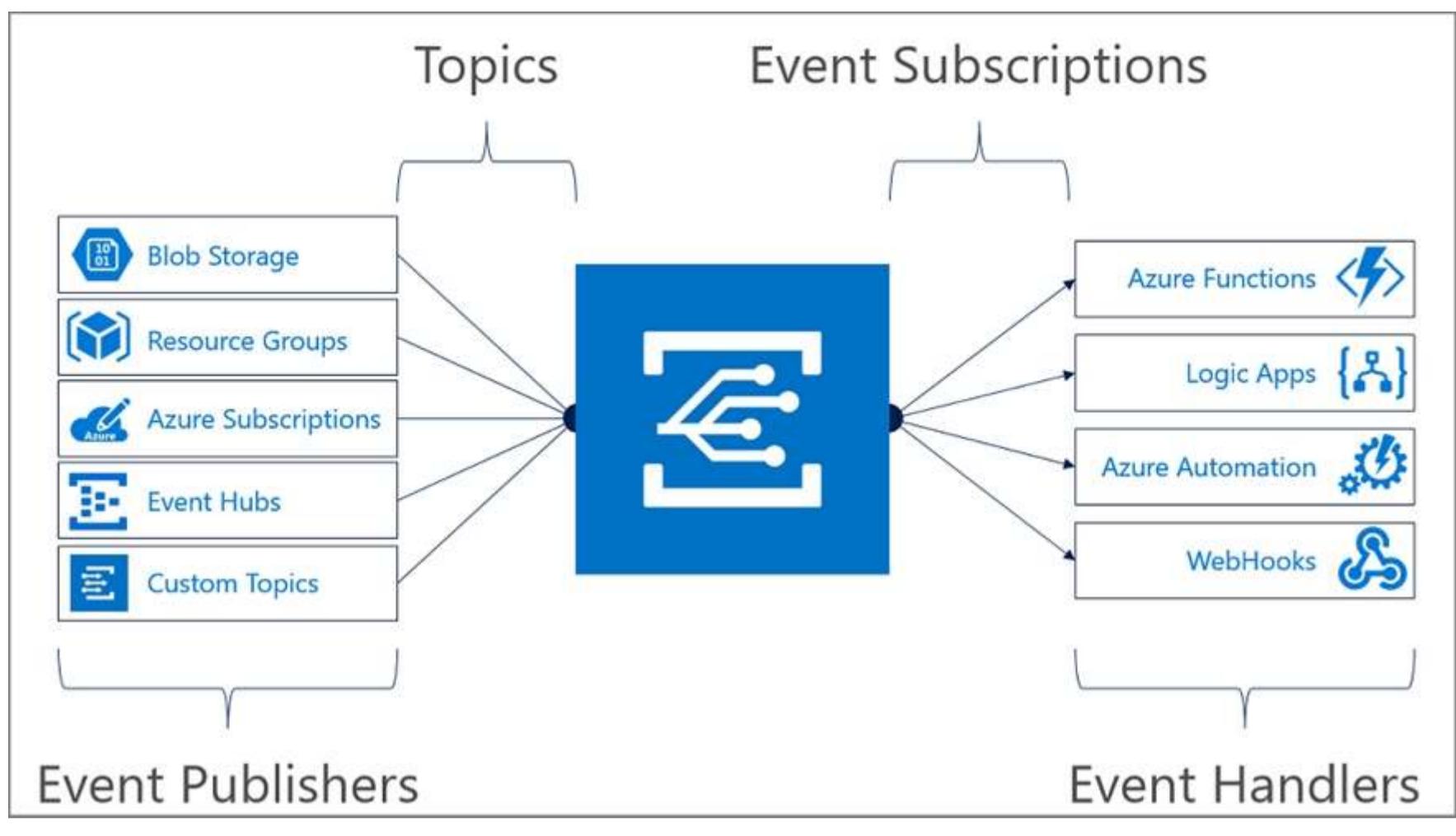
Technologies	Answer Area	Object	Technology
Azure Event Hub		Event Source	Azure Event Grid
		Event Receiver	Azure Logic App
Azure Blob Storage		Event Handler	Azure Service Bus
Azure App Service			

**Box 1: Azure Event Grid -**

Blob storage events are pushed using Azure Event Grid to subscribers such as Azure Functions, Azure Logic Apps, or even to your own http listener. Event Grid provides reliable event delivery to your applications through rich retry policies and dead-lettering.

**Box 2: Azure Logic App -**

Event Grid uses event subscriptions to route event messages to subscribers. This image illustrates the relationship between event publishers, event subscriptions, and event handlers.



#### Box 3: Azure Service Bus -

The Event Grid service doesn't store events. Instead, events are stored in the Event Handlers, including ServiceBus, EventHubs, Storage Queue, WebHook endpoint, or many other supported Azure Services.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-event-overview> <https://docs.microsoft.com/en-us/java/api/overview/azure/messaging-eventgrid-readme>

✉️ **Jurgen1234** Highly Voted 9 months, 3 weeks ago

Source -> blob storage  
 Receiver -> event grid  
 Handler -> logic app  
 upvoted 67 times

✉️ **unilldreams** 4 months, 3 weeks ago

Shouldn't receiver be Azure service bus , we are not just sending event but also inventory data (Message type).  
<https://docs.microsoft.com/en-us/azure/event-grid/compare-messaging-services#comparison-of-services>

upvoted 1 times

✉️ **Mev4953** 3 months ago

An event handler is the place where the event is sent. The handler takes some further action to process the event. Several Azure services are automatically configured to handle events and Azure Service Bus is one of them.

<https://docs.microsoft.com/en-us/azure/event-grid/handler-service-bus>  
 upvoted 2 times

✉️ **Molte** 3 months ago

Also "Filter data based on store location information." indicates its a message right? Furthermore ServiceBus has the ability to filter message  
<https://docs.microsoft.com/en-us/azure/service-bus-messaging/topic-filters>  
 upvoted 1 times

✉️ **jay158** 9 months, 3 weeks ago

Receiver ??  
<https://docs.microsoft.com/en-us/azure/event-grid/overview>  
 upvoted 5 times

✉️ **Philli** 3 months, 2 weeks ago

Indeed when you look at it from the perspective of the Event Grid the question seems answerable. Your link is good. Receiver is implicitly mentioned here:  
 "Event sources.  
 Currently, the following Azure services support sending events to Event Grid."  
 upvoted 1 times

✉️ **Jurgen1234** 9 months, 3 weeks ago

The image in the answers even shows it like that  
 upvoted 2 times

✉️ **argoth** Highly Voted 9 months, 1 week ago

I'm always wondering who is the big brain behind the examtopics question solutions...  
upvoted 25 times

✉  **meoukg** Most Recent 1 month, 1 week ago

Got it on 03/2022, chose Source: Blob storage, Receiver: Event Grid, Handler: Logic App.  
upvoted 1 times

✉  **edengoforit** 4 months ago

Event Grid is a fully-managed event routing service and the first of its kind. Azure Event Grid greatly simplifies the development of event-based applications and simplifies the creation of serverless workflows. Using a single service, Azure Event Grid manages all routing of events from any source, to any destination, for any application.

upvoted 1 times

✉  **d\_programmer** 4 months ago

Receiver should be event hub as the message needs to be retained for 24 hours  
upvoted 2 times

✉  **koolexam** 4 months ago

Event Grid -> Reliability - 24-hour retry with exponential backoff to make sure events are delivered.  
<https://docs.microsoft.com/en-us/azure/event-grid/overview#capabilities>  
upvoted 2 times

✉  **jvyas** 5 months, 2 weeks ago

I think the given answer tries to meet all the requirements solution must meet in your responses.  
upvoted 1 times

✉  **Franz22** 6 months ago

I think that the right solution should be:

Source -> blob storage

Receiver -> event grid

Handler -> logic app

Because:

1)the source of the event, which means WHO has created the event and who is publishing this event, is the Blob Storage  
2)The receiver of this event, which means who should receive this event, is the Event Grid. In the event Grid we can create Topic. Topic is where all publishers write messages --> so the Blob Storage write into a topic which is inside an Event Grid.  
3)Handler of this event, which means who should handle this event, is the Logic App by creating a subscription in the event grid and connecting the Logic App to that subscription.

upvoted 12 times

✉  **catalene** 6 months, 3 weeks ago

Why not "Event Hub" like Event Receiver?  
upvoted 3 times

✉  **ning** 8 months, 1 week ago

No idea what is event receiver? No where in documentation mentioned that!  
Source --> Blob Storage, Handler --> Logic App  
upvoted 1 times

✉  **ranjitklive** 8 months, 3 weeks ago

<https://www.cognizantsoftvision.com/blog/azure-event-grid-vs-event-hubs/>  
upvoted 2 times

✉  **7ack** 9 months, 3 weeks ago

According to the diagram, shouldn't the source be Blob storage, the receiver Event Grid, and the handler Logic app?  
upvoted 15 times

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

**Correct Answer:** *Incorrect Answer:*

For relational data you will need the SQL API

A: The MongoDB API is not used for relational data.

B: The Table API only supports data in the key/value format

D: The Cassandra API only supports OLTP (Online Transactional Processing) and not batch processing.

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/choose-api>

**HOTSPOT -**

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);
```

Correct Answer:

**Answer Area**

```
CloudStorageAccount storageAccount = CloudStorageAccount.Parse
(CloudConfigurationManager.GetSetting ("StorageConnectionString"));

 pVar1 = storageAccount. ▼ () ;
 ┌───┐
 │ CloudQueueClient CreateCloudQueueClient
 │ CloudTableClient CreateCloudTableClient
 │ CloudQueue GetQueueReference
 │ CloudTable GetTableReference
 └───┘

 pVar2 = pVar1. ▼ ("contoso-storage");
 ┌───┐
 │ CreateCloudQueueClient
 │ CreateCloudTableClient
 │ GetQueueReference ┌───┐
 │ GetTableReference └───┘

try
{
 await pVar2.CreateIfNotExistsAsync();
}
catch (StorageException x)
{
 throw;
}

CloudQueueMessage cloudQueueMessage = new CloudQueueMessage("App Launch: <iUserID>");
await pVar2.AddMessageAsync(cloudQueueMessage);
```

Reference:

<https://docs.microsoft.com/en-us/azure/storage/queues/storage-dotnet-how-to-use-queues?tabs=dotnetv11>

**HOTSPOT -**

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
```

## Answer Area

```
Set-AzAppServicePlan `
 -ResourceGroupName $rg `
 -Name "PrimaryASP" `
```

	▼
NumberOfSites 1	
PerSiteScaling \$true	
TargetWorkerCount = 1	
MaxNumberOfWorkers = 1	
SiteConfig.NumberOfWorkers = 1	

Correct Answer:

```
$app = Get-AzWebApp `
 -ResourceGroupName $rg `
 -Name "ExcelParser"
```

\$app.	▼
NumberOfSites 1	
PerSiteScaling \$true	
TargetWorkerCount = 1	
MaxNumberOfWorkers = 1	
SiteConfig.NumberOfWorkers = 1	

```
Set-AzWebApp $app
```

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/manage-scale-per-app>

**DRAG DROP -**

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:

<b>Policy types</b>	<b>Answer Area</b>	<b>Policy type</b>
Inbound	Requirement Support alternative input parameters.	policy type
Outbound	Requirement Remove formatting text from responses.	policy type
Backend	Requirement Provide additional context to back-end services.	policy type

**Correct Answer:**

<b>Policy types</b>	<b>Answer Area</b>	<b>Policy type</b>
Inbound	Requirement Support alternative input parameters.	Inbound
Outbound	Requirement Remove formatting text from responses.	Outbound
Backend	Requirement Provide additional context to back-end services.	Inbound

**Reference:**

<https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-policies> <https://docs.microsoft.com/en-us/azure/api-management/api-management-transformation-policies#forward-context-information-to-the-backend-service>

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

**Correct Answer: A**

As a solution architect/developer, you should consider using Service Bus queues when:

Your solution requires the queue to provide a guaranteed first-in-first-out (FIFO) ordered delivery.

Reference:

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted>

 **rahulrai19** Highly Voted 1 year, 5 months ago

Answer Should be C, even explanation is saying so  
upvoted 137 times

 **fearoffree** 2 months, 1 week ago

Correct:

Use Service Bus when your solution requires transactional behavior and atomicity when sending or receiving multiple messages from a queue.  
upvoted 2 times

 **cloud\_exam1** 1 year, 5 months ago

I think so.

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted>  
upvoted 3 times

 **Juanlu** 1 year, 1 month ago

Yes, I Agree !

upvoted 2 times

 **Ash111** Highly Voted 1 year, 5 months ago

Choose Service Bus queues if:

You need an At-Most-Once delivery guarantee.

You need a FIFO guarantee.

You need to group messages into transactions.

You want to receive messages without polling the queue.

You need to provide a role-based access model to the queues.

You need to handle messages larger than 64 KB but less than 256 KB.

Your queue size will not grow larger than 80 GB.

You would like to be able to publish and consume batches of messages.

Queue storage isn't quite as feature-rich, but if you don't need any of those features, it can be a simpler choice. In addition, it's the best solution if your app has any of the following requirements.

Choose Queue storage if:

You need an audit trail of all messages that pass through the queue.

You expect the queue to exceed 80 GB in size.

You want to track progress for processing a message inside of the queue.

upvoted 37 times

 **Ash111** 1 year, 5 months ago

C will be the answer...

upvoted 5 times

 **frostbeard** Most Recent 1 week, 3 days ago

Agree with C.

upvoted 1 times

 **Ischuster** 1 month, 2 weeks ago

**Selected Answer: C**

Highly voted seems correct : C  
upvoted 1 times

✉ **Baskman** 2 months, 1 week ago

**Selected Answer: C**

FIFO -> Service Bus  
upvoted 2 times

✉ **oescm** 2 months, 2 weeks ago

Got this one 02/2022. Went with the highest voted  
upvoted 3 times

✉ **heisenberg33** 2 months, 3 weeks ago

**Selected Answer: C**

Answer should be C Ref: <https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted>  
upvoted 3 times

✉ **kdidi** 2 months, 3 weeks ago

**Selected Answer: C**

Answer Should be Azure Service bus queues  
<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-queues-topics-subscriptions>  
<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted>  
upvoted 3 times

✉ **fesioche** 2 months, 3 weeks ago

**Selected Answer: C**

FIFO = Service Bus queues  
upvoted 3 times

✉ **Mev4953** 3 months, 2 weeks ago

**Selected Answer: C**

Maybe, It helps to get better understanding of Azure message (see video) and service bus  
<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted>  
<https://www.youtube.com/watch?v=82akIKoX09A>  
upvoted 3 times

✉ **itssayeed** 3 months, 3 weeks ago

**Selected Answer: C**

Service Bus  
upvoted 3 times

✉ **sappypatil** 4 months, 3 weeks ago

**Selected Answer: C**

Should be C  
upvoted 7 times

✉ **Ravindu** 6 months, 1 week ago

The correct answer is C  
upvoted 2 times

✉ **ning** 8 months, 1 week ago

Not storage queue, but service bus queue, which can make messages in order  
upvoted 2 times

✉ **Dan84** 8 months, 3 weeks ago

Comparison Criteria : Ordering guarantee  
Storage queues: No  
Service Bus queues: Yes - First-In-First-Out (FIFO)  
<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted>  
upvoted 1 times

✉ **somenkr** 9 months, 2 weeks ago

Dont blame the answer provider. Even he want to go with Service Bus. Same mentioned in description. May be typo to put 'A' as Answer ...  
upvoted 2 times

✉ **Kvm1** 10 months ago

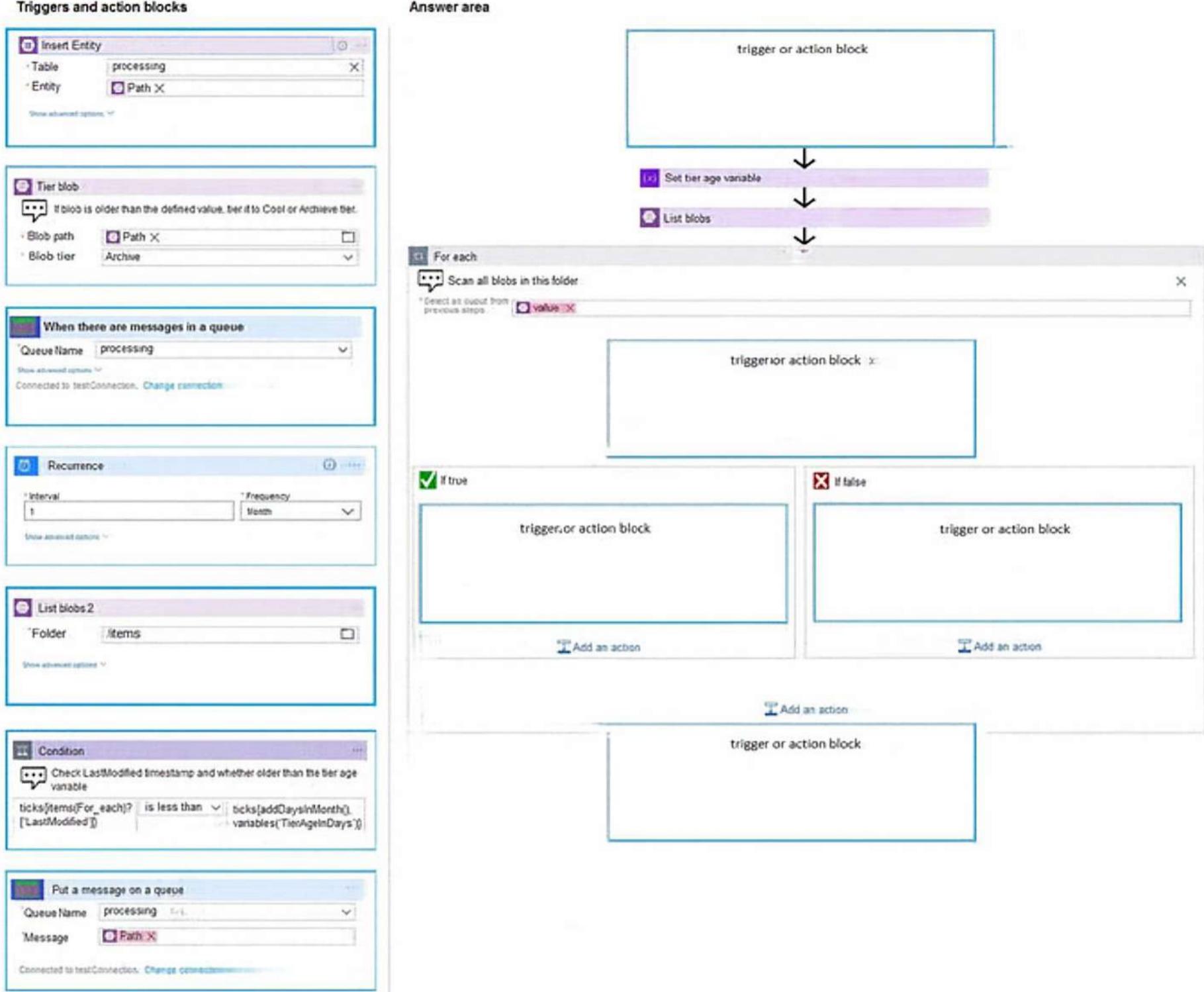
Answer should be C, service bus as it needs FIFO guarantee which is not provided with storage queue but provided by service bus  
upvoted 2 times

**DRAG DROP -**

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:



## Correct Answer:

**Triggers and action blocks**

**Answer area**

```

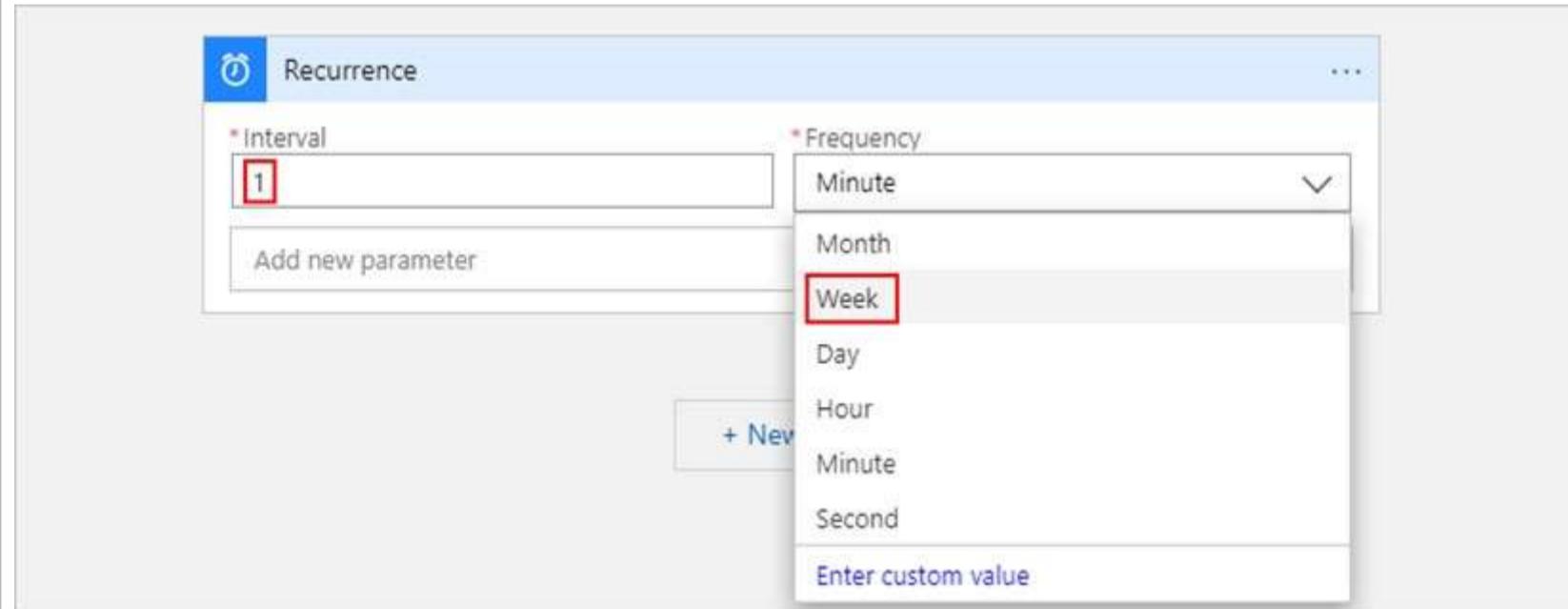
graph TD
 Recurrence[Recurrence] --> SetTier[Set tier age variable]
 SetTier --> ListBlobs1[List blobs]
 ListBlobs1 --> ForEach[For each]
 ForEach --> Condition[Condition]
 Condition -- If true --> TierBlobTrue[Tier blob]
 Condition -- If false --> ListBlobs2[List blobs]

```

### Box 1: Reoccurrence..

To regularly run tasks, processes, or jobs on specific schedule, you can start your logic app workflow with the built-in Recurrence - Schedule trigger. You can set a date and time as well as a time zone for starting the workflow and a recurrence for repeating that workflow.

Set the interval and frequency for the recurrence. In this example, set these properties to run your workflow every week.



### Box 2: Condition..

To run specific actions in your logic app only after passing a specified condition, add a conditional statement. This control structure compares the data in your workflow against specific values or fields. You can then specify different actions that run based on whether or not the data meets the condition.

### Box 3: Put a message on a queue -

The path for any item that is not archived must be placed in an existing queue.

Note: Under If true and If false, add the steps to perform based on whether the condition is met.

### Box 4: ..tier it to Cool or Archive tier.

Archive item.

## Box 5: List blobs 2 -

Reference:

<https://docs.microsoft.com/en-us/azure/connectors/connectors-native-recurrence> <https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-control-flow-loops> <https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-control-flow-conditional-statement>

✉  **Cricketer** Highly Voted 1 year ago

Logic App is not part of 204 exam since March 2021  
upvoted 88 times

✉  **jay158** 9 months, 3 weeks ago

See Notes from 'fabulousethiopia': we still get questions about logic app  
<https://www.examtopics.com/exams/microsoft/az-204/>  
upvoted 2 times

✉  **if54uran** 10 months, 1 week ago

In the official document logic apps are still included.

<https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RE4oZ7B>

Can you provide a source?

upvoted 1 times

✉  **nocap** 10 months ago

In the linked document it actually confirms Logic Apps are no longer part of the criteria in the comparison of this section "Connect to and consume Azure services and third-party services"  
upvoted 6 times

✉  **SnakePlissken** 11 months, 2 weeks ago

You're right!! Let's not waste our time with questions about Logic Apps anymore!  
Please upvote Cricketer!  
upvoted 4 times

✉  **MariusN** Highly Voted 1 year, 5 months ago

For Box 3, refer to the answer's text that says "Put a message on a queue". The answer's graphic implies "When there are messages in a queue" for Box 3 by mistake.  
upvoted 36 times

✉  **ning** Most Recent 8 months, 1 week ago

No idea, what is the last box ...

For the condition, tick less than is older than ...

upvoted 2 times

✉  **crepatata** 12 months ago

Probably, you should use "Insert Entity" in case it should be archived and in the 5th step archive all the entities in that path?  
upvoted 2 times

✉  **Pomphard** 1 year ago

It is clear that :  
box 1 should be recurrence  
box 2 should be the condition

However, there is confusion about the condition, and rightly so:  
the right half, ticks(addDaysInMonth(), variables("TierAgeInDays")) has a few problems,  
first off: addDaysInMonth() doesn't exist as a function at all  
Second, ticks does not accept two parameters as is done here.  
(see reference: <https://docs.microsoft.com/en-us/azure/logic-apps/workflow-definition-language-functions-reference#date-and-time-functions>)

So, the condition block is bogus. However, they probably wanted to write something like: addDays(utcNow(), variables("TierAgeInDays")) which IS valid.

The less-than will return true for anything older, which leaves the next boxes to be:

box 3: Tier blob

box 4: Message queue

box 5: optional, they probably want to show the results with list blob2

upvoted 8 times

✉  **BrettusMaximus** 11 months, 4 weeks ago

Totally agree, however Box 5 should be "Insert Entity" as it occurs for every blob. A good developer would want to track "Processing" and record the state of an archive transaction or not.  
upvoted 1 times

✉  **XYZ2** 1 year ago

About condition

"the Ticks property to display the number of ticks that have elapsed since the beginning of the twenty-first century"

Basically, if left side has a bigger value, then it's been updated less than 180 days ago, and should not be archived

Condition says "if left value less than right value", then we have:

If yes (true), it should be archived (left value less than right value, less ticks, older than 180 days)

If no (false) - do not put it to archive (left value greater than right value, more ticks, newer than 180 days)

So, current answer is

Box 1 Recurrence

Box 2 Condition

Box 3 Tier blob (item last modified < current date - 180 days)

Box 4 Put a message on a queue

Box 5 .... still not sure...

upvoted 4 times

✉ **gchen** 1 year, 1 month ago

BOX 1: Recurrence

BOX 2: Condition

BOX 3: Tier blob ==> condition is older than 180 days

BOX 4: Put a message on a queue

BOX 5: List blob2 ==> check the next one

upvoted 5 times

✉ **pieronegri** 1 year, 1 month ago

I think the false branch needs "The path for any item that is not archived must be placed in an existing queue." as it is about items which are not archived (last modified is >= adddays(-180)).

the true branch needs archiving.

Last action, listing, is not needed per se. Just to show the results.

upvoted 1 times

✉ **minsma** 1 year, 2 months ago

I think this is the correct answer: <http://prntscr.com/zqmpjl>

upvoted 5 times

✉ **cbn** 1 year, 2 months ago

Box 1 Recurrence

Box 2 Condition

Box 3 Tier blob (item last modified < current date - 180 days)

Box 4 Put a message on a queue

Box 5 When there are messages in a queue / blank

upvoted 15 times

✉ **ning** 8 months, 1 week ago

No, you cannot do multiple trigger in the designer

In code view, you can

upvoted 1 times

✉ **clarionprogrammer** 1 year ago

This is the right answer.

upvoted 1 times

✉ **atomicicebreaker** 1 year ago

Box 3 - you need to tier blob when modified > currentDate - 180 days, and the condition is set to "less than" so true -> blobs to ignore, false -> blobs to tier

upvoted 2 times

✉ **Juanlu** 1 year, 1 month ago

I thing, after analyse all comments, this is the good one !

upvoted 2 times

✉ **Archimedes** 1 year, 2 months ago

The condition is "LastModified" "less than" (Date - 180). (TierAgeInDays is a negative value of -180). If this statement is true, it means that the blob has been modified before 180 days from now. Hence it should be archived. So boxes 3 and 4 should be swapped. Correct me if I am wrong. Box 5 is immaterial. Not covered in the question scope. So, I am Ok with listing the blobs for Box 5.

upvoted 7 times

✉ **jvyas** 7 months, 2 weeks ago

"You must automatically move blobs to Archive tier after they have not been modified within 180 days. " If condition block returns true meaning the block has been modified within 180 days and should not be archived.

upvoted 1 times

✉ **jvyas** 7 months, 2 weeks ago

Sorry I did not realize it was -180.

upvoted 1 times

✉ **Kibb** 1 year, 3 months ago

Aren't 3 and 4 swapped?

The question sais place in queue if the messages AREN'T archived (so not older than 180 days)

upvoted 5 times

✉ **rajwit** 1 year, 3 months ago

there is different discussion  
<https://www.examtopics.com/exams/microsoft/az-203/view/7/>  
I believe  
Box 1 Recurrence  
Box 2 Condition  
Box 3 Put a message on a queue  
Box 4 Tier blob  
Box 5 List Blob  
upvoted 6 times

✉ **xofowi5140** 1 year, 3 months ago

But the workflow is not the same  
upvoted 1 times

✉ **sleepyboy777** 1 year, 3 months ago

It might make sense to List blobs 2 to see what files are there at the end of the operation, but the question does not specify that  
upvoted 1 times

✉ **reggina** 1 year, 3 months ago

for the condition, True means the blob is older than the limit so 3 and 4 should be switched.  
<https://docs.microsoft.com/en-us/azure/logic-apps/workflow-definition-language-functions-reference#ticks>  
upvoted 15 times

✉ **internalK** 1 year, 3 months ago

Yes, condition is Ticks(item.LastModified) < Ticks(today-180) --> Box3 & Box4 should be switched. If the condition is true means that the item must be archived.  
upvoted 7 times

✉ **bortolearn** 1 year, 3 months ago

I disagree because if you read the condition, it is saying that if the item is less than age(180) which is different from the condition's description.  
upvoted 3 times

✉ **melli** 1 year, 3 months ago

No, it says "if the item was modified at a time more than 180 days ago". Notice that "TierAgeInDays" is a negative value of -180. So if you add it to the current date it is 180 days ago. In Pseudocode this would be : If("LastModified" < Today-180d)  
upvoted 9 times

✉ **Member777** 1 year, 4 months ago

Box 1 Recurrence  
Box 2 Condition  
Box 3 Put a message on a queue  
Box 4 Tier blob  
Box 5 When there are messages in a queue  
upvoted 10 times

✉ **altafpatel1984** 5 months ago

Please don't misguide people.  
upvoted 1 times

✉ **cbn** 1 year, 2 months ago

I think it should be  
Box 3 Tier blob (item last modified < current date - 180 days)  
Box 4 Put a message on a queue  
upvoted 9 times

✉ **Cornholioz** 1 year, 4 months ago

Wrong for 4 & 5. The WHEN is not a condition like in a WHEN block of code. It gets processed after the IF condition. So in the IF condition for true, you want to put into the queue already. Box 5 should either be empty or (just for fun) list the blobs.  
upvoted 3 times

✉ **xofowi5140** 1 year, 3 months ago

Cornholioz what is the correct order for you?  
upvoted 1 times

✉ **luppittegui** 1 year, 4 months ago

Last one must be empty, and the false statement too. You only want to process > 1 month with that queue (I assume that other process do the job of moving the blobs)  
upvoted 2 times



Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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

#### Correct Answer: A

You can create a function that is triggered when messages are submitted to an Azure Storage queue.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-create-storage-queue-triggered-function>

✉  **gunencali** Highly Voted 1 year, 4 months ago

Yes, is correct answer

upvoted 27 times

✉  **kemtin** Highly Voted 1 year, 5 months ago

i enjoys questions on azure functions a lot :)

upvoted 14 times

✉  **betepah987** 1 year, 2 months ago

Probably, cuz it's common to use so easy to answer.

upvoted 3 times

✉  **xRiot007** Most Recent 1 month, 1 week ago

The answer is Yes, but the link is wrong. It is not important how the implementation looks. What is important is that you satisfy those 3 conditions in the problem, which you can find in a much better link, here: <https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-service-bus-trigger>

upvoted 1 times

✉  **xRiot007** 1 month, 1 week ago

Correction. Link is here: <https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted>

upvoted 1 times

✉  **meoukg** 1 month, 1 week ago

Got it on 03/2022, I chose A. Yes

upvoted 1 times

✉  **Freidrich** 1 month, 4 weeks ago

Selected Answer: A

The correct answer is A: Yes.

upvoted 1 times

✉  **Netspud** 2 months ago

Selected Answer: A

It is correct

upvoted 1 times

✉  **lugospod** 3 months ago

Got this one 01/2022. Went with YES

upvoted 3 times

✉️  **MiraA** 6 months, 3 weeks ago

The URL link in the answer mentions Azure Function and Storage Queue.  
This link is better - Azure Function and Service Bus Queue:  
<https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-service-bus-trigger>

upvoted 3 times

✉️  **fbfffff** 11 months, 3 weeks ago

Correctomundo  
upvoted 2 times

✉️  **paru123456789** 1 year, 1 month ago

Answer: Yes  
upvoted 2 times

✉️  **priya1** 1 year, 2 months ago

A. Yes is correct  
upvoted 7 times

✉️  **mehul9595** 1 year, 4 months ago

since the question also asks to minimize the cost, so why can't the answer be Storage Queues?  
upvoted 5 times

✉️  **atomicicebreaker** 1 year ago

two reasons:  
1. FIFO - Service Bus guarantees that  
2. Size < 80 GB - you should consider Storage Queue when data exceeds that limit  
Question is tailored for Service Bus :)  
upvoted 9 times

✉️  **Cornholioz** 1 year, 4 months ago

No. Service Bus Queue is FIFO. Not Storage Queue.  
I hit the upvote button by mistake, instead of reply. So don't assume someone upvoted your answer :)  
upvoted 14 times

✉️  **MAzureLearner2020** 1 year, 4 months ago

Service bus queue size is limited to 80 gigs -> can't be yes

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-quotas>  
upvoted 2 times

✉️  **olegys** 1 year, 4 months ago

question contains: "Queue size must not grow larger than 80 gigabytes (GB)"  
yes - looks correct answer.  
upvoted 21 times

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. 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

#### **Correct Answer: B**

Instead use an Azure Service Bus, which is used for order processing and financial transactions.

Reference:

<https://docs.microsoft.com/en-us/azure/event-grid/compare-messaging-services>

  **Justing\_Gao** Highly Voted 1 year, 9 months ago

Azure event Hub is the best choice  
upvoted 30 times

  **Genere** 1 year, 8 months ago

Azure Event Hub is for telemetry and distributed data broadcasting, while Azure Service Bus can be used for order processing and financial transactions.  
What is clearly specified in the statement: "You are developing an Azure solution to collect point-of-sale (POS) device data from 2,000 stores ..." It's Service Bus  
upvoted 43 times

  **Nabeelcp** 1 year, 7 months ago

I think this scenario is more suited on message based not event based notification  
upvoted 8 times

  **quokka** 1 year, 8 months ago

Event Hub won't work as message size is currently limited to 1MB (unless each device will upload more than once a day or you put an API in front to pre-process data to two 1MB blocks).  
upvoted 2 times

  **Adol** 1 year, 3 months ago

Yes but we're talking about 2 MB in 24 hours and not every message. So still Azure Event Hub is the best choice and should be the primary choice when it comes to IoT or data from many devices  
upvoted 5 times

  **clarionprogrammer** 1 year ago

Event Hub is incorrect. Event Hub is for streaming real-time data.  
<https://azure.microsoft.com/en-us/services/event-hubs/>  
upvoted 1 times

  **clarionprogrammer** 1 year ago

Event Hub appears to be the correct answer. Although it's such a tiny amount of data, the devices could be streaming a mere 2 MB over 24 hrs.  
upvoted 2 times

  **Camios** Highly Voted 1 year, 9 months ago

Explanation should be that notification hub is for pushing to mobile devices?  
upvoted 25 times

  **AnkanG** 1 year, 9 months ago

True, notification hub is for pushing the data, to a mobile device, not for collecting the data.  
upvoted 8 times

  **meoukg** Most Recent 1 month, 1 week ago

Got it on 03/2022, I chose B. No

upvoted 2 times

✉ **Adediwura** 1 month, 2 weeks ago

Azure notification hub is used to push messages to  
upvoted 1 times

✉ **Netspud** 2 months ago

**Selected Answer: B**

Answer is no  
upvoted 1 times

✉ **Mev4953** 3 months, 2 weeks ago

**Selected Answer: B**

B is better choice

<https://docs.microsoft.com/en-us/azure/event-grid/compare-messaging-services>

upvoted 1 times

✉ **kondapaturi** 10 months ago

Answer is NO  
upvoted 2 times

✉ **rdemontis** 1 year, 1 month ago

In my opinion EventHub is the best choice for the following reason:  
1. Faster in elaborating millions of data every day.  
2. No problem for future expansions of POS as assumed in the question  
3. It is a slender system than Service bus  
4. It is not required advanced features like transactions, ordering, duplicate detection, and instantaneous consistency as service bus provide  
5. The requirement here is to manage huge quantity of streaming data

In a similar question (i don't remember whether on udemy or testprepration web site) the correct answer is Event Hub.

upvoted 3 times

✉ **Chulbul\_Pandey** 1 year, 1 month ago

Az event hub is a better choice  
upvoted 3 times

✉ **paru123456789** 1 year, 1 month ago

Answer: No  
upvoted 2 times

✉ **aditya\_2016** 1 year, 2 months ago

<https://docs.microsoft.com/en-us/azure/event-grid/compare-messaging-services#comparison-of-services>  
upvoted 3 times

✉ **tom999** 1 year, 3 months ago

No - Notification Hub is for outbound communication  
upvoted 7 times

Topic 7 - Testlet 1

## Introductory Info

Case study -

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To start the case study -

To display the first question in this case study, click the Next button. Use the buttons in the left pane to explore the content of the case study before you answer the questions. Clicking these buttons displays information such as business requirements, existing environment, and problem statements. When you are ready to answer a question, click the Question button to return to the question.

Background -

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.

Shipping Data -

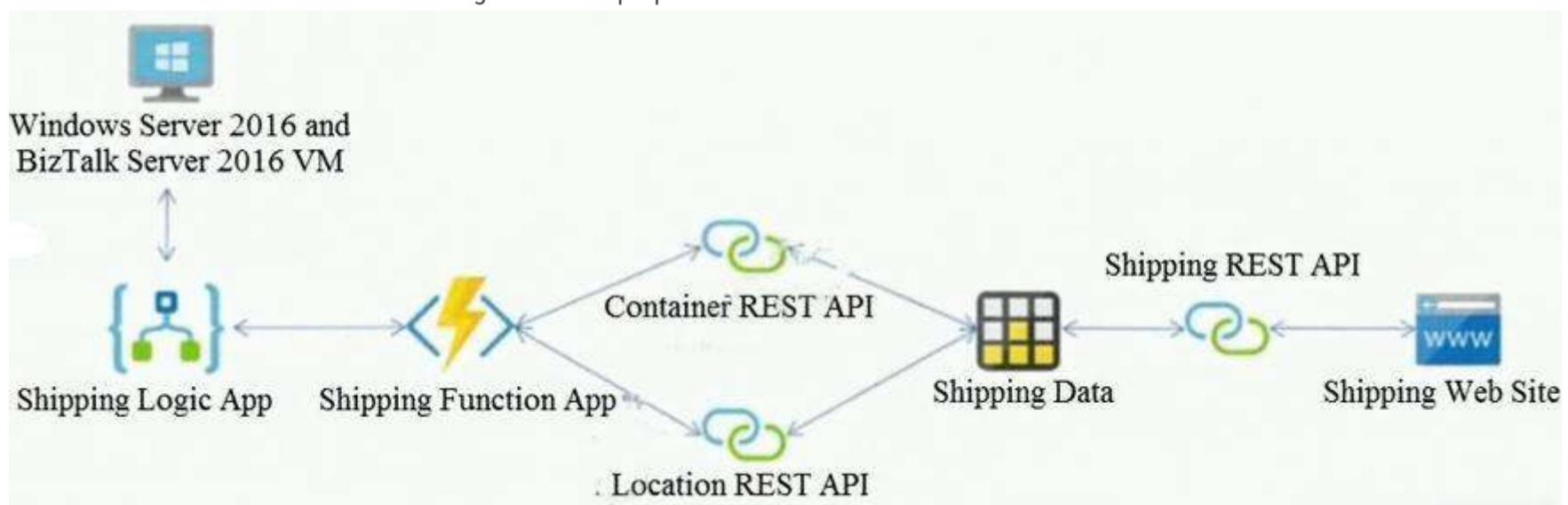
The application uses MongoDB JSON document storage database for all container and transport information.

Shipping Web Site -

The site displays shipping container tracking information and container contents. The site is located at <http://shipping.wideworldimporters.com/>

Proposed solution -

The on-premises shipping application must be moved to Azure. The VM has been migrated to a new Standard\_D16s\_v3 Azure VM by using Azure Site Recovery and must remain running in Azure to complete the BizTalk component migrations. You create a Standard\_D16s\_v3 Azure VM to host BizTalk Server. The Azure architecture diagram for the proposed solution is shown below:



Requirements -

## 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.

## Shipping Function app -

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

## REST APIs -

The REST API's that support the solution must meet the following requirements:

Secure resources to the corporate VNet.

Allow deployment to a testing location within Azure while not incurring additional costs.

Automatically scale to double capacity during peak shipping times while not causing application downtime.

Minimize costs when selecting an Azure payment model.

## Shipping data -

Data migration from on-premises to Azure must minimize costs and downtime.

## Shipping website -

Use Azure Content Delivery Network (CDN) and ensure maximum performance for dynamic content while minimizing latency and costs.

## Issues -

### 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.

### Shipping website and REST APIs -

The following error message displays while you are testing the website:

Failed to load <http://test-shippingapi.wideworldimporters.com/>: No 'Access-Control-Allow-Origin' header is present on the requested resource.

Origin '<http://test.wideworldimporters.com/>' is therefore not allowed access.

## Question

### HOTSPOT -

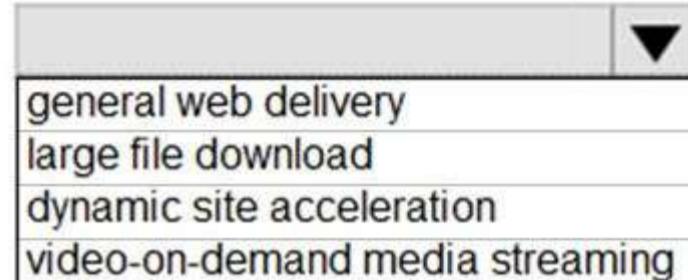
You need to configure Azure CDN for the Shipping web site.

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

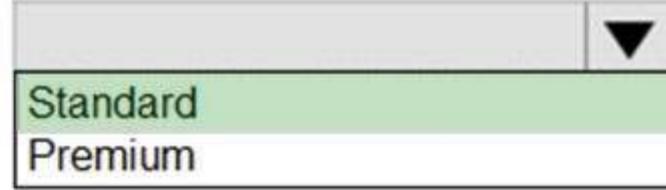
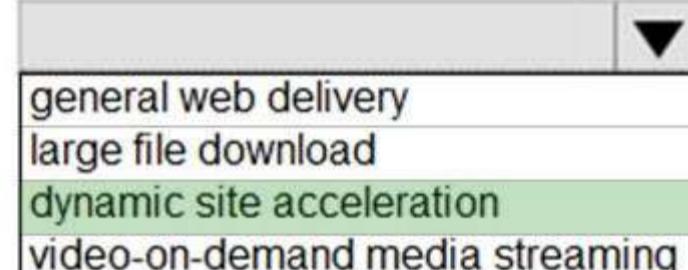
NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Option	Value
Tier	
Profile	
Optimization	

## Answer Area

Option	Value
Tier	
Correct Answer: Profile	
Optimization	

Scenario: Shipping website -

Use Azure Content Delivery Network (CDN) and ensure maximum performance for dynamic content while minimizing latency and costs.

Tier: Standard -

Profile: Akamai -

Optimization: Dynamic site acceleration

Dynamic site acceleration (DSA) is available for Azure CDN Standard from Akamai, Azure CDN Standard from Verizon, and Azure CDN Premium from Verizon profiles.

DSA includes various techniques that benefit the latency and performance of dynamic content. Techniques include route and network optimization, TCP optimization, and more.

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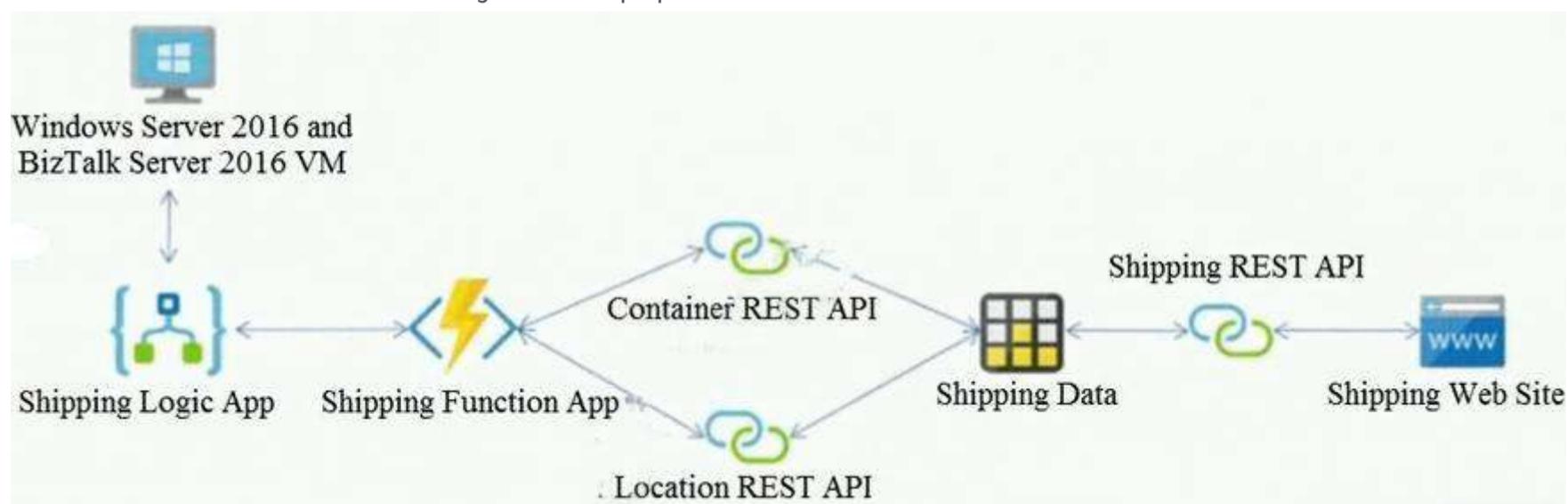
The application uses MongoDB JSON document storage database for all container and transport information.

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## Shipping data -

Data migration from on-premises to Azure must minimize costs and downtime.

Shipping website -

Use Azure Content Delivery Network (CDN) and ensure maximum performance for dynamic content while minimizing latency and costs.

### **Issues -**

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.

## Shipping website and REST APIs -

The following error message displays while you are testing the website:

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Origin 'http://test.wideworldimporters.com/' is therefore not allowed access.

## Question

#### **HOTSPOT -**

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

## Answer Area

Issue	Tool				
Backup and Restore  Correct Answer:	<table border="1"><tr><td>Azure Site Recovery</td></tr><tr style="background-color: #90EE90;"><td>Azure Backup</td></tr><tr><td>Azure Data Box</td></tr><tr><td>Azure Migrate</td></tr></table>	Azure Site Recovery	Azure Backup	Azure Data Box	Azure Migrate
Azure Site Recovery					
Azure Backup					
Azure Data Box					
Azure Migrate					
Performance	<table border="1"><tr><td>Azure Network Watcher</td></tr><tr><td>Azure Traffic Manager</td></tr><tr><td>ExpressRoute</td></tr><tr style="background-color: #90EE90;"><td>Accelerated Networking</td></tr></table>	Azure Network Watcher	Azure Traffic Manager	ExpressRoute	Accelerated Networking
Azure Network Watcher					
Azure Traffic Manager					
ExpressRoute					
Accelerated Networking					

Box 1: Azure Backup -

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.

In-Place restore of disks in IaaS VMs is a feature of Azure Backup.

Performance: Accelerated Networking

Scenario: The VM shows high network latency, jitter, and high CPU utilization.

Box 2: Accelerated networking -

The VM shows high network latency, jitter, and high CPU utilization.

Accelerated networking enables single root I/O virtualization (SR-IOV) to a VM, greatly improving its networking performance. This high-performance path bypasses the host from the datapath, reducing latency, jitter, and CPU utilization, for use with the most demanding network workloads on supported VM types.

Reference:

<https://azure.microsoft.com/en-us/blog/an-easy-way-to-bring-back-your-azure-vm-with-in-place-restore/>

Topic 8 - Testlet 10

**Introductory Info****Case study -**

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**To start the case study -**

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**Background -**

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.

**Receipt processing -**

Employees may upload receipts in two ways:

Uploading using an Azure Files mounted folder

Uploading using the web application

**Data Storage -**

Receipt and employee information is stored in an Azure SQL database.

**Documentation -**

Employees are provided with a getting started document when they first use the solution. The documentation includes details on supported operating systems for

Azure File upload, and instructions on how to configure the mounted folder.

**Solution details -****Users table -**

Column	Description
UserId	unique identifier for an employee
ExpenseAccount	employees expense account number in the format 1234-123-1234
AllowedAmount	limit of allowed expenses before approval is needed
SupervisorId	unique identifier for employee's supervisor
SecurityPin	value used to validate user identity

**Web Application -**

You enable MSI for the Web App and configure the Web App to use the security principal name WebAppIdentity.

**Processing -**

Processing is performed by an Azure Function that uses version 2 of the Azure Function runtime. Once processing is completed, results are stored in Azure Blob

Storage and an Azure SQL database. Then, an email summary is sent to the user with a link to the processing report. The link to the report must

remain valid if the email is forwarded to another user.

#### Logging -

Azure Application Insights is used for telemetry and logging in both the processor and the web application. The processor also has TraceWriter logging enabled.

Application Insights must always contain all log messages.

#### Requirements -

##### Receipt processing -

Concurrent processing of a receipt must be prevented.

##### Disaster recovery -

Regional outage must not impact application availability. All DR operations must not be dependent on application running and must ensure that data in the DR region is up to date.

#### Security -

User's SecurityPin must be stored in such a way that access to the database does not allow the viewing of SecurityPins. The web application is the only system that should have access to SecurityPins.

All certificates and secrets used to secure data must be stored in Azure Key Vault.

You must adhere to the principle of least privilege and provide privileges which are essential to perform the intended function.

All access to Azure Storage and Azure SQL database must use the application's Managed Service Identity (MSI).

Receipt data must always be encrypted at rest.

All data must be protected in transit.

User's expense account number must be visible only to logged in users. All other views of the expense account number should include only the last segment, with the remaining parts obscured.

In the case of a security breach, access to all summary reports must be revoked without impacting other parts of the system.

#### Issues -

##### Upload format issue -

Employees occasionally report an issue with uploading a receipt using the web application. They report that when they upload a receipt using the Azure File Share, the receipt does not appear in their profile. When this occurs, they delete the file in the file share and use the web application, which returns a 500 Internal Server error page.

##### Capacity issue -

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

##### 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.

#### Application code -

##### 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); : 0d131
PC16
PC17 }
PC18 }
PC19 private static CloudBlockBlob GetDRBlob(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 }
PC37 private KeyVaultClient _keyVaultClient = new KeyVaultClient("...");;
PC38 }
PC39 }

```

Database.cs -

```

DB01 public class Database
DB02 {
DB03 private string ConnectionString =
DB04
DB05 public async Task<object> LoadUserDetails(string userId)
DB06 {
DB07
DB08 return await policy.ExecuteAsync(async () =>
DB09 {
DB10 using (var connection = new SqlConnection(ConnectionString))
DB11 {
DB12 await connection.OpenAsync();
DB13 using (var command = new SqlCommand("...", connection))
DB14 using (var reader = command.ExecuteReader())
DB15 {
DB16 ...
DB17 }
DB18 }
DB19 });
DB20 }
DB21 }

```

ReceiptUploader.cs -

```

RU01 public class ReceiptUploader
RU02 {
RU03 public async Task UploadFile(string file, byte[] binary)
RU04 {
RU05 var httpClient = new HttpClient();
RU06 var response = await httpClient.PutAsync("...", new ByteArrayContent(binary));
RU07 while (ShouldRetry(response))
RU08 {
RU09 response = await httpClient.PutAsync("...", new ByteArrayContent(binary));
RU10 }
RU11 }
RU12 private bool ShouldRetry(HttpStatusCode response)
RU13 {
RU14 }
RU15 }
RU16 }
```

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
```

## Question

DRAG DROP -

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

```

MSITokenProvider("...", null)
tp.GetAccessTokenAsync("...")

AzureServiceTokenProvider()

StringTokenProvider("storage", "msi")
tp.GetAuthenticationHeaderAsync(CancellationToken.None)
```

### Answer Area

```

var tp = new _____
 code segment

var t = new TokenCredential(await _____
 code segment
);

return new StorageCredentials(t);
```

**Correct Answer:**

**Code segments**

```
MSITokenProvider("...", null)

StringTokenProvider("storage", "msi")

tp.GetAuthenticationHeaderAsync(CancellationToken.None)
```

**Answer Area**

```
var tp = new AzureServiceTokenProvider()

var t = new TokenCredential(await tp.GetAccessTokenAsync("..."))

return new StorageCredentials(t);
```

Box 1: AzureServiceTokenProvider()

Box 2: tp.GetAccessTokenAsync(..)

Acquiring an access token is then quite easy. Example code:

```
private async Task<string> GetAccessTokenAsync()
{
 var tokenProvider = new AzureServiceTokenProvider();
 return await tokenProvider.GetAccessTokenAsync("https://storage.azure.com/");
}
```

Reference:

<https://joonasw.net/view/azure-ad-authentication-with-azure-storage-and-managed-service-identity>

✉  **rqb11** Highly Voted 1 year ago

Answer is correct: <https://docs.microsoft.com/en-us/azure/app-service/overview-managed-identity?context=azure%2Factive-directory%2Fmanaged-identities-azure-resources%2Fcontext%2Fmsi-context&tabs=python#asal>  
upvoted 15 times

✉  **Faizs** 11 months, 3 weeks ago

Absolutely  
upvoted 2 times

✉  **SivajiTheBoss** Most Recent 1 month, 2 weeks ago

Correct Answer:  
- AzureServiceTokenProvider  
- GetAccessTokenAsync(...)  
upvoted 1 times

✉  **UnknowMan** 11 months, 1 week ago

Yep :

- AzureServiceTokenProvider  
- GetAccessTokenAsync  
upvoted 3 times

✉  **Faizs** 11 months, 3 weeks ago

Very correct  
upvoted 2 times



## Introductory Info

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#### Issues -

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PC12 var ms = new MemoryStream();
PC13 await file.DownloadToStreamAsync(ms);
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DB11 {
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DB16 ...
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DB18 }
DB19 });
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RU07 while (ShouldRetry(response))
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RU11 }
RU12 private bool ShouldRetry(HttpStatusCode response)
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CS04 Set-AzureRmKeyVaultAccessPolicy `
CS05 -VaultName $keyVault.VaultName `
CS06 -ObjectId $storageAccount.Identity.PrincipalId `
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CS08
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CS12 -EnableEncryptionService File `
CS13 -KeyvaultEncryption `
CS14 -KeyName $key.Name `
CS15 -KeyVersion $key.Version `
CS16 -KeyVaultUri $keyVault.VaultUri
```

## Question

DRAG DROP -

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
true
SingleTransferContext
ShouldTransferCallbackAsync
false
DirectoryTransferContext
ShouldOverwriteCallbackAsync

### Answer Area

```

var copyOptions = new CopyOptions { };
var context = new Value = (source, destination) => Task.FromResult(true);
context. Value = (source, destination) => Task.FromResult(true);
await TransferManager.CopyAsync(blob, GetDRBlob(blob), isServiceCopy: Value
, context: context, options:copyOptions);
```

### Correct Answer:

Values
true
SingleTransferContext
ShouldOverwriteCallbackAsync

### Answer Area

```
var copyOptions = new CopyOptions { };
var context = new DirectoryTransferContext = (source, destination) => Task.FromResult(true);
context. ShouldTransferCallbackAsync = (source, destination) => Task.FromResult(true);
await TransferManager.CopyAsync(blob, GetDRBlob(blob), isServiceCopy: false
, context: context, options:copyOptions);
```

Scenario: Disaster recovery. Regional outage must not impact application availability. All DR operations must not be dependent on application running and must ensure that data in the DR region is up to date.

Box 1: DirectoryTransferContext -

We transfer all files in the directory.

Note: The TransferContext object comes in two forms: SingleTransferContext and DirectoryTransferContext. The former is for transferring a single file and the latter is for transferring a directory of files.

Box 2: ShouldTransferCallbackAsync

The DirectoryTransferContext.ShouldTransferCallbackAsync delegate callback is invoked to tell whether a transfer should be done.

Box 3: False -

If you want to use the retry policy in Copy, and want the copy can be resume if break in the middle, you can use SyncCopy (isServiceCopy = false).

Note that if you choose to use service side copy ('isServiceCopy' set to true), Azure (currently) doesn't provide SLA for that. Setting 'isServiceCopy' to false will download the source blob loca

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-use-data-movement-library> <https://docs.microsoft.com/en-us/dotnet/api/microsoft.windowsazure.storage.datamovement.directorytransfercontext.shouldtransfercallbackasync?view=azure-dotnet>

✉  **rdemontis**  1 year, 1 month ago

Answers in box 1 and 2 aren't correct. They should be SingleTranferConext and ShouldOverwriteCallbackAsync because we are copying a single blob (see CopyAsync method). We are inside a foreach loop that scan each file in the share.

upvoted 43 times

✉  **ray01** 1 year ago

Correct

1. <https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.datamovement.singletransfercontext?view=azure-dotnet>
2. According to a link above, there is only "ShouldOverwriteCallbackAsync" available for "SingleTranferConext "
3. [https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.datamovement.transfermanager.copyasync?view=azure-dotnet#Microsoft\\_Azure\\_Storage\\_DataMovement\\_TransferManager\\_CopyAsync\\_Microsoft\\_Azure\\_Storage\\_Blob\\_CloudBlob\\_Microsoft\\_Azure\\_Storage\\_Blob\\_CloudBlob\\_System\\_Boolean\\_Microsoft\\_Azure\\_Storage\\_DataMovement\\_CopyOptions\\_Microsoft\\_Azure\\_Storage\\_DataMovement\\_SingleTransferContext\\_](https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.datamovement.transfermanager.copyasync?view=azure-dotnet#Microsoft_Azure_Storage_DataMovement_TransferManager_CopyAsync_Microsoft_Azure_Storage_Blob_CloudBlob_Microsoft_Azure_Storage_Blob_CloudBlob_System_Boolean_Microsoft_Azure_Storage_DataMovement_CopyOptions_Microsoft_Azure_Storage_DataMovement_SingleTransferContext_)

The question is should it be server side copy or not? I would say "true".

upvoted 4 times

✉  **d0bermannn** 8 months ago

yes, foreach construction applied

upvoted 2 times

✉  **clarionprogrammer**  1 year ago

SingleTranferConext  
ShouldOverwriteCallbackAsync  
true

upvoted 15 times

✉  **ZodiaC** 9 months ago

ITS FALSE 10000000000%

upvoted 1 times

✉  **ZodiaC** 9 months ago

Srry im didnt read well

upvoted 3 times

anastakasim 1 year ago

The last box is "true"? really?  
upvoted 1 times

SivajiTheBoss [Most Recent] 1 month, 2 weeks ago

Correct Answer:

- 1.SingleTransferContext (because it is inside loop)
- 2.ShouldOverwriteCallbackAsync (for singleTransferContext this is only option)
- 3.true (If this flag is set to true, service-side asynchronous copy will be used)

upvoted 2 times

leonidn 2 months, 3 weeks ago

SingleTransferContext because we transfer blob by blob because line PC16 is in the ForEach.  
IsServiceCopy true to allow service side asynchronous processing instead of downloading/uploading blobs.

ShouldOverwriteCallbackAsync because ShouldTransferCallbackAsync is not a property of SingleTransferContext.

upvoted 3 times

asdasdasg2 3 months, 2 weeks ago

No one is talking about how the line on the first answer box is invalid no matter that answer you put.

I believe it's a copy paste error and the line should be:

var context = new [ ];

with answer SingleTransferContext

upvoted 1 times

asdasdasg2 3 months, 2 weeks ago

i realize that is confusing, i meant that the line in the hot area should be :

var context = new \_\_\_ ();

upvoted 1 times

BrettusMaximus 11 months, 3 weeks ago

isServiceCopy: True

Boolean

A flag indicating whether the copy is service-side asynchronous copy or not. If this flag is set to true, service-side asynchronous copy will be used; if this flag is set to false, file is downloaded from source first, then uploaded to destination

## Topic 9 - Testlet 11

**Introductory Info****Case study -**

This is a case study. Case studies are not timed separately. You can use as much exam time as you would like to complete each case. However, there may be additional case studies and sections on this exam. You must manage your time to ensure that you are able to complete all questions included on this exam in the time provided.

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**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.

**Requirements. Data -**

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.

**Requirements. Security -**

You have the following security requirements:

Users of Coho Winery applications must be able to provide access to documents, resources, and applications to external partners.

External partners must use their own credentials and authenticate with their organization's identity management solution.

External partner logins must be audited monthly for application use by a user account administrator to maintain company compliance.

Storage of e-commerce application settings must be maintained in Azure Key Vault.

E-commerce application sign-ins must be secured by using Azure App Service authentication and Azure Active Directory (AAD).

Conditional access policies must be applied at the application level to protect company content.

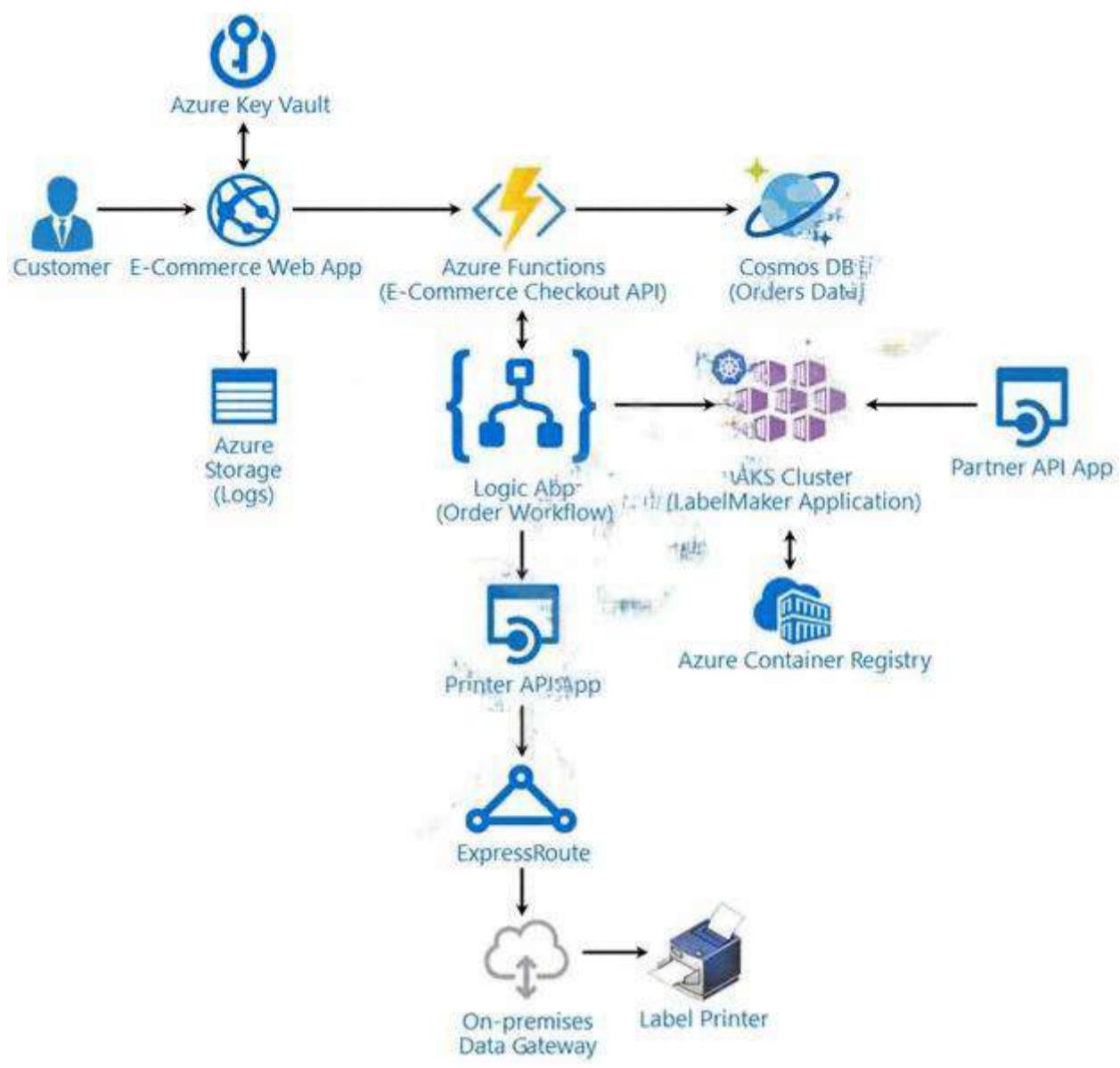
The LabelMaker application must be secured by using an AAD account that has full access to all namespaces of the Azure Kubernetes Service (AKS) cluster.

**Requirements. LabelMaker app -**

Azure Monitor Container Health must be used to monitor the performance of workloads that are deployed to Kubernetes environments and hosted on Azure Kubernetes Service (AKS).

You must use Azure Container Registry to publish images that support the AKS deployment.

**Architecture -**



#### Issues -

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.

#### Order.json -

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-3422N" ,
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]
]
```

### Question

HOTSPOT -

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.

Hot Area:

### Answer Area

Setting	Value
---------	-------

Consistency Level

Strong
Bounded-staleness
Session
Eventual

API

SQL
MongoDB
Graph
Table

## Answer Area

### Setting      Value

#### Consistency Level

Correct Answer:

Setting	Value
Consistency Level	Strong Bounded-staleness Session Eventual

#### API

Setting	Value
API	SQL MongoDB Graph Table

Box 1: Strong -

When the consistency level is set to strong, the staleness window is equivalent to zero, and the clients are guaranteed to read the latest committed value of the write operation.

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

Note: You can choose from five well-defined models on the consistency spectrum. From strongest to weakest, the models are: Strong, Bounded staleness,

Session, Consistent prefix, Eventual

Box 2: SQL -

Scenario: You identify the following requirements for data management and manipulation:

Order data is stored as nonrelational JSON and must be queried using Structured Query Language (SQL).

✉  **noip** Highly Voted 8 months, 3 weeks ago

correct 100%

upvoted 6 times

✉  **SivajiTheBoss** Most Recent 1 month, 2 weeks ago

correct Answer:

1. Strong consistency
2. Sql Api

upvoted 1 times

✉  **asdadasdasg2** 3 months, 2 weeks ago

Answer is correct - Strong consistency matches requirements and MS recommends that if you have no preference or specific reason to use any of the other cosmos APIs, you should use the SQL api

upvoted 2 times

✉  **Sukon\_Desknot** 7 months, 4 weeks ago

(/● ワ ●)/\*:-°✧

upvoted 4 times

**Introductory Info****Case study -**

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**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.

**Requirements. Data -**

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.

**Requirements. Security -**

You have the following security requirements:

Users of Coho Winery applications must be able to provide access to documents, resources, and applications to external partners.

External partners must use their own credentials and authenticate with their organization's identity management solution.

External partner logins must be audited monthly for application use by a user account administrator to maintain company compliance.

Storage of e-commerce application settings must be maintained in Azure Key Vault.

E-commerce application sign-ins must be secured by using Azure App Service authentication and Azure Active Directory (AAD).

Conditional access policies must be applied at the application level to protect company content.

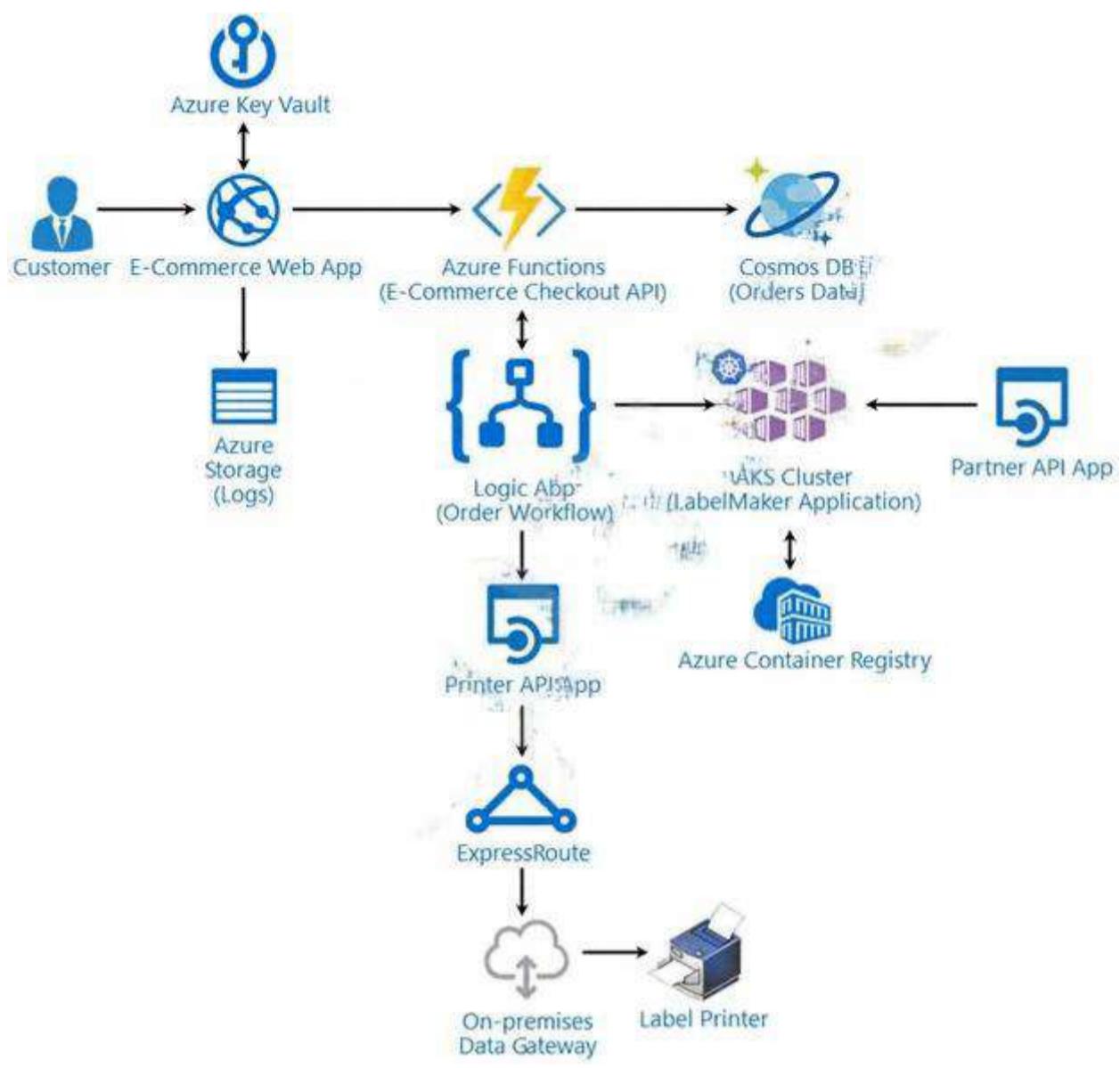
The LabelMaker application must be secured by using an AAD account that has full access to all namespaces of the Azure Kubernetes Service (AKS) cluster.

**Requirements. LabelMaker app -**

Azure Monitor Container Health must be used to monitor the performance of workloads that are deployed to Kubernetes environments and hosted on Azure Kubernetes Service (AKS).

You must use Azure Container Registry to publish images that support the AKS deployment.

**Architecture -**



#### Issues -

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.

#### Order.json -

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-3422N" ,
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]
]
```

### Question

HOTSPOT -

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   
JOIN   
ORDER BY

## Answer Area

SELECT li.id AS lineitemid, li.price  
FROM   
JOIN   
IN   
Correct Answer:  
ORDER BY ASC

Box 1: orders o -

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

Box 2:li -

Box 3: o.line\_items -

Box 4: o.city -

The city field is in Order, not in the 2s.

✉ **Droplex** Highly Voted 7 months ago

goodluck!  
upvoted 51 times

✉ **cool\_tool** Highly Voted 8 months, 2 weeks ago

The last one should be o.address.city  
upvoted 17 times

✉ **Alex42** 7 months, 3 weeks ago

address is not joined, so it has to be o.city  
upvoted 3 times

✉ **SaintBahamut** 1 week, 2 days ago

joining is needed because we want to list line items from all orders as separate rows (it will give us order x item line of rows), address is just a simple object from order, that will be included for all line items due join we made  
upvoted 1 times

✉ **mariodarken** 2 months, 2 weeks ago

In CosmosDB SQL, if the address is not an array, it seems that you can skip the join <https://docs.microsoft.com/es-es/azure/cosmos-db/sql/sql-query-getting-started#query-the-json-items>  
upvoted 2 times

✉ **d0bermannn** 8 months ago

exactly  
upvoted 2 times

✉ **tunaparker** Most Recent 1 month, 1 week ago

Now let's review all questions again because there are dozens of them lol  
upvoted 3 times

✉ **SD5713** 2 months, 1 week ago

I passed with only these questions, so don't stress guys. 80% of these questions is exactly the same. Good luck!  
upvoted 8 times

✉ **GunjanLiebwein** 1 month, 4 weeks ago

I have my exam on 25.02.2022. So let's see.  
upvoted 2 times

✉️ **GunjanLiebwein** 1 month, 4 weeks ago

I Cleared it with 88%. And I got this question too.:)  
upvoted 6 times

✉️ **altafpatel1984** 4 months ago

I got this question and json had address node inside main json. So answer would be o. address.city  
upvoted 4 times

✉️ **mkqwert** 5 months ago

HOPE NOT TO SEE YOU AGAIN  
upvoted 13 times

✉️ **tunaparker** 1 month, 1 week ago

Hahahahahaha lol :D  
upvoted 1 times

✉️ **phvogel** 5 months, 3 weeks ago

I suspect that the JSON document is incomplete. But if the city were going to be anywhere it would be in the Order, not the line. So the last answer is either o.city or o.address.city. For that we have to guess because there's no way to tell if the address information is stored inline in the order or in a class called address. It could be either of:

"street": "828 Broadway",  
"city": "New York"  
or  
"address": {  
"street": "828 Broadway",  
"city": "New York"  
}  
upvoted 7 times

✉️ **altafpatel1984** 4 months ago

I got this question and json had address node inside main json. So answer would be o. address.city  
upvoted 5 times

✉️ **ning** 7 months, 4 weeks ago

Where is the city field in json???  
upvoted 3 times

✉️ **altafpatel1984** 4 months ago

I got this question and json had address node inside main json. So answer would be o. address.city  
upvoted 4 times

✉️ **GreenPanda** 8 months, 1 week ago

<https://docs.microsoft.com/ja-jp/azure/cosmos-db/sql-query-getting-started#query-the-json-items>  
upvoted 2 times

## Topic 10 - Testlet 12

upvoted 6 times

✉️ **vokep77043** 8 months ago

Whole orders.json is not showed in case study - it seems Orders.json is a single document of another Orders table/json.  
upvoted 2 times

✉️ **altafpatel1984** 4 months ago

I got this question and json had address node inside main json. So answer would be o. address.city  
upvoted 2 times

✉️ **gesl** 2 months, 4 weeks ago

Are these questions enough to pass the exam?  
upvoted 1 times

✉️ **mariodarken** 2 months, 2 weeks ago

I hope so.. good luck mate  
upvoted 2 times

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### Background -

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.

### Current environment -

#### Corporate website -

The company provides a public website located at <http://www.vanarsdeltd.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.

#### Requirements -

The application components must meet the following requirements:

#### 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.

#### Retail store locations -

Azure Functions must process data immediately when data is uploaded to Blob storage. Azure Functions must update Azure Cosmos DB by using native SQL language queries.

Audit store sale transaction information nightly to validate data, process sales financials, and reconcile inventory.

#### Delivery services -

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.

#### Inventory services -

The company has contracted a third-party to develop an API for inventory processing that requires access to a specific blob within the retail store storage account for three months to include read-only access to the data.

**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.

**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.

**Question**

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.

**Correct Answer: AD**

Scenario: 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.

Microsoft Azure Key Vault is a cloud-hosted management service that allows users to encrypt keys and small secrets by using keys that are protected by hardware security modules (HSMs).

You need to create a managed identity for your application.

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/app-service-key-vault-references>

**Topic 11 - Testlet 13**

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### Background -

#### Overview -

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.

#### Azure Active Directory -

Contoso, Ltd. uses Azure Active Directory (Azure AD) for both internal and guest accounts.

#### Requirements -

##### ContentAnalysisService -

The company's data science group built ContentAnalysisService which accepts user generated content as a string and returns a probable value for inappropriate content. Any values over a specific threshold must be reviewed by an employee of Contoso, Ltd.

You must create an Azure Function named CheckUserContent to perform the content checks.

#### Costs -

You must minimize costs for all Azure services.

#### Manual review -

To review content, the user must authenticate to the website portion of the ContentAnalysisService using their Azure AD credentials. The website is built using

React and all pages and API endpoints require authentication. In order to review content a user must be part of a ContentReviewer role. All completed reviews must include the reviewer's email address for auditing purposes.

#### High availability -

All services must run in multiple regions. The failure of any service in a region must not impact overall application availability.

#### Monitoring -

An alert must be raised if the ContentUploadService uses more than 80 percent of available CPU cores.

#### Security -

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.

#### User agreements -

When a user submits content, they must agree to a user agreement. The agreement allows employees of Contoso, Ltd. to review content, store cookies on user devices, and track user's IP addresses.

Information regarding agreements is used by multiple divisions within Contoso, Ltd.

User responses must not be lost and must be available to all parties regardless of individual service uptime. The volume of agreements is expected to be in the millions per hour.

#### Validation testing -

When a new version of the ContentAnalysisService is available the previous seven days of content must be processed with the new version to verify that the new version does not significantly deviate from the old version.

#### Issues -

Users of the ContentUploadService report that they occasionally see HTTP 502 responses on specific pages.

#### Code -

##### 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
```

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 }
```

#### Question

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

User

value

role

Application

allowedMemberTypes

allowedAccountTypes

#### Answer Area

```
"appRoles": [
 {
 "value": [
 "ContentReviewer"
],
 "role": "ContentReviewer",
 "displayName": "ContentReviewer",
 "id": "e1c2ade8-98f8-45fd-aa4a-6d24b512c22a",
 "isEnabled": true,
 "allowedMemberTypes": ["
 "User"
]
 }
],
```

Correct Answer:

### Json segments

User  
value  
role  
Application  
allowedMemberTypes  
allowedAccountTypes

### Answer Area

```
"appRoles": [
{
 "allowedMemberTypes": [
 "User"
],
 "displayName": "ContentReviewer",
 "id": "e1c2ade8-98f8-45fd-aa4a-6d24b512c22a",
 "isEnabled": true,
 "value": "ContentReviewer"
},
]
```

Box 1: allowedMemberTypes -

allowedMemberTypes specifies whether this app role definition can be assigned to users and groups by setting to "User", or to other applications (that are accessing this application in daemon service scenarios) by setting to "Application", or to both.

Note: The following example shows the appRoles that you can assign to users.

```
"appId": "8763f1c4-f988-489c-a51e-158e9ef97d6a",
"appRoles": [
{
 "allowedMemberTypes": [
 "User"
],
 "displayName": "Writer",
 "id": "d1c2ade8-98f8-45fd-aa4a-6d06b947c66f",
 "isEnabled": true,
 "description": "Writers Have the ability to create tasks.",
 "value": "Writer"
},
],
"availableToOtherTenants": false,
```

Box 2: User -

Scenario: In order to review content a user must be part of a ContentReviewer role.

Box 3: value -

value specifies the value which will be included in the roles claim in authentication and access tokens.

Reference:

<https://docs.microsoft.com/en-us/graph/api/resources/approle>

✉ ray01 Highly Voted 1 year ago

Correct. See MS example here:

<https://docs.microsoft.com/de-de/azure/active-directory/develop/howto-add-app-roles-in-azure-ad-apps#example-user-app-role>  
upvoted 20 times

✉ mlantonis Highly Voted 10 months, 3 weeks ago

Correct. Check here: <https://docs.microsoft.com/de-de/azure/active-directory/develop/howto-add-app-roles-in-azure-ad-apps#example-user-app-role>  
role

upvoted 5 times

✉ edengoforit Most Recent 3 months ago

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upvoted 1 times

✉ lugospod 3 months ago

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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
```

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 }
```

**Question**

HOTSPOT -

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 Area

Correct Answer:

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

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

Box 1: "oauth2Permissions": ["login"]

oauth2Permissions specifies the collection of OAuth 2.0 permission scopes that the web API (resource) app exposes to client apps. These permission scopes may be granted to client apps during consent.

Box 2: "oauth2AllowImplicitFlow":true

For applications (Angular, Ember.js, React.js, and so on), Microsoft identity platform supports the OAuth 2.0 Implicit Grant flow.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/develop/reference-app-manifest>

✉  **Zidimirite**  1 year ago

<https://www.examtopics.com/discussions/microsoft/view/25371-exam-az-204-topic-8-question-2-discussion/>

oauth2AllowImplicitFlow = true,  
oauth2AllowIdTokenImplicitFlow = true  
upvoted 23 times

✉  **mlantonis**  10 months, 3 weeks ago

Box 1: "oauth2AllowIdTokenImplicitFlow":true

This value indicates whether the web app can request ID tokens of the implicit OAuth 2.0 flow. The default setting is "false".

Box 2: "oauth2AllowImplicitFlow":true

This value indicates whether the web app can request OAuth 2.0 implicit flow access tokens. The default setting is "false".

Reference:

<https://docs.microsoft.com/de-de/azure/active-directory/develop/reference-app-manifest>

<https://docs.microsoft.com/de-de/azure/active-directory/develop/reference-app-manifest#oauth2allowidtokenimplicitflow-attribute>

<https://docs.microsoft.com/de-de/azure/active-directory/develop/reference-app-manifest#oauth2allowimplicitflow-attribute>  
upvoted 14 times

✉  **edengoforit**  3 months ago

Since it is a browser app (React), Implicit Grant Flow, should be enabled:

oauth2AllowImplicitFlow = true,  
oauth2AllowIdTokenImplicitFlow = true

"To review content, the user must authenticate to the website portion of the ContentAnalysisService using their Azure AD credentials. The website is built using React and all pages and API endpoints require authentication. In order to review content a user must be part of a ContentReviewer role. All completed reviews must include the "reviewer's email address for auditing purposes."

This is a web app so we need oauth2AllowImplicitFlow.

We need to have information about the user (reviewer email), so we need to have Id Token thus oauth2AllowIdTokenImplicitFlow must be set to true

upvoted 3 times

✉  **RajMasilamani** 7 months ago

I think the answer should be

Oauth2permission login for first box as API to be exposed and email credentials to be saved for auditing purpose.

upvoted 1 times

✉  **azuregenerator** 11 months, 3 weeks ago

"allowPublicClient": true

> Not required as inferred from replyUrlsWithType

"oauth2Permissions": ["login"]

> only for resource server exposing an API

"oauth2AllowUrlPathMatching": true

> Couldn't find in the docu

"oauth2AllowIdTokenImplicitFlow": true

> Correct one to choose!

"oauth2AllowImplicitFlow": true

> Correct one to choose!

"oauth2RequiredPostResponse": true

> Not relevant

"preAuthorizedApplications": ["SPA"]

> Not relevant

"knownClientApplications": ["ContentAnalysisService"]

> Not relevant

[https://docs.microsoft.com/en-us/azure/active-directory/develop/reference-app-manifest?WT.mc\\_id=Portal-Microsoft\\_AAD\\_RegisteredApps#manifest-reference](https://docs.microsoft.com/en-us/azure/active-directory/develop/reference-app-manifest?WT.mc_id=Portal-Microsoft_AAD_RegisteredApps#manifest-reference)

upvoted 5 times

✉  **wtkwsk** 1 year ago

Zidimirite is correct: oauth2AllowImplicitFlow & oauth2AllowIdTokenImplicitFlow

See here: <https://docs.microsoft.com/de-de/azure/active-directory/develop/reference-app-manifest>

upvoted 2 times

✉  **clarionprogrammer** 1 year ago

"oauth2AllowIdTokenImplicitFlow":true

"oauth2AllowImplicitFlow":true

upvoted 3 times

✉  **trance13** 1 year ago

I think the first answer should be allowPublicClient: true because this is SPA application and by default it is set to false. implicit flow does not make sense with confidential clients, it would be client credentials flow.

upvoted 4 times

## Introductory Info

### Case study -

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### Background -

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↳ 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.

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Contoso, Ltd. uses Azure Active Directory (Azure AD) for both internal and guest accounts.

### Requirements -

#### ContentAnalysisService -

The company's data science group built ContentAnalysisService which accepts user generated content as a string and returns a probable value for inappropriate content. Any values over a specific threshold must be reviewed by an employee of Contoso, Ltd.

You must create an Azure Function named CheckUserContent to perform the content checks.

### Costs -

You must minimize costs for all Azure services.

### Manual review -

To review content, the user must authenticate to the website portion of the ContentAnalysisService using their Azure AD credentials. The website is built using

React and all pages and API endpoints require authentication. In order to review content a user must be part of a ContentReviewer role. All completed reviews must include the reviewer's email address for auditing purposes.

### High availability -

All services must run in multiple regions. The failure of any service in a region must not impact overall application availability.

### Monitoring -

An alert must be raised if the ContentUploadService uses more than 80 percent of available CPU cores.

### Security -

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.

#### User agreements -

When a user submits content, they must agree to a user agreement. The agreement allows employees of Contoso, Ltd. to review content, store cookies on user devices, and track user's IP addresses.

Information regarding agreements is used by multiple divisions within Contoso, Ltd.

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#### Validation testing -

When a new version of the ContentAnalysisService is available the previous seven days of content must be processed with the new version to verify that the new version does not significantly deviate from the old version.

#### Issues -

Users of the ContentUploadService report that they occasionally see HTTP 502 responses on specific pages.

#### Code -

##### 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
```

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 }
```

#### Question

HOTSPOT -

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="checkbox"/> Valid root certificate <input type="checkbox"/> Self-signed certificate
Proxy type	<input type="checkbox"/> nginx <input type="checkbox"/> Azure Application Gateway

### Answer Area

Technology	Value
Correct Answer: SSL certificate	<input checked="" type="checkbox"/> Valid root certificate <input type="checkbox"/> Self-signed certificate
Proxy type	<input type="checkbox"/> nginx <input checked="" type="checkbox"/> Azure Application Gateway

Box 1: Valid root certificate -

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

Box 2: Azure Application Gateway

Scenario:

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

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

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

Azure Web Application Firewall (WAF) on Azure Application Gateway provides centralized protection of your web applications from common exploits and vulnerabilities. Web applications are increasingly targeted by malicious attacks that exploit commonly known vulnerabilities. SQL injection and cross-site scripting are among the most common attacks.

Application Gateway supports autoscaling, SSL offloading, and end-to-end SSL, a web application firewall (WAF), cookie-based session affinity, URL path-based routing, multisite hosting, redirection, rewrite HTTP headers and other features.

Note: Both Nginx and Azure Application Gateway act as a reverse proxy with Layer 7 load-balancing features plus a WAF to ensure strong protection against common web vulnerabilities and exploits.

You can modify Nginx web server configuration/SSL for X-XSS protection. This helps to prevent cross-site scripting exploits by forcing the injection of HTTP headers with X-XSS protection.

Reference:

<https://docs.microsoft.com/en-us/azure/web-application-firewall/ag/ag-overview> <https://www.upguard.com/articles/10-tips-for-securing-your-nginx-deployment>

 **mlantonis** Highly Voted 10 months, 3 weeks ago

Box 1: Valid root certificate

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

Box 2: Azure Application Gateway

Scenario:

- Any web service accessible over the Internet must be protected from cross site scripting attacks.
- All Internal services must only be accessible from Internal Virtual Networks (VNets).

upvoted 26 times

 **SivajiTheBoss** Most Recent 1 month, 1 week ago

Correct Answer provided

upvoted 1 times

## Introductory Info

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#### Overview -

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- ↳ 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.

### Azure Active Directory -

Contoso, Ltd. uses Azure Active Directory (Azure AD) for both internal and guest accounts.

### Requirements -

#### ContentAnalysisService -

The company's data science group built ContentAnalysisService which accepts user generated content as a string and returns a probable value for inappropriate content. Any values over a specific threshold must be reviewed by an employee of Contoso, Ltd.

You must create an Azure Function named CheckUserContent to perform the content checks.

### Costs -

You must minimize costs for all Azure services.

### Manual review -

To review content, the user must authenticate to the website portion of the ContentAnalysisService using their Azure AD credentials. The website is built using

React and all pages and API endpoints require authentication. In order to review content a user must be part of a ContentReviewer role. All completed reviews must include the reviewer's email address for auditing purposes.

### High availability -

All services must run in multiple regions. The failure of any service in a region must not impact overall application availability.

### Monitoring -

An alert must be raised if the ContentUploadService uses more than 80 percent of available CPU cores.

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You have the following security requirements:

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

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#### Validation testing -

When a new version of the ContentAnalysisService is available the previous seven days of content must be processed with the new version to verify that the new version does not significantly deviate from the old version.

#### Issues -

Users of the ContentUploadService report that they occasionally see HTTP 502 responses on specific pages.

#### Code -

##### 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
```

#### 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 }
```

#### Question

DRAG DROP -

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=

#### Correct Answer:

#### YAML segments

envVar

secretValues

environmentVariables

#### Answer Area

volumeMounts :

- mountPath: /mnt/secrets  
 name: accesskey

volumes :

- name: accesskey

secret :

key: TXkgZmlyc3Qgc2VjcmV0IEZPTwo=

Box 1: volumeMounts -

Example:

```
volumeMounts:
- mountPath: /mnt/secrets
name: secretvolume1
volumes:
- name: secretvolume1
secret:
mysecret1: TXkgZmlyc3Qgc2VjcmV0IEZPTwo=
```

Box 2: volumes -

Box 3: secret -

Reference:

<https://docs.microsoft.com/en-us/azure/container-instances/container-instances-volume-secret>

✉  **rdemontis** Highly Voted 1 year, 1 month ago

Answers are correct!

upvoted 19 times

✉  **mlantonis** Highly Voted 10 months, 3 weeks ago

Box 1: volumeMounts

Box 2: volumes

Box 3: secret

Reference:

<https://docs.microsoft.com/en-us/azure/container-instances/container-instances-volume-secret>

upvoted 15 times

✉  **meoukg** Most Recent 1 month, 1 week ago

Got it on 03/2022, I chose as below:

1: volumeMounts

2: volumes

3: secret

upvoted 1 times

✉  **BrettusMaximus** 11 months, 3 weeks ago

Correct. But a trick question.

accesskey is the name of the volume

upvoted 10 times

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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
```

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 }
```

**Question**

HOTSPOT -

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",
 "pltf",
 "sid",
 "tenant_ctry",
 "sid",
 "upn",
 "email",
 "enfpolids"],
```

## Answer Area

"optionalClaims": [  
    "  
        acct  
        platf  
        **sid**  
        tenant\_ctry  
    ",  
    "  
        **sid**  
        upn  
        **email**  
        enfpolids  
    "]

Correct Answer:

Box 1: sid -

Sid: Session ID, used for per-session user sign-out. Personal and Azure AD accounts.

Scenario: Manual review -

To review content, the user must authenticate to the website portion of the ContentAnalysisService using their Azure AD credentials. The website is built using

React and all pages and API endpoints require authentication. In order to review content a user must be part of a ContentReviewer role.

Box 2: email -

Scenario: All completed reviews must include the reviewer's email address for auditing purposes.

### Topic 12 - Testlet 14

✉  **mlantonis** Highly Voted 10 months, 3 weeks ago

Box 1: sid

Sid: Session ID, used for per-session user sign-out. Personal and Azure AD accounts.

Scenario:

To review content, the user must authenticate to the website portion of the ContentAnalysisService using their Azure AD credentials. The website is built using React and all pages and API endpoints require authentication. In order to review content a user must be part of a ContentReviewer role

Box 2: email

Scenario: All completed reviews must include the reviewer's email address for auditing purposes.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/develop/reference-app-manifest>

<https://docs.microsoft.com/en-us/azure/active-directory/develop/active-directory-optional-claims>

upvoted 16 times

✉  **Tom87** Highly Voted 1 year ago

The answer is correct. References:

<https://docs.microsoft.com/en-us/azure/active-directory/develop/reference-app-manifest>

<https://docs.microsoft.com/en-us/azure/active-directory/develop/active-directory-optional-claims>

upvoted 7 times

✉  **jose** Most Recent 1 year ago

Why sid?

upvoted 1 times

✉  **joanbdm** 11 months ago

"To review content, the user must authenticate to the website portion of the ContentAnalysisService using their Azure AD credentials."

sid = Personal and Azure AD accounts Session ID

<https://docs.microsoft.com/en-us/azure/active-directory/develop/active-directory-optional-claims>

upvoted 5 times

## Introductory Info

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Background -

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.

Shipping Data -

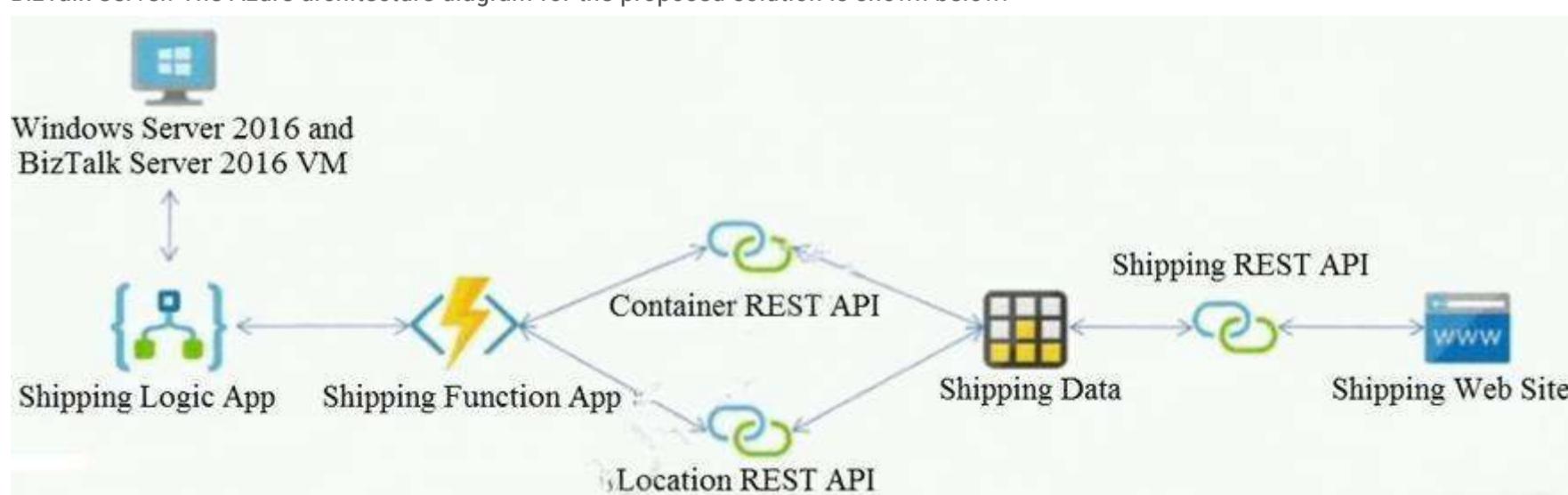
The application uses MongoDB JSON document storage database for all container and transport information.

Shipping Web Site -

The site displays shipping container tracking information and container contents. The site is located at <http://shipping.wideworldimporters.com/>

Proposed solution -

The on-premises shipping application must be moved to Azure. The VM has been migrated to a new Standard\_D16s\_v3 Azure VM by using Azure Site Recovery and must remain running in Azure to complete the BizTalk component migrations. You create a Standard\_D16s\_v3 Azure VM to host BizTalk Server. The Azure architecture diagram for the proposed solution is shown below:



Requirements -

#### 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.

#### Shipping Function app -

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

#### REST APIs -

The REST API's that support the solution must meet the following requirements:

Secure resources to the corporate VNet.

Allow deployment to a testing location within Azure while not incurring additional costs.

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Minimize costs when selecting an Azure payment model.

#### Shipping data -

Data migration from on-premises to Azure must minimize costs and downtime.

#### Shipping website -

Use Azure Content Delivery Network (CDN) and ensure maximum performance for dynamic content while minimizing latency and costs.

#### Issues -

#### 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.

#### Shipping website and REST APIs -

The following error message displays while you are testing the website:

Failed to load <http://test-shippingapi.wideworldimporters.com/>: No 'Access-Control-Allow-Origin' header is present on the requested resource.

Origin '<http://test.wideworldimporters.com/>' is therefore not allowed access.

#### Question

##### HOTSPOT -

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	<div style="border: 1px solid black; padding: 5px; width: fit-content;">Function Anonymous Admin</div>
User claims	<div style="border: 1px solid black; padding: 5px; width: fit-content;">JSON Web Token (JWT) Shared Access Signature (SAS) token API Key</div>
Trigger type	<div style="border: 1px solid black; padding: 5px; width: fit-content;">blob HTTP queue timer</div>

## Answer Area

Setting	Value
Authorization level	<div style="border: 1px solid black; padding: 5px; width: fit-content;">Function Anonymous Admin</div>
Correct Answer: User claims	<div style="border: 1px solid black; padding: 5px; width: fit-content;">JSON Web Token (JWT) Shared Access Signature (SAS) token API Key</div>
Trigger type	<div style="border: 1px solid black; padding: 5px; width: fit-content;">blob HTTP queue timer</div>

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

Box 1: Function -

Box 2: JSON based Token (JWT)

Azure AD uses JSON based tokens (JWTs) that contain claims

Box 3: HTTP -

How a web app delegates sign-in to Azure AD and obtains a token

User authentication happens via the browser. The OpenID protocol uses standard HTTP protocol messages.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/develop/authentication-scenarios>

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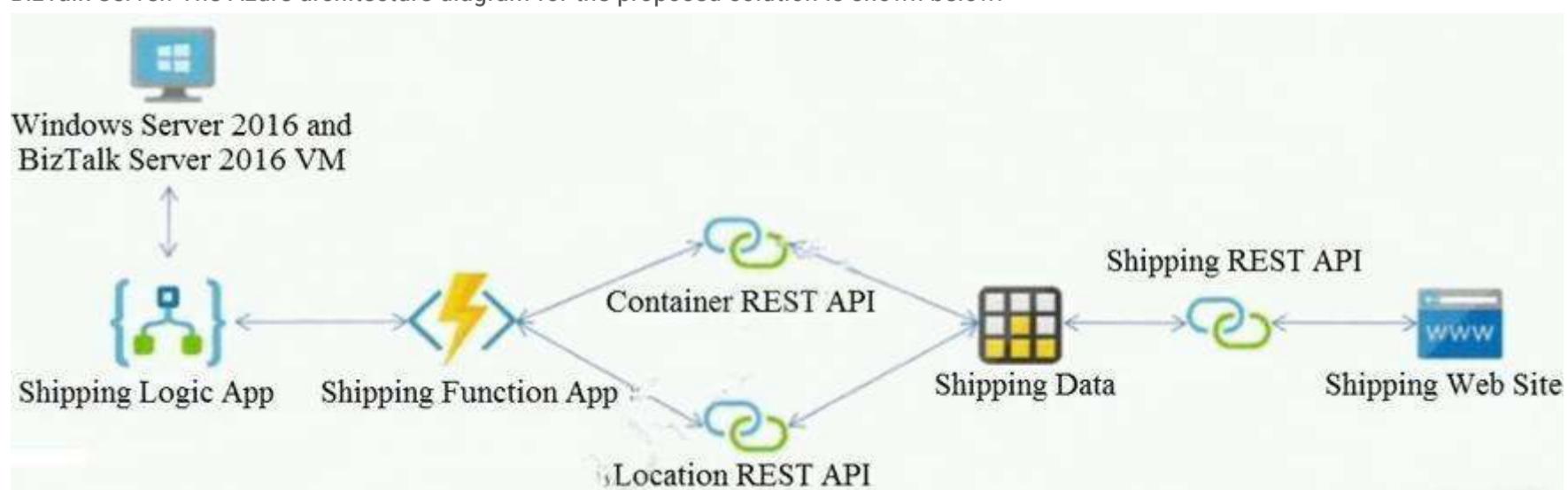
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The following error message displays while you are testing the website:

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#### Question

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

#### Correct Answer: B

Scenario: The Shipping Logic App requires secure resources to the corporate VNet and use dedicated storage resources with a fixed costing model.

You can access to Azure Virtual Network resources from Azure Logic Apps by using integration service environments (ISEs).

Sometimes, your logic apps and integration accounts need access to secured resources, such as virtual machines (VMs) and other systems or services, that are inside an Azure virtual network. To set up this access, you can create an integration service environment (ISE) where you can run your logic apps and create your integration accounts.

Reference:

<https://docs.microsoft.com/en-us/azure/logic-apps/connect-virtual-network-vnet-isolated-environment-overview>

  **NKnab**  1 year, 8 months ago

B is correct. confirmed

upvoted 24 times

 **mlantonis** Most Recent 10 months, 3 weeks ago

Shipping Logic app:

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

For scenarios where your logic apps and integration accounts need access to an Azure virtual network, create an integration service environment (ISE). An ISE is a dedicated environment that uses dedicated storage and other resources that are kept separate from the "global" multi-tenant Logic Apps service. This separation also reduces any impact that other Azure tenants might have on your apps' performance. An ISE also provides you with your own static IP addresses. These IP addresses are separate from the static IP addresses that are shared by the logic apps in the public, multi-tenant service.

Reference:

<https://docs.microsoft.com/en-us/azure/logic-apps/connect-virtual-network-vnet-isolated-environment>

upvoted 1 times

 **mlantonis** 10 months, 3 weeks ago

B. Integration Service Environment (ISE)

upvoted 2 times

### Topic 13 - Testlet 15

## Introductory Info

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### Background -

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

### Current environment -

#### Architecture overview -

The company has a public website located at <http://www.cpndl.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.

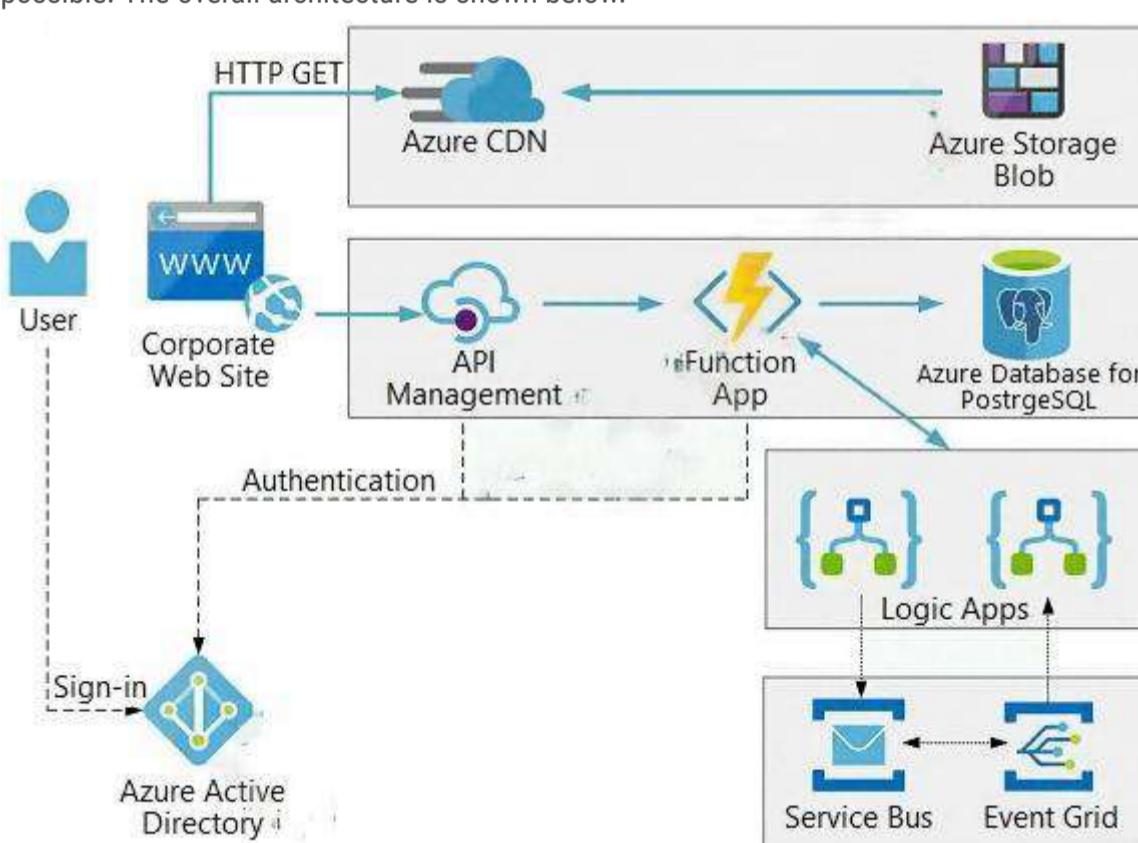
API Management and Azure Function App functions are used to process and store data in Azure Database for PostgreSQL. API Management is used to broker communications to the Azure Function app functions for Logic app integration. Logic apps are used to orchestrate the data processing while Service Bus and

Event Grid handle messaging and events.

The solution uses Application Insights, Azure Monitor, and Azure Key Vault.

#### Architecture diagram -

The company has several applications and services that support their business. The company plans to implement serverless computing where possible. The overall architecture is shown below.



#### User authentication -

The following steps detail the user authentication process:

1. The user selects Sign in in the website.
2. The browser redirects the user to the Azure Active Directory (Azure AD) sign in page.

3. The user signs in.
4. Azure AD redirects the user's session back to the web application. The URL includes an access token.
5. The web application calls an API and includes the access token in the authentication header. The application ID is sent as the audience ('aud') claim in the access token.
6. The back-end API validates the access token.

Requirements -

Corporate website -

Communications and content must be secured by using SSL.

Communications must use HTTPS.

Data must be replicated to a secondary region and three availability zones.

Data storage costs must be minimized.

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

Azure Event Grid must use Azure Service Bus for queue-based load leveling.

Events in Azure Event Grid must be routed directly to Service Bus queues for use in buffering.

Events from Azure Service Bus and other Azure services must continue to be routed to Azure Event Grid for processing.

Security -

All SSL certificates and credentials must be stored in Azure Key Vault.

File access must restrict access by IP, protocol, and Azure AD rights.

All user accounts and processes must receive only those privileges which are essential to perform their intended function.

Compliance -

Auditing of the file updates and transfers must be enabled to comply with General Data Protection Regulation (GDPR). The file updates must be read-only, stored in the order in which they occurred, include only create, update, delete, and copy operations, and be retained for compliance reasons.

Issues -

Corporate website -

While testing the site, the following error message displays:

CryptographicException: The system cannot find the file specified.

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:

FunctionAppLogs -

```
| where FunctionName == "RequestUserApproval"
```

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.

Code -

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 }

```

Function app -

RequestUserApproval.cs:

```

RA01 public static class RequestUserApproval
RA02 {
RA03 [FunctionName("RequestUserApproval")]
RA04 public static async Task<IActionResult> Run(
RA05 [HttpTrigger(AuthorizationLevel.Function, "get", "post", Route = null)] HttpRequest req,
ILogger log)
RA06 {
RA07 log.LogInformation("RequestUserApproval.function processed a request.");
RA08 ...
RA09 return ProcessRequest(req)
RA10 ? (ActionResult)new OkObjectResult($"User approval processed")
RA11 : new BadRequestObjectResult("Failed to process user approval");
RA12 }
RA13 private static bool ProcessRequest(HttpContext req)
RA14 {
RA15 ...
RA16 }
RA17 }

```

### Question

HOTSPOT -

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://	<input type="text"/>	▼	.vault.azure.net/secrets/	<input type="text"/>	▼ /
	<input type="checkbox"/> cpandlkeyvault <input type="checkbox"/> PostgreSQLConn <input type="checkbox"/> 80df3e46ffcd4f1cb187f79905e9a1e8				
	<input type="checkbox"/> cpandlkeyvault <input type="checkbox"/> PostgreSQLConn <input type="checkbox"/> 80df3e46ffcd4f1cb187f79905e9a1e8				

Variable type to access Azure Key Vault secret values:

▼
<input type="checkbox"/> Environment
<input type="checkbox"/> Session
<input type="checkbox"/> ViewState
<input type="checkbox"/> Querystring

Correct Answer:

### Answer Area

REST API Endpoint:

https://	<input type="text"/>	▼	.vault.azure.net/secrets/	<input type="text"/>	▼ /
	<input checked="" type="checkbox"/> cpandlkeyvault <input type="checkbox"/> PostgreSQLConn <input type="checkbox"/> 80df3e46ffcd4f1cb187f79905e9a1e8				
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Variable type to access Azure Key Vault secret values:

▼
<input checked="" type="checkbox"/> Environment
<input checked="" type="checkbox"/> Session
<input checked="" type="checkbox"/> ViewState
<input checked="" type="checkbox"/> Querystring

Azure database connection string retrieve REST API vault.azure.net/secrets/

Box 1: cpndlkeyvault -

We specify the key vault, cpndlkeyvault.

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

Azure Key Vault name: cpndlkeyvault

Secret name: PostgreSQLConn -

Id: 80df3e46ffcd4f1cb187f79905e9a1e8

Box 2: PostgreSQLConn -

We specify the secret, PostgreSQLConn

Example, sample request:

<https://myvault.vault.azure.net/secrets/mysecretname/4387e9f3d6e14c459867679a90fd0f79?api-version=7.1>

Box 3: Querystring -

Reference:

<https://docs.microsoft.com/en-us/rest/api/keyvault/getsecret/getsecret>

✉  **mlantonis**  10 months, 3 weeks ago

As per requirement:

- Azure Key Vault name: cpndlkeyvault
- Secret name: PostgreSQLConn
- Id: 80df3e46ffcd4f1cb187f79905e9a1e8

<https://myvault.vault.azure.net/secrets/mysecretname/4387e9f3d6e14c459867679a90fd0f79?api-version=7.1>

Box 1: cpndlkeyvault

We specify the key vault, cpndlkeyvault.

Box 2: PostgreSQLConn

We specify the secret, PostgreSQLConn.

Box 3: Environment

If a reference is not resolved properly, the reference value will be used instead. This means that for application settings, an environment variable would be created

upvoted 18 times

✉  **cool\_tool** 8 months, 2 weeks ago

Box 3 is QueryString (query string to specify the API version along with the secret version), the other part is fine. (Answer provided is CORRECT)

upvoted 6 times

✉  **66xxx66**  1 year ago

it is not clear what is "variable type to access azure key vault secret value". why query string ?

upvoted 9 times

✉  **Bartimaeus** 1 month, 2 weeks ago

If you think about it, it's how do YOU access key vault secret value, i.e. where do you store it.

Let's start from invalid answers:

- QueryString - obviously wrong, do you want to store SECRET value in QueryString variable (i.e. QueryString param)? In URL, where every single person using your website can see it?

- ViewState / Session variable - wrong, here's comparison between the two: <https://www.geeksforgeeks.org/viewstate-vs-sessionstate/#:~:text=The%20basic%20difference%20between%20these,content%20from%20this%20end%20too.>

But the point here is - both are per user, ViewState for page, Sessions until browser is closed. You don't want to retrieve your DB connection string from KV for each user.

Which leaves us with Environment variable, which is the only viable option, which will persist the secret for multiple users as long the application lives.

From docs:

> Cache secrets in your application for at least eight hours.

(<https://docs.microsoft.com/en-us/azure/key-vault/secrets/secrets-best-practices#service-limits-and-caching>)

upvoted 1 times

✉  **clarionprogrammer** 1 year ago

It should be Environment.

If a reference is not resolved properly, the reference value will be used instead. This means that for application settings, an environment variable would be created...

<https://docs.microsoft.com/en-us/azure/app-service/app-service-key-vault-references>

upvoted 6 times

✉  **Bartimaeus** 1 month, 2 weeks ago

Completely random explanation by googling "Key Vault" + "environment".

upvoted 1 times

✉  **SivajiTheBoss** [Most Recent] 1 month, 2 weeks ago

Correct Answer:

Box 1: cpndlkeyvault

Name of the key vault.

Box 2: PostgreSQLConn

Name of the secret.

Box 3: QueryString

Variable type to access the secret (100% correct - Not environment)

upvoted 1 times

✉  **lugospod** 3 months ago

Got this one 01/2022. Went with most voted (to avoid writing answers again) @mlantonis

upvoted 2 times

✉  **lugospod** 3 months, 2 weeks ago

nah, i read it wrong, they do not have ID in the URL...it is only in the comments.

upvoted 1 times

✉  **lugospod** 3 months, 2 weeks ago

I have an issue with the "original question" meaning, they are assuming that we would send ID of the secret version to the HTTP GET. This means that we would ALWAYS retrieve the SAME version of the secret, and would not get the latest version. And they specifically said that the latest version should be used, so based on the information on page

<https://docs.microsoft.com/en-us/rest/api/keyvault/getsecret/getsecret>

we see that the ID is OPTIONAL, and if we do omit it the latest version will be retrieved.

My comment is just to point out the possibility that the proposed solution by Microsoft is invalid.

upvoted 1 times

✉  **lugospod** 3 months, 2 weeks ago

Ignore this, read it wrong. ID is not used in their question.

upvoted 1 times

✉  **MiraA** 7 months, 1 week ago

I think it could be "Environment".

The question "Variable type to access Azure Key Vault secret values" could mean "what object type instance do I need to call GET request to API endpoint to retrieve the connection string"?

I believe the GET request to retrieve the secret (connection string) must be authorized by the Azure. This means the application had signed in Azur AD already and had retrieved the access token (id\_token) which can be added as a HTTP header to GET requests on endpoint API:

GET [https://cpndlkeyvault.vault.azure.net/secrets/.....](https://cpndlkeyvault.vault.azure.net/secrets/)

Authorization: Bearer <bearer-token>

So this means the access token has to be stored somewhere to allow subsequent repeated calls to get secret connection? Maybe Environment is such place?

upvoted 1 times

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PS: Not sure if adding the access token to Environment is not a security risk?

upvoted 2 times

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PS: Not sure if adding the access token to Environment is not a security risk?  
upvoted 1 times

✉ **rustycables** 8 months, 1 week ago

I'm not happy with answers and discussions on Box 3. Typically this type of setting would be done as an environment variable. The only thing that makes me hesitate is this line: The connection information is updated frequently. The application must always use the latest information to connect to the database. Nothing stops you calling this code each time the connection is needed. In that way the connection string will not be stored in any of the variable types listed. But that is a big overhead. If you wanted to store the connection string between requests it must be stored in one of these variables types. query string is the least secure, and I would never consider it for this type of value as it exposes parts of the application to an attacker. I would select session, because session can still be updated, and is more secure than both query and viewstate. I would think twice about setting as an environment variable because of the line above that states that the connection changes frequently. I could be wrong, but if I get this question I'm going to choose session.

upvoted 3 times

✉ **ning** 8 months ago

see this link <https://azure.microsoft.com/en-us/updates/versions-no-longer-required-for-key-vault-references-in-app-service-and-azure-functions/>

upvoted 1 times

✉ **mcOre** 8 months, 1 week ago

According to the link below, the type is SecretBundle.  
<https://docs.microsoft.com/en-us/rest/api/keyvault/get-secret/get-secret#response>

upvoted 2 times

✉ **MrXBasit** 9 months ago

Answer is correct  
upvoted 2 times

✉ **pavan555manjunath** 11 months, 1 week ago

It should be Environment is correct one  
upvoted 6 times

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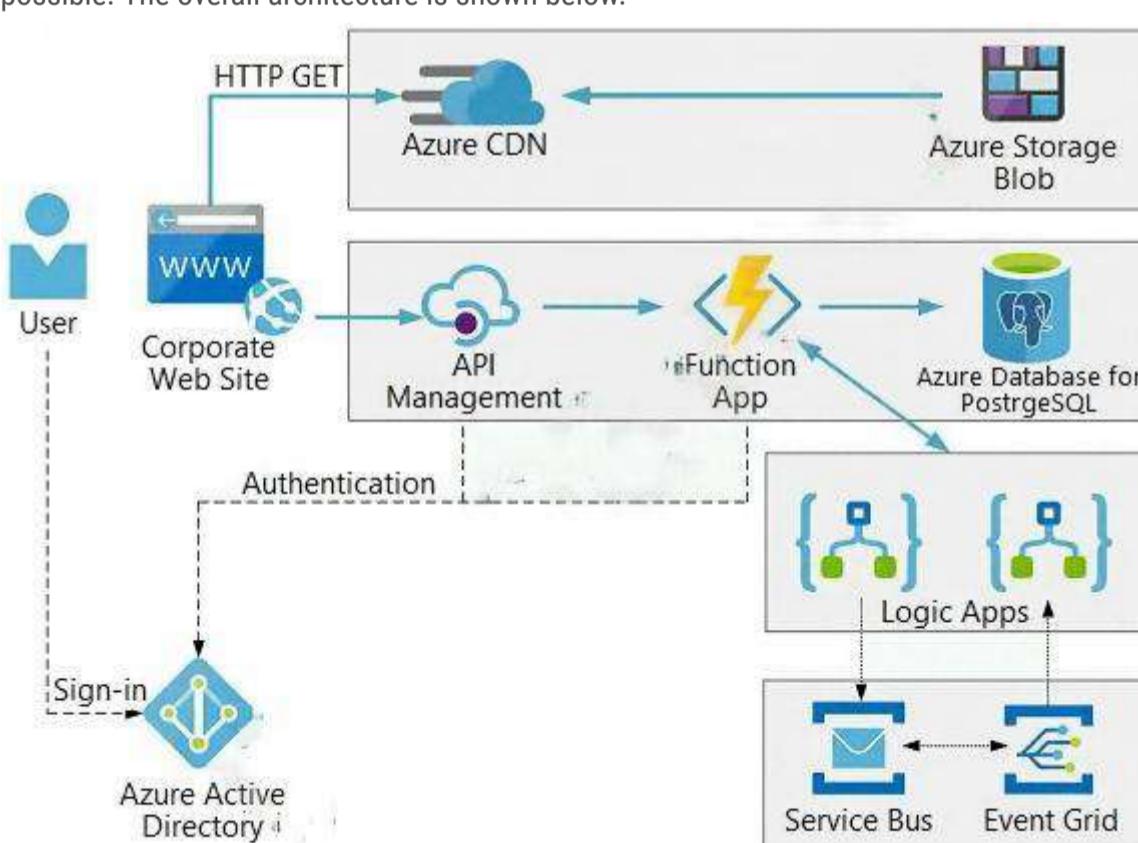
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The solution uses Application Insights, Azure Monitor, and Azure Key Vault.

Architecture diagram -

The company has several applications and services that support their business. The company plans to implement serverless computing where possible. The overall architecture is shown below.



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The following steps detail the user authentication process:

1. The user selects Sign in in the website.
2. The browser redirects the user to the Azure Active Directory (Azure AD) sign in page.

3. The user signs in.
4. Azure AD redirects the user's session back to the web application. The URL includes an access token.
5. The web application calls an API and includes the access token in the authentication header. The application ID is sent as the audience ('aud') claim in the access token.
6. The back-end API validates the access token.

Requirements -

Corporate website -

Communications and content must be secured by using SSL.

Communications must use HTTPS.

Data must be replicated to a secondary region and three availability zones.

Data storage costs must be minimized.

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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.

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Azure Event Grid must use Azure Service Bus for queue-based load leveling.

Events in Azure Event Grid must be routed directly to Service Bus queues for use in buffering.

Events from Azure Service Bus and other Azure services must continue to be routed to Azure Event Grid for processing.

Security -

All SSL certificates and credentials must be stored in Azure Key Vault.

File access must restrict access by IP, protocol, and Azure AD rights.

All user accounts and processes must receive only those privileges which are essential to perform their intended function.

Compliance -

Auditing of the file updates and transfers must be enabled to comply with General Data Protection Regulation (GDPR). The file updates must be read-only, stored in the order in which they occurred, include only create, update, delete, and copy operations, and be retained for compliance reasons.

Issues -

Corporate website -

While testing the site, the following error message displays:

CryptographicException: The system cannot find the file specified.

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:

FunctionAppLogs -

```
| where FunctionName == "RequestUserApproval"
```

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.

Code -

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 }
```

Function app -

RequestUserApproval.cs:

```
RA01 public static class RequestUserApproval
RA02 {
RA03 [FunctionName("RequestUserApproval")]
RA04 public static async Task<IActionResult> Run(
RA05 [HttpTrigger(AuthorizationLevel.Function, "get", "post"), Route = null]) HttpRequest req,
RA06 ILogger log)
RA06 {
RA07 log.LogInformation("RequestUserApproval.function processed a request.");
RA08 ...
RA09 return ProcessRequest(req)
RA10 ? (ActionResult)new OkObjectResult($"User approval processed")
RA11 : new BadRequestObjectResult("Failed to process user approval");
RA12 }
RA13 private static bool ProcessRequest(HttpContext req)
RA14 {
RA15 ...
RA16 }
RA17 }
```

### Question

DRAG DROP -

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.	

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

Scenario: Corporate website -  
 While testing the site, the following error message displays:  
 CryptographicException: The system cannot find the file specified.

Step 1: Generate a certificate -  
 Step 2: Upload the certificate to Azure Key Vault  
 Scenario: All SSL certificates and credentials must be stored in Azure Key Vault.  
 Step 3: Import the certificate to Azure App Service  
 Step 4: Update line SC05 of Security.cs to include error handling and then redeploy the code  
 Reference:  
<https://docs.microsoft.com/en-us/azure/app-service/configure-ssl-certificate>

✉  **Frakandel**  11 months, 1 week ago

Answer:

- Generate a certificate
- Upload the certificate to Azure key vault
- Import the certificate to Azure App Service
- Add the certificate thumbprint to the WEBSITE\_LOAD\_CERTIFICATES app setting

<https://ankitvijay.net/2021/04/14/certificate-azure-app-service-linux/>

upvoted 41 times

✉  **SnakePlissken**  11 months, 1 week ago

1. Generate a certificate.
2. Upload the certificate to Azure Key Vault.
3. Import the certificate to Azure App Service.
4. Add the certificate thumbprint to the WEBSITE\_LOAD\_CERTIFICATES app setting.

Prerequisite: Scale up your App Service plan if your app is in a shared infrastructure tier.

<https://docs.microsoft.com/en-us/azure/app-service/configure-ssl-certificate>

<https://docs.microsoft.com/en-us/azure/app-service/configure-ssl-certificate-in-code#load-certificate-in-linuxwindows-containers>  
 upvoted 16 times

✉  **lugospod**  3 months ago

Got this one 01/2022. Went with most voted (to avoid writing answers again)

upvoted 5 times

✉  **asdadasg2** 3 months, 2 weeks ago

what a horrible question. Security.cs is not even valid C# and its usage is not even shown in the following snippet that contains the function.  
 upvoted 2 times

✉  **GreenPanda** 8 months, 2 weeks ago

Does the ReadAllBytes method need to specify the file path instead of the directory?

upvoted 1 times

**lugospod** 3 months, 2 weeks ago

yes I agree, but I think this is a typo...the same way the path has ~ in front...

upvoted 1 times

**GreenPanda** 8 months, 2 weeks ago

<https://docs.microsoft.com/en-us/azure/app-service/configure-ssl-certificate-in-code#load-certificate-in-linuxwindows-containers>  
upvoted 1 times

✉️ **BrettusMaximus** 11 months, 4 weeks ago

Ok - How does the cert get to be located at the URL (/var/ssl/private)?  
1. Generate a certificate  
2. Upload to key vault  
3. Add the certificate thumbprint to the WEBSITE\_LOAD\_CERTIFICATES app setting.  
4. Add the certificate to Source Control (/var/ssl/private), So when the app deploys it gets there.  
It doesn't matter about nice error messages.

upvoted 1 times

✉️ **BrettusMaximus** 11 months, 4 weeks ago

OK I am slightly wrong here; as in <https://ankitvijay.net/2021/04/14/certificate-azure-app-service-linux/>  
1. Generate a certificate  
2. Upload to key vault (mandatory security requirements)  
3. Import the certificate to Azure App Service. For Linux container, it keeps the private certificates at the location /var/ssl/private and public certificates at /var/ssl/certs.  
4. Add the certificate thumbprint to the WEBSITE\_LOAD\_CERTIFICATES app setting.

It doesn't matter about nice error messages.

upvoted 13 times

✉️ **azuregenerator** 12 months ago

General information

- \* CryptographicException: The system cannot find the file specified
- \* According to the path we are running a linux container (/var/ssl/private)
- \* Question seems to have a typo (line SC03, ~ is not needed)

Answer

1. Generate a certificate
2. Import the certificate to Azure App Service
3. Add the certificate thumbprint to the WEBSITE\_LOAD\_CERTIFICATES app setting
4. Update line SC05 to include error handling ...

Further reading:

<https://docs.microsoft.com/en-us/azure/app-service/configure-ssl-certificate-in-code#load-certificate-in-linuxwindows-containers>  
upvoted 2 times

✉️ **lugospod** 3 months, 2 weeks ago

Adding exception handling won't help you solve the problem...so not needed. You Must use key vault so you are missing that part as a second step.

upvoted 1 times

✉️ **anastakasim** 1 year ago

So what is the correct answer to this?

upvoted 3 times

✉️ **clarionprogrammer** 1 year ago

1. Generate a certificate
2. Import the certificate to Azure App Service.
3. Add the certificate thumbprint to the WEBSITE\_LOAD\_CERTIFICATES app setting.  
<https://docs.microsoft.com/en-us/azure/app-service/configure-ssl-certificate-in-code#make-the-certificate-accessible>
4. Update line SC05 of Security.cs to include error handling and then redeploy the code.

upvoted 4 times

✉️ **SwatiN** 12 months ago

Certificates should be imported from azure key vault. its one of the requirement. so it would be :

1. Generate Cert
2. Upload to key vault
3. import from key vault.
4. Update config thumbprint value
5. Handle the error in the code gracefully

<https://docs.microsoft.com/en-us/azure/app-service/configure-ssl-certificate>

<https://docs.microsoft.com/en-us/azure/app-service/configure-ssl-certificate-in-code#load-certificate-in-linuxwindows-containers>  
upvoted 2 times

✉️ **lugospod** 3 months, 2 weeks ago

The question is to select FOUR steps..you selected FIVE.

upvoted 1 times

✉️ **jokergester** 1 year ago

I think it should be

1. Generate Cert

2. Upload to App Service
3. Update config thumbprint value
4. Handle the error in the code gracefully

Uploading to Key Vault would offer a better security but another step(s) would be needed it is to add access policy for the App Service to use the Certificate

upvoted 2 times

✉️  **lugospod** 3 months, 2 weeks ago

There is a requirement that states that key vault MUST be used to store certificates.

upvoted 1 times

✉️  **Zsolt72** 1 year ago

<https://docs.microsoft.com/en-us/azure/app-service/configure-ssl-certificate-in-code#make-the-certificate-accessible>

upvoted 1 times

✉️  **rdemontis** 1 year, 1 month ago

honestly I don't understand why i have to use try..catch block (error handling) as proposed by the given answer in box 4. In a similar sample on microsoft website it's sufficient to verify if the certificate variable is not null. <https://docs.microsoft.com/en-in/azure/app-service/configure-ssl-certificate-in-code#load-certificate-in-windows-apps>. But if you look above in the same article (make the certificate accessible, <https://docs.microsoft.com/en-us/azure/app-service/configure-ssl-certificate-in-code#make-the-certificate-accessible>) you can see it's mandatory to add certificate thumbprint to the WEBSITE\_LOAD\_CERTIFICATES app setting. But this answer has been discarded. But i think it's more important than add error handling in the code! I addition the exception is CryptographicException. If the problem is accessing a null certification object the error message would be "object reference not set to an instance of an object" (IsNullReferenceException).

upvoted 3 times

✉️  **kwaazaar** 1 year ago

should be the 4th answer indeed. That setting makes the certificates available on disk of the server.

upvoted 1 times

✉️  **Alluru** 1 year, 1 month ago

4 - box is correct. Thumbprint can be hardcoded in code it-self and add error-handling to check certificate is null.

<https://docs.microsoft.com/en-in/azure/app-service/configure-ssl-certificate-in-code#load-certificate-in-windows-apps>

upvoted 2 times

✉️  **Bengkel** 1 year, 1 month ago

This is an option on Windows not on Linux.

upvoted 1 times

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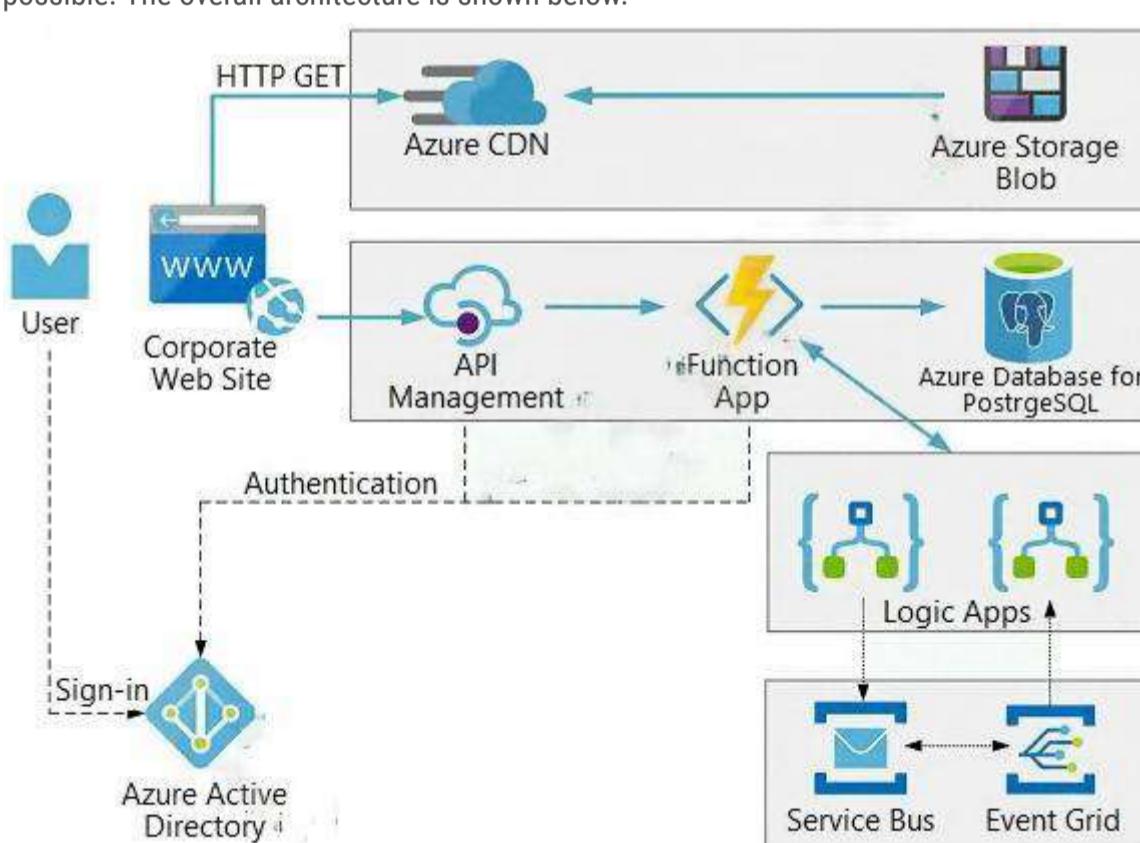
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SC05 var certName = cert.FriendlyName;
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```

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RequestUserApproval.cs:

```

RA01 public static class RequestUserApproval
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RA03 [FunctionName("RequestUserApproval")]
RA04 public static async Task<IActionResult> Run(
RA05 [HttpTrigger(AuthorizationLevel.Function, "get", "post", Route = null)] HttpRequest req,
ILogger log)
RA06 {
RA07 log.LogInformation("RequestUserApproval.function processed a request.");
RA08 ...
RA09 return ProcessRequest(req)
RA10 ? (ActionResult)new OkObjectResult($"User approval processed")
RA11 : new BadRequestObjectResult("Failed to process user approval");
RA12 }
RA13 private static bool ProcessRequest(HttpContext req)
RA14 {
RA15 ...
RA16 }
RA17 }

```

### Question

HOTSPOT -

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;"> Check HTTP header  Restrict caller IPs  Limit call rate by key  Validate JWT </div>
Policy section	<div style="border: 1px solid black; padding: 5px;"> Inbound  Outbound </div>

### Answer Area

Setting	Value
Policy	<div style="border: 1px solid black; padding: 5px;"> Check HTTP header  Restrict caller IPs  Limit call rate by key  <span style="background-color: #e0f2e0;">Validate JWT</span> </div>
Policy section	<div style="border: 1px solid black; padding: 5px;"> <span style="background-color: #e0f2e0;">Inbound</span>  <span style="background-color: #e0f2e0;">Outbound</span> </div>

Box 1: Validate JWT -

The validate-jwt policy enforces existence and validity of a JWT extracted from either a specified HTTP Header or a specified query parameter.

Scenario: User authentication (see step 5 below)

The following steps detail the user authentication process:

1. The user selects Sign in in the website.
2. The browser redirects the user to the Azure Active Directory (Azure AD) sign in page.
3. The user signs in.
4. Azure AD redirects the user's session back to the web application. The URL includes an access token.
5. The web application calls an API and includes the access token in the authentication header. The application ID is sent as the audience ('aud') claim in the access token.
6. The back-end API validates the access token.

Incorrect Answers:

- ⇒ Limit call rate by key - Prevents API usage spikes by limiting call rate, on a per key basis.
- ⇒ Restrict caller IPs - Filters (allows/denies) calls from specific IP addresses and/or address ranges.
- ⇒ Check HTTP header - Enforces existence and/or value of a HTTP Header.

Box 2: Outbound -

Reference:

<https://docs.microsoft.com/en-us/azure/api-management/api-management-access-restriction-policies>

✉  **ZiadAZ**  1 year, 1 month ago

The second box should be Inbound instead of Outbound.

<https://docs.microsoft.com/en-us/azure/api-management/api-management-access-restriction-policies>

Quoting:

This policy can be used in the following policy sections and scopes.

Policy sections: inbound

Policy scopes: all scopes

upvoted 77 times

✉  **sam365** 1 year, 1 month ago

you are correct. it should be INBOUND for Validate JWT

<https://docs.microsoft.com/en-us/azure/api-management/api-management-access-restriction-policies#ValidateJWT>

upvoted 9 times

✉  **mlantonis**  10 months, 3 weeks ago

Box 1: Validate JWT

The validate-jwt policy enforces existence and validity of a JWT extracted from either a specified HTTP Header or a specified query parameter.

Box 2: Inbound

Authentication should be done on Incoming Request and that should be done in Inbound section of the policy of course.

This policy can be used in the following policy sections and scopes.

Policy sections: inbound

Policy scopes: all scopes

Reference:

<https://docs.microsoft.com/en-us/azure/api-management/api-management-access-restriction-policies>

<https://docs.microsoft.com/en-us/azure/api-management/api-management-access-restriction-policies#ValidateJWT>

<https://docs.microsoft.com/en-us/azure/api-management/api-management-access-restriction-policies>

upvoted 12 times

✉  **SivajiTheBoss**  1 month, 2 weeks ago

Correct answer:

1. JWT

2. Inbound

upvoted 1 times

✉  **leonidn** 3 months ago

Validate JWT

Inbound

upvoted 2 times

✉  **fr369** 3 months, 2 weeks ago

Scenario, section 'Authentication':

5. The web application calls an API and includes the access token in the authentication header. The application ID is sent as the audience ('aud') claim in the access token.

6. The back-end API validates the access token.

So, shouldn't the first box be "Check HTTP header"?

upvoted 3 times

✉  **lugospod** 3 months, 2 weeks ago

Yeap, it could be done that way also... there is a small performance hit when using JWT validation. There is no need to have the validation on both places except in the case one has a "great" number of invalid JWT tokens and you want to remove the burden from the backend server.

So I think that deciding between checking the existence of the header vs validation JWT in this exams boils down to "lucky guess".  
upvoted 2 times

✉  **MrXBasit** 9 months ago

Policy Section should be Inbound  
upvoted 2 times

✉  **MrXBasit** 9 months ago

Use the Validate JWT policy to pre-authorize requests in API Management, by validating the access tokens of each incoming request. If a request does not have a valid token, API Management blocks it. Validate JWT policy is part of <inbound> policy section of the the API. It checks the audience claim in an access token, and returns an error message if the token is not valid.

<https://docs.microsoft.com/en-us/azure/api-management/api-management-access-restriction-policies#ValidateJWT>  
upvoted 3 times

✉  **anandhprakash** 11 months, 1 week ago

The correct answer is:

Validate JWT

Inbound

upvoted 3 times

✉  **pavan555manjunath** 11 months, 1 week ago

wht is the correct answer

restrict caller ip & inbound

upvoted 1 times

✉  **faizalzain** 1 year ago

the answer should be restrict caller ip & inbound

upvoted 1 times

✉  **SnakePlissken** 11 months, 2 weeks ago

IP restriction is only asked for file access, not API calls.

upvoted 1 times

✉  **kwaazaar** 1 year ago

Shouldn't it also restrict by up? Or was that not intended, since the question is about authentication instead of authorization?

upvoted 2 times

✉  **SubhoG** 1 year ago

It should be Inbound. Authentication should be done on Incoming Request and that should be done in Inbound section of the policy ofcourse.

upvoted 4 times

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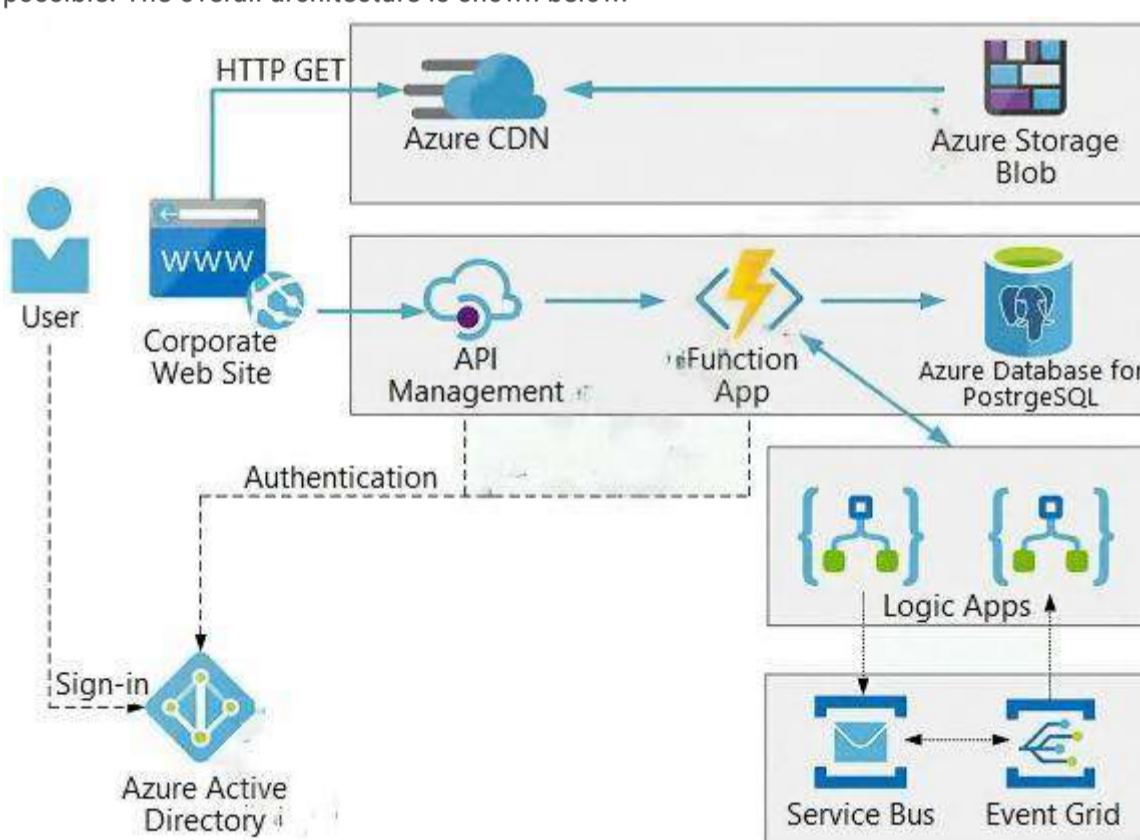
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```

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RA03 [FunctionName("RequestUserApproval")]
RA04 public static async Task<IActionResult> Run(
RA05 [HttpTrigger(AuthorizationLevel.Function, "get", "post"), Route = null]) HttpRequest req,
ILogger log)
RA06 {
RA07 log.LogInformation("RequestUserApproval.function processed a request.");
RA08 ...
RA09 return ProcessRequest(req)
RA10 ? (ActionResult)new OkObjectResult($"User approval processed")
RA11 : new BadRequestObjectResult("Failed to process user approval");
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RA13 private static bool ProcessRequest(HttpRequest req)
RA14 {
RA15 ...
RA16 }
RA17 }

```

### Question

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

#### Correct Answer: AD

A: Claims in access tokens -

JWTs (JSON Web Tokens) are split into three pieces:

- ☞ Header - Provides information about how to validate the token including information about the type of token and how it was signed.
- ☞ Payload - Contains all of the important data about the user or app that is attempting to call your service.
- ☞ Signature - Is the raw material used to validate the token.

E: Your client can get an access token from either the v1.0 endpoint or the v2.0 endpoint using a variety of protocols.

Scenario: User authentication (see step 5 below)

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Reference:

<https://docs.microsoft.com/en-us/azure/api-management/api-management-access-restriction-policies>

 **trance13** Highly Voted 1 year ago

You need ID Token Claims for authorisation.

You need to validate ID Token signature as a part of authentication.

So the correct answer is A.

Having both D & E does not make sense, URI has tenant ID in it, so answer D.

upvoted 17 times

faizalzain [Highly Voted] 1 year ago

it should be D & E

upvoted 16 times

ChrisEvans [Most Recent] 1 week, 5 days ago

Selected Answer: AD

Claims are for authorization. The signature is used for authentication, and the endpoint url includes the tenant id, so A&D are correct by process of elimination.

upvoted 1 times

ReniRechner 1 month, 3 weeks ago

Selected Answer: AD

Authentication is not sign in!

So for example API Management needs to check whether the user is as stated.

So it needs

\* D to find the correct authentication "service".

\* And to check if the user is as stated "A" is needed, since this is the only option that contains information about the user.

B is not viable since the claims alone are not trustworthy.

I don't know why E would help and it can surely not replace A or D.

C is surely not needed since it contains neither information about the user nor the AD.

upvoted 1 times

chingdm 1 month, 3 weeks ago

To authenticate, you need to know the url of auth service api and the tenant id i.e.

[https://login.microsoftonline.com/{tenant}/oauth2/v2.0/authorize?](https://login.microsoftonline.com/{tenant}/oauth2/v2.0/authorize?client_id=6731de76-14a6-49ae-97bc-6eba6914391e&response_type=code&redirect_uri=http%3A%2F%2Flocalhost%2Fmyapp%2F&response_mode=query)

client\_id=6731de76-14a6-49ae-97bc-6eba6914391e  
&response\_type=code  
&redirect\_uri=http%3A%2F%2Flocalhost%2Fmyapp%2F  
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after visiting that url, it will be presented the AD consent and login, then auth code is appended to the redirect url, which can be used to get the access token.

so answer is D and E.

upvoted 2 times

leonidn 3 months ago

Selected Answer: DE

We are asked about what we need to get authenticated. A and B make sense when a user is authenticated. Hence, both options are invalid. I do not know why we need Response Code. Consequently, options D and E.

upvoted 2 times

lugospod 3 months ago

Got this one 01/2022. Went with DE since they are asking about AUTHENTICATION and not AUTHORIZATION

upvoted 6 times

Loai 3 months, 1 week ago

Selected Answer: DE

this is the correct answer

upvoted 1 times

asdasdasg2 3 months, 2 weeks ago

AzureAD token is a JWT - therefore A&D are correct. You need the token signature and the claims (for business-logic validation).

<https://docs.microsoft.com/en-us/azure/active-directory/develop/access-tokens#validating-tokens>

upvoted 1 times

asdasdasg2 3 months, 2 weeks ago

Sorry, meant A&B

upvoted 1 times

lugospod 3 months, 2 weeks ago

I would say that the question is about authentication and NOT authorization so this automatically eliminates A & B. C makes no sense, so we are left with two options D & E which you really do need to connect and authenticate via AD (additionally Client/Application ID is needed)

upvoted 3 times

tiggertag2000 4 months, 1 week ago

It should be A & E

<https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-protect-backend-with-aad>

upvoted 2 times

 **phvoqel** 5 months, 2 weeks ago

It should be D & E. Check out this code sample: Step 3 (run your Visual Studio program) and the information that has to be provided in step 5: The tenant Id and the redirect URI (also the application Id but that's not listed here): <https://docs.microsoft.com/en-us/azure/active-directory/develop/quickstart-v2-aspnet-webapp>

upvoted 4 times

 **RaiMasilamani** 7 months ago

The answer would be A and D

Pre-authorize requests in API Management with the Validate JWT policy, by validating the access tokens of each incoming request. If a request does not have a valid token, API Management blocks it.

unvoted 3 times

 **nina** 8 months ago

If you are talking about configuring AAD, then I will go D, E

If you are talking about validate the token, then it must be ID Token ...

If you are talking about validate the token, then I am not sure what is the question asking for???

unvoted 6 times

 MrXBasit 9 months ago

The answer is D and E

## User authentication flow-

The following steps detail the user authentication process:

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To redirect user for authentication when user clicks on Sign in, we need Azure AD endpoint URI and Azure AD tenant ID.

<https://docs.microsoft.com/en-us/azure/active-directory/develop/quickstart-v2-aspnet-webapp>

unvoted 12 times

 SWedia 9 months ago

I think you are right.

<https://docs.microsoft.com/en-us/azure/app-service/configure-authentication-provider-aad>

unvoted 1 times

 **semenkr** 9 months, 2 weeks ago

— SOMCIRI —

Ans is correct

 Zodiac 9 months ago

**Zodiac** 9 months ago

NO TTS D & E TO

□ ● **DBoratik** 10 months ago

► **DParékkii** 10 months ago You should like DPL-SEA's Facebook URL in the ID.

Yes, it should b

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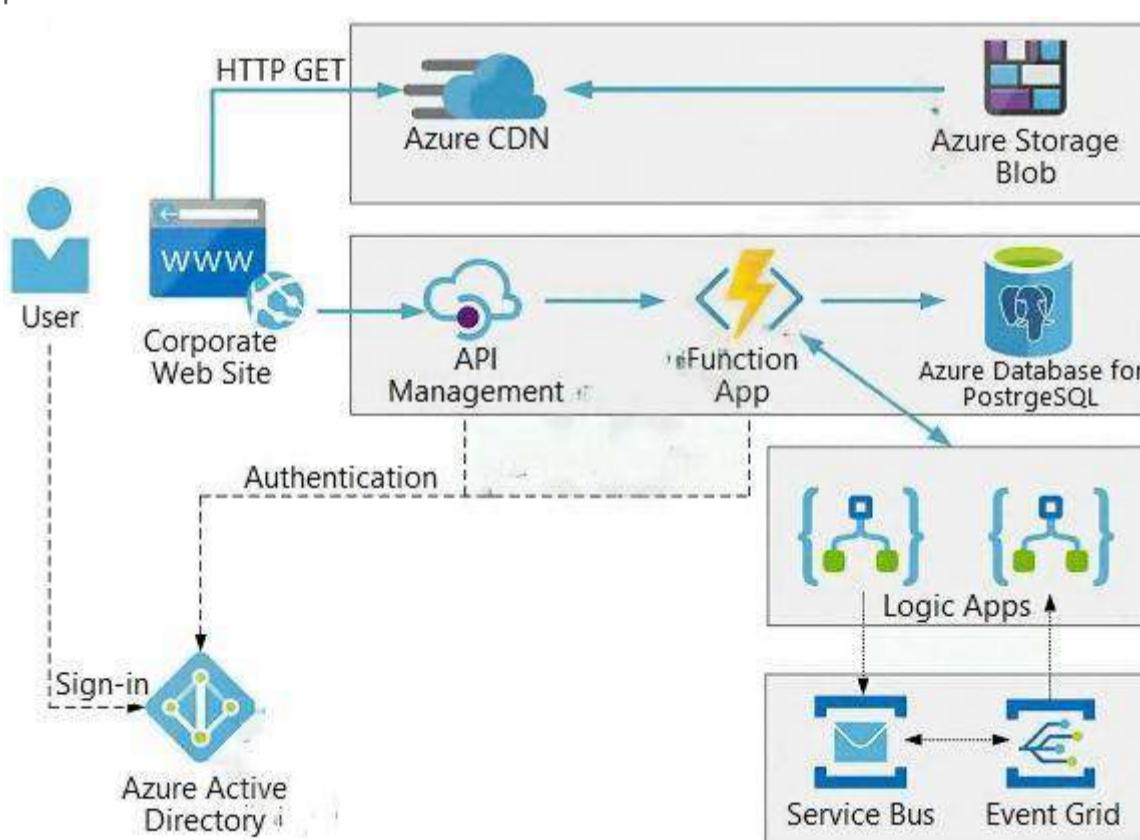
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### Question

HOTSPOT -

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

Setting	Value
authentication level	<div style="border: 1px solid #ccc; padding: 5px; width: fit-content;"> anonymous  function  admin </div>
managed identity	<div style="border: 1px solid #ccc; padding: 5px; width: fit-content;"> system-assigned  user-assigned </div>

### Answer Area

Setting	Value
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Scenario: You test the Logic app in a development environment. The following error message displays:

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

Note: If the inbound call's request body doesn't match your schema, the trigger returns an HTTP 400 Bad Request error.

#### Box 1: function -

If you have an Azure function where you want to use the system-assigned identity, first enable authentication for Azure functions.

#### Box 2: system-assigned -

Your logic app or individual connections can use either the system-assigned identity or a single user-assigned identity, which you can share across a group of logic apps, but not both.

Reference:

<https://docs.microsoft.com/en-us/azure/logic-apps/create-managed-service-identity>

✉️  **rqb11** Highly Voted 1 year ago

According to this article Function authz should be set to anonymous as we're using AAD auth. <https://adatum.no/azure/azure-ad-authentication-in-azure-functions>

upvoted 27 times

✉️  **lmass** 1 year ago

Agree, see also this: <https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-azure-functions#enable-authentication-for-functions>

upvoted 4 times

✉️  **anastakasim** 1 year ago

Not function?

upvoted 1 times

✉️  **ZodiaC** 9 months ago

NOPE READ LINK !

upvoted 2 times

✉️  **mlantonis** Highly Voted 10 months, 3 weeks ago

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.

Box 1: anonymous

To use your logic app's managed identity in your function, you must set your function's authentication level to anonymous. Otherwise, your logic app throws a "BadRequest" error.

Box 2: system-assigned

Your logic app or individual connections can use either the system-assigned identity or a single user-assigned identity, which you can share across a group of logic apps, but not both. On your logic app menu, under Settings, select Identity > System assigned

upvoted 23 times

✉️  **mlantonis** 10 months, 3 weeks ago

Reference:

<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-azure-functions#set-up-anonymous-authentication-in-your-function>

upvoted 5 times

✉️  **ChrisEvans** Most Recent 1 week, 5 days ago

We are fixing the logic app, not the function app. If you look at the function app code, you can see it's using function level authentication, so it can't be anonymous. I think it's function + system assigned.

upvoted 1 times

✉️  **SivajiTheBoss** 1 month, 1 week ago

Correct Answer:

Anonymous

System assigned identity

upvoted 2 times

✉️  **chingdm** 1 month, 3 weeks ago

Can use combination of auth level=Function + managed identity=user-assigned, this works if you set the Function, Logic App and API Management to use this same user-assigned identity.

otherwise, the simpler approach but less secure is to have auth level=Anonymous set to Function and the Logic App to have the system-assigned managed identity.

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/overview>

upvoted 1 times

✉️  **edengoforit** 2 months, 4 weeks ago

Why system-assigned?

upvoted 1 times

✉️  **Jonas\_86** 7 months ago

Anonymous ans system-assigned

check : <https://docs.microsoft.com/fr-fr/azure/spring-cloud/tutorial-managed-identities-functions>

upvoted 1 times

✉️  **ning** 8 months ago

Either system or user identity works in this scenario ...  
Without further requirements, it is hard to say ...

upvoted 1 times

✉️  **ning** 8 months ago

Only thing I can see "All user accounts and processes must receive only those privileges which are essential to perform their intended function."  
maybe system identity then ...  
upvoted 3 times

✉️  **jkes80** 9 months, 2 weeks ago

I think I would answer  
Box1: anonymous  
Box2: user-assigned -> there are 2 Logic Apps in the picture, so it makes sense to me to create a user-assigned identity that is being used for both Logic Apps?  
upvoted 2 times

✉️  **ZodiaC** 9 months ago

Nope, that's make it difficult... So stay with system!  
upvoted 1 times

✉️  **anandhprakash** 11 months, 1 week ago

Anonymous  
System assigned identity

will be correct answer? I am guessing

upvoted 3 times

✉️  **SnakePlissken** 11 months, 2 weeks ago

Logic App is removed from the study guide on March 26, 2021.  
<https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RE4oZ7B>  
upvoted 3 times

✉️  **if54uran** 10 months, 1 week ago

It seems to still in ther o\_O --> page 6 lower left side "Develop an App Service Logic App"  
Am I missing something here?  
upvoted 1 times

✉️  **hstml** 7 months, 1 week ago

The left side of the table states the things that are retired from the exam. "Previous Study Guide" :)  
So SnakePlissken is correct.  
upvoted 3 times

✉️  **oadigun** 11 months, 3 weeks ago

Answer is Anonymous....To use your logic app's managed identity in your function, you must set your function's authentication level to anonymous.  
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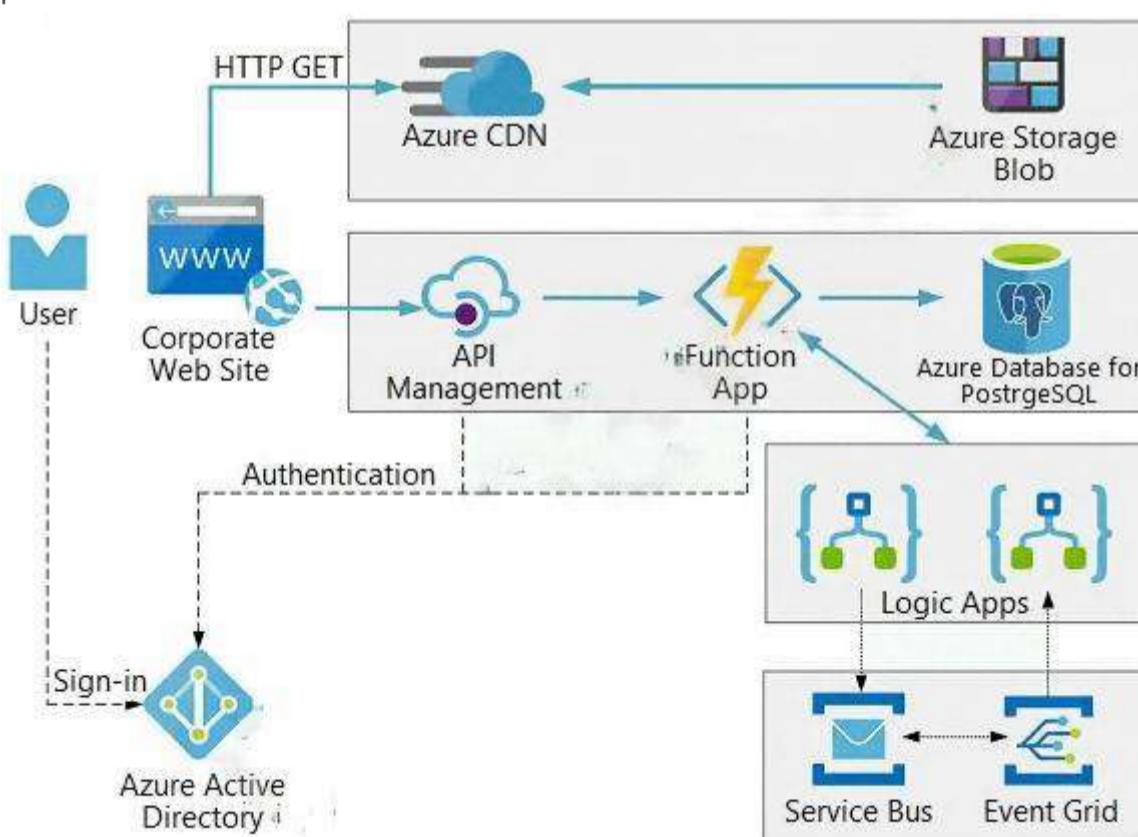
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SC05 var certName = cert.FriendlyName;
SC06 }

```

Function app -

RequestUserApproval.cs:

```

RA01 public static class RequestUserApproval
RA02 {
RA03 [FunctionName("RequestUserApproval")]
RA04 public static async Task<IActionResult> Run(
RA05 [HttpTrigger(AuthorizationLevel.Function, "get", "post"), Route = null]) HttpRequest req,
RA06 ILogger log)
RA07 {
RA08 log.LogInformation("RequestUserApproval.function processed a request.");
RA09 ...
RA10 return ProcessRequest(req)
RA11 ? (ActionResult)new OkObjectResult($"User approval processed")
RA12 : new BadRequestObjectResult("Failed to process user approval");
RA13 private static bool ProcessRequest(HttpRequest req)
RA14 {
RA15 ...
RA16 }
RA17 }

```

### Question

HOTSPOT -

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

Setting	Value
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

### Answer Area

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

Box 1: Premium -

Service Bus can now emit events to Event Grid when there are messages in a queue or a subscription when no receivers are present. You can create Event Grid subscriptions to your Service Bus namespaces, listen to these events, and then react to the events by starting a receiver. With

this feature, you can use Service Bus in reactive programming models.

To enable the feature, you need the following items:

A Service Bus Premium namespace with at least one Service Bus queue or a Service Bus topic with at least one subscription.

Contributor access to the Service Bus namespace.

Box 2: Contributor -

Reference:

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-to-event-grid-integration-concept>

✉  **Marusyk** Highly Voted 1 year, 1 month ago

The answer is correct

upvoted 18 times

✉  **mlantonis** Highly Voted 10 months, 3 weeks ago

To enable the feature, you need the following items:

- A Service Bus Premium namespace with at least one Service Bus queue or a Service Bus topic with at least one subscription.
- Contributor access to the Service Bus namespace.

Box 1: Premium

Box 2: Contributor

Reference:

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-to-event-grid-integration-concept>

upvoted 13 times

✉  **lugospod** Most Recent 3 months ago

Got this one 01/2022. Went with most voted (to avoid writing answers again)

upvoted 3 times

✉  **MrXBasit** 9 months ago

Correct

upvoted 2 times

✉  **syedaquib77** 1 year ago

Azure Service Bus to Event Grid integration overview

To enable the feature, you need the following items:

A Service Bus \*Premium\* namespace with at least one Service Bus queue or a Service Bus topic with at least one subscription.

\*Contributor access\* to the Service Bus namespace. Navigate to your Service Bus namespace in the Azure portal, and then select Access control (IAM), and select Role assignments tab. Verify that you have the contributor access to the namespace.

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-to-event-grid-integration-concept?tabs=event-grid-event-schema>

upvoted 4 times

✉  **ferut** 11 months ago

Tier = Premium, because the requirement says "Data must be replicated to a secondary region and three availability zones". Standard and basic don't support Geo Disaster Recover and Availability Zones.

upvoted 12 times

✉  **rqb11** 1 year ago

Premium tier includes Geo-Disaster Recovery (Geo-DR): <https://azure.microsoft.com/en-us/pricing/details/service-bus/>

upvoted 4 times

✉  **atomicicebreaker** 1 year ago

Microsoft for sure likes your mindset ;) You are correct, but the issue in this question is Service Bus <-> Event Grid communication, not availability or data recovery.

upvoted 3 times

**Topic 14 - Testlet 16**

## Introductory Info

### Case study -

This is a case study. Case studies are not timed separately. You can use as much exam time as you would like to complete each case. However, there may be additional case studies and sections on this exam. You must manage your time to ensure that you are able to complete all questions included on this exam in the time provided.

To answer the questions included in a case study, you will need to reference information that is provided in the case study. Case studies might contain exhibits and other resources that provide more information about the scenario that is described in the case study. Each question is independent of the other questions in this case study.

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### To start the case study -

To display the first question in this case study, click the Next button. Use the buttons in the left pane to explore the content of the case study before you answer the questions. Clicking these buttons displays information such as business requirements, existing environment, and problem statements. When you are ready to answer a question, click the Question button to return to the question.

### Background -

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.

### Receipt processing -

Employees may upload receipts in two ways:

Uploading using an Azure Files mounted folder

Uploading using the web application

### Data Storage -

Receipt and employee information is stored in an Azure SQL database.

### Documentation -

Employees are provided with a getting started document when they first use the solution. The documentation includes details on supported operating systems for

Azure File upload, and instructions on how to configure the mounted folder.

### Solution details -

#### Users table -

Column	Description
UserId	unique identifier for an employee
ExpenseAccount	employees expense account number in the format 1234-123-1234
AllowedAmount	limit of allowed expenses before approval is needed
SupervisorId	unique identifier for employee's supervisor
SecurityPin	value used to validate user identity

### Web Application -

You enable MSI for the Web App and configure the Web App to use the security principal name WebAppIdentity.

### Processing -

Processing is performed by an Azure Function that uses version 2 of the Azure Function runtime. Once processing is completed, results are stored in Azure Blob

Storage and an Azure SQL database. Then, an email summary is sent to the user with a link to the processing report. The link to the report must

remain valid if the email is forwarded to another user.

#### Logging -

Azure Application Insights is used for telemetry and logging in both the processor and the web application. The processor also has TraceWriter logging enabled.

Application Insights must always contain all log messages.

#### Requirements -

##### Receipt processing -

Concurrent processing of a receipt must be prevented.

##### Disaster recovery -

Regional outage must not impact application availability. All DR operations must not be dependent on application running and must ensure that data in the DR region is up to date.

#### Security -

User's SecurityPin must be stored in such a way that access to the database does not allow the viewing of SecurityPins. The web application is the only system that should have access to SecurityPins.

All certificates and secrets used to secure data must be stored in Azure Key Vault.

You must adhere to the principle of least privilege and provide privileges which are essential to perform the intended function.

All access to Azure Storage and Azure SQL database must use the application's Managed Service Identity (MSI).

Receipt data must always be encrypted at rest.

All data must be protected in transit.

User's expense account number must be visible only to logged in users. All other views of the expense account number should include only the last segment, with the remaining parts obscured.

In the case of a security breach, access to all summary reports must be revoked without impacting other parts of the system.

#### Issues -

##### Upload format issue -

Employees occasionally report an issue with uploading a receipt using the web application. They report that when they upload a receipt using the Azure File Share, the receipt does not appear in their profile. When this occurs, they delete the file in the file share and use the web application, which returns a 500 Internal Server error page.

##### Capacity issue -

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

##### 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.

#### Application code -

##### 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 GetDRBlock(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 Task<StorageCredentials> GetCredentials()
PC31 {
PC32 . . .
PC33 }
PC34 private static async Task<List<IListFileItem>> ListFiles()
PC35 {
PC36 . . .
PC37 } ←↓
PC38 private KeyVaultClient _keyVaultClient = new KeyVaultClient(" . . .");
PC39 }

```

Database.cs -

```

DB01 public class Database
DB02 {
DB03 private string ConnectionString =
DB04
DB05 public async Task<object> LoadUserDetails(string userId)
DB06 {
DB07
DB08 return await policy.ExecuteAsync(async () =>
DB09 {
DB10 using (var connection = new SqlConnection(ConnectionString))
DB11 {
DB12 await connection.OpenAsync();
DB13 using (var command = new SqlCommand(" . . .", connection))
DB14 using (var reader = command.ExecuteReader())
DB15 {
DB16 . . .
DB17 }
DB18 }
DB19 });
DB20 }

```

ReceiptUploader.cs -

```

RU01 public class ReceiptUploader
RU02 {
RU03 public async Task UploadFile(string file, byte[] binary)
RU04 {
RU05 var httpClient = new HttpClient();
RU06 var response = await httpClient.PutAsync("...", new ByteArrayContent(binary));
RU07 while (ShouldRetry(response))
RU08 {
RU09 response = await httpClient.PutAsync("...", new ByteArrayContent(binary));
RU10 }
RU11 }
RU12 private bool ShouldRetry(HttpStatusCode response)
RU13 {
RU14 }
RU15 }
RU16 }
```

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
```

## Question

HOTSPOT -

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.

NOTE: Each correct selection is worth one point.

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));
```

Correct Answer:

## 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));
```

Box 1: var key = await Resolver.ResolveKeyAsyn(keyBundle,KeyIdentifier.CancellationToken.None);

Box 2: var x = new BlobEncryptionPolicy(key,resolver);

Example:

```
// We begin with cloudKey1, and a resolver capable of resolving and caching Key Vault secrets.
```

```
BlobEncryptionPolicy encryptionPolicy = new BlobEncryptionPolicy(cloudKey1, cachingResolver);
```

```
client.DefaultRequestOptions.EncryptionPolicy = encryptionPolicy;
```

Box 3: cloudblobClient. DefaultRequestOptions.EncryptionPolicy = x;

Reference:

<https://github.com/Azure/azure-storage-net/blob/master/Samples/GettingStarted/EncryptionSamples/KeyRotation/Program.cs>

✉  **wumingshi** Highly Voted 1 year ago

The answer is correct

upvoted 15 times

✉  **UnknowMan** Highly Voted 11 months, 1 week ago

BlobEncryptionPolicy accept "Ikey" on constructor

=> [https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.blobencryptionpolicy.-ctor?view=azure-dotnet-legacy#Microsoft\\_Azure\\_Storage\\_Blob\\_BlobEncryptionPolicy\\_ctor\\_Microsoft\\_Azure\\_KeyVault\\_Core\\_IKey\\_Microsoft\\_Azure\\_KeyVault\\_Core\\_IKeyResolver\\_](https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.blobencryptionpolicy.-ctor?view=azure-dotnet-legacy#Microsoft_Azure_Storage_Blob_BlobEncryptionPolicy_ctor_Microsoft_Azure_KeyVault_Core_IKey_Microsoft_Azure_KeyVault_Core_IKeyResolver_)

(keyBundle.Key return a Microsoft.Azure.KeyVault.WebKey.JsonWebKey).

The answer is correct !

upvoted 7 times

✉  **Yazhu** Most Recent 4 months ago

Given Answer is correct.

Refer the below URL.

<https://csharp.hotexamples.com/examples/Microsoft.WindowsAzure.Storage.Blob/BlobEncryptionPolicy/-/php-blobencryptionpolicy-class-examples.html>

upvoted 2 times

✉  **UnknowMan** 11 months, 1 week ago

BlobEncryptionPolicy accept "Ikey" on constructor

=> [https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.blobencryptionpolicy.-ctor?view=azure-dotnet-legacy#Microsoft\\_Azure\\_Storage\\_Blob\\_BlobEncryptionPolicy\\_ctor\\_Microsoft\\_Azure\\_KeyVault\\_Core\\_IKey\\_Microsoft\\_Azure\\_KeyVault\\_Core\\_IKeyResolver\\_](https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.blobencryptionpolicy.-ctor?view=azure-dotnet-legacy#Microsoft_Azure_Storage_Blob_BlobEncryptionPolicy_ctor_Microsoft_Azure_KeyVault_Core_IKey_Microsoft_Azure_KeyVault_Core_IKeyResolver_)

(keyBundle.Key return a Microsoft.Azure.KeyVault.WebKey.JsonWebKey).

The answer is correct !

upvoted 1 times

✉️  **SnakePlissken** 11 months, 2 weeks ago

```
1. var key = keyBundle.Key;
2. var x = new BlobEncryptionPolicy(key, resolver);
3. cloudBlobClient.DefaultRequestOptions.EncryptionPolicy = x;
```

But I'm afraid I've wasted my time. As you can see in the links, it's all legacy code.

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.keyvault.keyvaultclientextensions.getkeyasync?view=azure-dotnet-legacy&viewFallbackFrom=azure-dotnet>  
[https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.blobencryptionpolicy.-ctor?view=azure-dotnet-legacy#Microsoft\\_Azure\\_Storage\\_Blob\\_BlobEncryptionPolicy\\_ctor\\_Microsoft\\_Azure\\_KeyVault\\_Core\\_IKey\\_Microsoft\\_Azure\\_KeyVault\\_Core\\_IKeyResolver\\_](https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.blobencryptionpolicy.-ctor?view=azure-dotnet-legacy#Microsoft_Azure_Storage_Blob_BlobEncryptionPolicy_ctor_Microsoft_Azure_KeyVault_Core_IKey_Microsoft_Azure_KeyVault_Core_IKeyResolver_)  
[https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.blobrequestoptions.encryptionpolicy?view=azure-dotnet-legacy#Microsoft\\_Azure\\_Storage\\_Blob\\_BlobRequestOptions\\_EncryptionPolicy](https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.storage.blob.blobrequestoptions.encryptionpolicy?view=azure-dotnet-legacy#Microsoft_Azure_Storage_Blob_BlobRequestOptions_EncryptionPolicy)

upvoted 4 times

✉️  **ning** 8 months ago

This is NOT correct, keyBundle.Key() is correct, it is a method, not a property, so no correct

upvoted 1 times

✉️  **vokep77043** 8 months ago

No, it's a property. Read documentation. [https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.keyvault.models.keybundle.key?view=azure-dotnet-legacy#Microsoft\\_Azure\\_KeyVault\\_Models\\_KeyBundle\\_Key](https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.keyvault.models.keybundle.key?view=azure-dotnet-legacy#Microsoft_Azure_KeyVault_Models_KeyBundle_Key)

upvoted 3 times

✉️  **jvyas** 11 months, 3 weeks ago

According to Udemy instructor Alan Rodriguez answer for first box is

var key = keyBundle.key

upvoted 3 times

✉️  **jokergester** 1 year ago

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-encrypt-decrypt-blobs-key-vault?tabs=dotnet11#encrypt-blob-and-upload>

upvoted 4 times

## Introductory Info

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### 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.

### Receipt processing -

Employees may upload receipts in two ways:

Uploading using an Azure Files mounted folder

Uploading using the web application

### Data Storage -

Receipt and employee information is stored in an Azure SQL database.

### Documentation -

Employees are provided with a getting started document when they first use the solution. The documentation includes details on supported operating systems for

Azure File upload, and instructions on how to configure the mounted folder.

### Solution details -

#### Users table -

Column	Description
UserId	unique identifier for an employee
ExpenseAccount	employees expense account number in the format 1234-123-1234
AllowedAmount	limit of allowed expenses before approval is needed
SupervisorId	unique identifier for employee's supervisor
SecurityPin	value used to validate user identity

### Web Application -

You enable MSI for the Web App and configure the Web App to use the security principal name WebAppIdentity.

### Processing -

Processing is performed by an Azure Function that uses version 2 of the Azure Function runtime. Once processing is completed, results are stored in Azure Blob

Storage and an Azure SQL database. Then, an email summary is sent to the user with a link to the processing report. The link to the report must

remain valid if the email is forwarded to another user.

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Azure Application Insights is used for telemetry and logging in both the processor and the web application. The processor also has TraceWriter logging enabled.

Application Insights must always contain all log messages.

#### Requirements -

##### Receipt processing -

Concurrent processing of a receipt must be prevented.

##### Disaster recovery -

Regional outage must not impact application availability. All DR operations must not be dependent on application running and must ensure that data in the DR region is up to date.

#### Security -

User's SecurityPin must be stored in such a way that access to the database does not allow the viewing of SecurityPins. The web application is the only system that should have access to SecurityPins.

All certificates and secrets used to secure data must be stored in Azure Key Vault.

You must adhere to the principle of least privilege and provide privileges which are essential to perform the intended function.

All access to Azure Storage and Azure SQL database must use the application's Managed Service Identity (MSI).

Receipt data must always be encrypted at rest.

All data must be protected in transit.

User's expense account number must be visible only to logged in users. All other views of the expense account number should include only the last segment, with the remaining parts obscured.

In the case of a security breach, access to all summary reports must be revoked without impacting other parts of the system.

#### Issues -

##### Upload format issue -

Employees occasionally report an issue with uploading a receipt using the web application. They report that when they upload a receipt using the Azure File Share, the receipt does not appear in their profile. When this occurs, they delete the file in the file share and use the web application, which returns a 500 Internal Server error page.

##### Capacity issue -

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

##### 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.

#### Application code -

##### 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 GetDRBlock(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 Task<StorageCredentials> GetCredentials()
PC31 {
PC32 . . .
PC33 }
PC34 private static async Task<List<IListFileItem>> ListFiles()
PC35 {
PC36 . . .
PC37 } ← ↵
PC38 private KeyVaultClient _keyVaultClient = new KeyVaultClient(" . . .");
PC39 }

```

Database.cs -

```

DB01 public class Database
DB02 {
DB03 private string ConnectionString =
DB04
DB05 public async Task<object> LoadUserDetails(string userId)
DB06 {
DB07
DB08 return await policy.ExecuteAsync(async () =>
DB09 {
DB10 using (var connection = new SqlConnection(ConnectionString))
DB11 {
DB12 await connection.OpenAsync();
DB13 using (var command = new SqlCommand(" . . .", connection))
DB14 using (var reader = command.ExecuteReader())
DB15 {
DB16 . . .
DB17 }
DB18 }
DB19 });
DB20 }
DB21 }

```

ReceiptUploader.cs -

```

RU01 public class ReceiptUploader
RU02 {
RU03 public async Task UploadFile(string file, byte[] binary)
RU04 {
RU05 var httpClient = new HttpClient();
RU06 var response = await httpClient.PutAsync("...", new ByteArrayContent(binary));
RU07 while (ShouldRetry(response))
RU08 {
RU09 response = await httpClient.PutAsync("...", new ByteArrayContent(binary));
RU10 }
RU11 }
RU12 private bool ShouldRetry(HttpStatusCode response)
RU13 {
RU14 }
RU15 }
RU16 }
```

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
```

### Question

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

### Correct Answer: B

Scenario: All certificates and secrets used to secure data must be stored in Azure Key Vault.

You must adhere to the principle of least privilege and provide privileges which are essential to perform the intended function.

The Set-AzureRmKeyValutAccessPolicy parameter -PermissionsToKeys specifies an array of key operation permissions to grant to a user or service principal.

The acceptable values for this parameter: decrypt, encrypt, unwrapKey, wrapKey, verify, sign, get, list, update, create, import, delete, backup, restore, recover, purge

Incorrect Answers:

A, C: The Set-AzureRmKeyValutAccessPolicy parameter -PermissionsToCertificates specifies an array of certificate permissions to grant to a user or service principal. The acceptable values for this parameter: get, list, delete, create, import, update, managecontacts, getissuers, listissuers, setissuers, deleteissuers, manageissuers, recover, purge, backup, restore

Reference:

<https://docs.microsoft.com/en-us/powershell/module/azurerm.keyvault/set-azurermkeyvaultaccesspolicy>

My opinion is that the answer is D.

The policy should belong to a key. In the case study the code retrieve the key so the GET access policy is mandatory. The wrap/unwrap is used for symmetric encryption and in this case study the task is to encrypt the blobs.

upvoted 37 times

✉ **azurelearner666** 10 months, 1 week ago

Yes! it's D

PermissionsToKeys wrapkey, unwrapkey, get

<https://docs.microsoft.com/en-us/powershell/module/az.storage/set-azstorageaccount?view=azps-5.8.0#example-5--set-encryption-keysource-to-keyvault>

code example at line 7

upvoted 6 times

✉ **Kuna\_Lambo**  1 year, 1 month ago

B have wrong parameters

I think it should be D

upvoted 7 times

✉ **sien** 1 year ago

the answer is indeed D. In the other link the answer is B which is the same as D in this question

upvoted 1 times

✉ **leonidn**  2 months, 3 weeks ago

**Selected Answer: D**

PermissionsToKeys wrapkey, unwrapkey, get

upvoted 4 times

✉ **edengoforit** 3 months ago

The Set-AzureRmKeyVaultAccessPolicy parameter -PermissionsToKeys specifies an array of key operation permissions to grant to a user or service principal.

According to the reference, the answer is D

<https://docs.microsoft.com/es-es/powershell/module/azurerm.storage/set-azurermstorageaccount?view=azurermps-6.13.0>

upvoted 1 times

✉ **RajMasilamani** 7 months ago

Answer is D.

Wrap,Unwrap,encrypt,decrypt available only for -PermissionsToKeys

<https://docs.microsoft.com/en-us/powershell/module/az.keyvault/set-azkeyvaultaccesspolicy?view=azps-6.4.0#parameters>

upvoted 3 times

✉ **ReniRechner** 1 month, 3 weeks ago

This site also clearly states that PermissionsToCertificates only has these options:

all, get, list, delete, create, import, update, managecontacts, getissuers, listissuers, setissuers, deleteissuers, manageissuers, recover, purge, backup, restore

So B and C are not even valid

upvoted 1 times

✉ **ning** 8 months ago

D is correct from <https://docs.microsoft.com/es-es/powershell/module/azurerm.storage/set-azurermstorageaccount?view=azurermps-6.13.0>

upvoted 2 times

✉ **mlantonis** 10 months, 3 weeks ago

Correct Answer: D

PS C:\>Set-AzKeyVaultAccessPolicy -VaultName "MyKeyVault" -ObjectId \$account.Identity.PrincipalId -PermissionsToKeys wrapkey,unwrapkey,get

Reference:

<https://docs.microsoft.com/en-us/powershell/module/az.storage/set-azstorageaccount?view=azps-5.8.0#example-5--set-encryption-keysource-to-keyvault>

upvoted 6 times

✉ **anandhprakash** 11 months, 1 week ago

Refer

<https://docs.microsoft.com/en-us/powershell/module/az.storage/set-azstorageaccount?view=azps-5.8.0#example-5--set-encryption-keysource-to-keyvault>

Example 5: Set Encryption KeySource to Keyvault

Answer should be D: wrapkey,unwrapkey,get

PS C:\>Set-AzKeyVaultAccessPolicy -VaultName "MyKeyVault" -ObjectId \$account.Identity.PrincipalId -PermissionsToKeys wrapkey,unwrapkey,get

upvoted 3 times

✉  **azuregenerator** 12 months ago

D is correct:

<https://docs.microsoft.com/en-us/powershell/module/az.storage/set-azstorageaccount?view=azps-5.8.0#example-5--set-encryption-keysource-to-keyvault>

upvoted 5 times

✉  **Omalick2** 1 year ago

D is correct

upvoted 3 times

✉  **wtkwsk** 1 year ago

It's B. See here <https://www.examtopics.com/discussions/microsoft/view/7981-exam-az-203-topic-8-question-4-discussion/>

upvoted 2 times

✉  **hstml** 7 months, 1 week ago

In the question you are referring to is B the correct answer. B there is equivalent to D in this question.

But B in this question can not be correct because the given options do not even exist on the parameter. <https://docs.microsoft.com/en-us/powershell/module/azurerm.keyvault/set-azurermkeyvaultaccesspolicy?view=azurermps-6.13.0#parameters>

upvoted 1 times

✉  **Shion2009** 1 year, 1 month ago

See the other discussion here:

<https://www.examtopics.com/discussions/microsoft/view/7981-exam-az-203-topic-8-question-4-discussion/>

upvoted 3 times

✉  **inputoutput** 1 year, 1 month ago

PermissionsToCertificates doesn't accept 'encrypt' and 'decrypt' values. 'Wrapkey' and 'unwrapkey' options seems to be not required here. I think the correct answer is A.

upvoted 6 times

✉  **clarionprogrammer** 1 year ago

A is correct.

upvoted 3 times

✉  **clarionprogrammer** 1 year ago

nm.... It must be D. 'Get' is required.

upvoted 1 times

## Topic 15 - Testlet 17

**Introductory Info**

Case study -

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Background -

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.

Current environment -

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.

Requirements -

The application components must meet the following requirements:

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.

Retail store locations -

Azure Functions must process data immediately when data is uploaded to Blob storage. Azure Functions must update Azure Cosmos DB by using native SQL language queries.

Audit store sale transaction information nightly to validate data, process sales financials, and reconcile inventory.

Delivery services -

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.

Inventory services -

The company has contracted a third-party to develop an API for inventory processing that requires access to a specific blob within the retail store storage account for three months to include read-only access to the data.

## 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.

## 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.

## Question

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.

### Correct Answer: BE

Scenario: Audit store sale transaction information nightly to validate data, process sales financials, and reconcile inventory.

"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":

Change feed support is well-suited for scenarios that process data based on objects that have changed. For example, applications can:

Store, audit, and analyze changes to your objects, over any period of time, for security, compliance or intelligence for enterprise data management.

"Subscribe to blob storage events by using an Azure Function and Azure Event Grid. Filter the events by store location": Azure Storage events allow applications to react to events, such as the creation and deletion of blobs. It does so without the need for complicated code or expensive and inefficient polling services. The best part is you only pay for what you use.

Blob storage events are pushed using Azure Event Grid to subscribers such as Azure Functions, Azure Logic Apps, or even to your own http listener. Event Grid provides reliable event delivery to your applications through rich retry policies and dead-lettering.

Incorrect Answers:

"Enable blob versioning for the storage account. Use an Azure Function to process a list of the blob versions per day": You can enable Blob storage versioning to automatically maintain previous versions of an object. When blob versioning is enabled, you can access earlier versions of a blob to recover your data if it is modified or deleted.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-change-feed> <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-event-overview>

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### Background -

#### Overview -

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.

#### Azure Active Directory -

Contoso, Ltd. uses Azure Active Directory (Azure AD) for both internal and guest accounts.

### Requirements -

#### ContentAnalysisService -

The company's data science group built ContentAnalysisService which accepts user generated content as a string and returns a probable value for inappropriate content. Any values over a specific threshold must be reviewed by an employee of Contoso, Ltd.

You must create an Azure Function named CheckUserContent to perform the content checks.

### Costs -

You must minimize costs for all Azure services.

### Manual review -

To review content, the user must authenticate to the website portion of the ContentAnalysisService using their Azure AD credentials. The website is built using

React and all pages and API endpoints require authentication. In order to review content a user must be part of a ContentReviewer role. All completed reviews must include the reviewer's email address for auditing purposes.

### High availability -

All services must run in multiple regions. The failure of any service in a region must not impact overall application availability.

### Monitoring -

An alert must be raised if the ContentUploadService uses more than 80 percent of available CPU cores.

### Security -

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.

#### User agreements -

When a user submits content, they must agree to a user agreement. The agreement allows employees of Contoso, Ltd. to review content, store cookies on user devices, and track user's IP addresses.

Information regarding agreements is used by multiple divisions within Contoso, Ltd.

User responses must not be lost and must be available to all parties regardless of individual service uptime. The volume of agreements is expected to be in the millions per hour.

#### Validation testing -

When a new version of the ContentAnalysisService is available the previous seven days of content must be processed with the new version to verify that the new version does not significantly deviate from the old version.

#### Issues -

Users of the ContentUploadService report that they occasionally see HTTP 502 responses on specific pages.

#### Code -

##### 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
```

## 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 }
```

### Question

You need to monitor ContentUploadService according to the requirements.

Which command should you use?

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

### Correct Answer: B

Scenario: An alert must be raised if the ContentUploadService uses more than 80 percent of available CPU cores.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/platform/metrics-supported#microsoftcontainerinstancecontainergroups>

✉  **anirbanzeus**  10 months, 2 weeks ago

C is the correct answer. We are dealing with containers here not VM so "CPU usage" is a valid condition. Had it been VM then it should have been "Percentage CPU usage". 800 is also correct since for containers its measured in millicores.

Ref : <https://docs.microsoft.com/en-us/azure/azure-monitor/platform/metrics-supported#microsoftcontainerinstancecontainergroups>  
upvoted 27 times

✉  **beonsoft** 5 months, 3 weeks ago

It is "avg" and not "usage". Reason: it is generalized as multicores could be there.

=>Answer C

upvoted 3 times

✉  **beonsoft** 5 months, 3 weeks ago

...B...

upvoted 3 times

✉  **Illumielle** 6 months, 2 weeks ago

Where does it say contentuploadservice uses containers? The main problem with B is that 800 is not a percentage.

upvoted 1 times

✉  **MiraA** 6 months, 2 weeks ago

See ContentUploadService, line CS02.

upvoted 3 times

✉  **Illumielle** 6 months, 2 weeks ago

It's in the code. There is still the problem with 800 not being a percentage

upvoted 1 times

✉  **robjanssen**  1 year, 1 month ago

Shouldn't it be > 80 (instead of 800)?

upvoted 20 times

✉  **SaNagh** 8 months, 3 weeks ago

The CPU usage measurement is in milicores. 80% of a core would be 800 milicores.  
upvoted 10 times

✉  **insanewriters** 10 months, 1 week ago

The CPU Usage measurement is in milicores (1/1000 of a core). So, 80% of a core would be 800 milicores.  
upvoted 12 times

✉  **Pozz4ever** 1 year, 1 month ago

agree with you  
upvoted 2 times

✉  **ReniRechner** Most Recent 1 month, 3 weeks ago

**Selected Answer: C**

Unit avg CPU: per hundred (%)  
Unit CPU: per thousand  
A:8%  
B:800%  
C:80%  
D:0.8%  
upvoted 3 times

✉  **Netspud** 1 month, 3 weeks ago

**Selected Answer: C**

It is a ACI not a VM so "CPU usage" is correct  
upvoted 2 times

✉  **heisenberg33** 2 months, 1 week ago

**Selected Answer: C**

I believe its C based on this Ref: <https://docs.microsoft.com/en-us/azure/container-instances/container-instances-monitor>  
upvoted 2 times

✉  **asdadasg2** 3 months, 2 weeks ago

It's not A or B because we don't care about average usage, we want an alert when the usage goes above 80%. Therefore it must be C, because as others have stated, CPU usage measurement is in milicores, so 800 would be 80%.

Correct answer: C  
upvoted 2 times

✉  **gfiorini** 5 months ago

"The ContentAnalysisService is deployed with Azure Container Instances"  
"The solution will use eight CPU cores."  
CPU usage is measured in millicore (<https://docs.microsoft.com/en-us/azure/container-instances/container-instances-monitor>)  
so correct answer should be 'C' (80% = 800millicore)  
upvoted 2 times

✉  **mlantonis** 10 months, 3 weeks ago

Monitoring:  
An alert must be raised if the ContentUploadService uses more than 80 percent of available CPU cores.  
The metric "CPU Usage" does not exist, avg Percentage CPU is valid.

Note: It should be "avg Percentage CPU > 80"

Reference:

[https://docs.microsoft.com/en-us/cli/azure/monitor/metrics/alert?view=azure-cli-latest#az\\_monitor\\_metrics\\_alert\\_create](https://docs.microsoft.com/en-us/cli/azure/monitor/metrics/alert?view=azure-cli-latest#az_monitor_metrics_alert_create)  
upvoted 9 times

✉  **Netspud** 1 month, 3 weeks ago

Because it is an ACI "CPU Usage" is valid. If it were a VM then it would not be. In fact "avg Percentage CPU" is not valid for an ACI. Check the various links in the comments, all the ones I checked point to this.  
upvoted 1 times

✉  **Renwa** 10 months, 3 weeks ago

As per Udemy, C is the correct answer - <https://docs.microsoft.com/en-us/azure/container-instances/container-instances-monitor>  
upvoted 3 times

✉  **SnakePlissken** 11 months, 2 weeks ago

The correct answer should be "avg Percentage CPU > 80"  
The metric "CPU Usage" does NOT exist, so people, stop suggesting that answer!  
upvoted 6 times

✉  **Alex42** 7 months, 1 week ago

CPU Usage is available for Container Groups and individual Containers  
<https://docs.microsoft.com/en-us/azure/container-instances/container-instances-monitor>  
C should be the correct answer

upvoted 5 times

✉️  **KaranKalra** 12 months ago

Answer - B

Looks correct based on the below link, the only thing is there should be 80 instead of 800  
[https://docs.microsoft.com/en-us/cli/azure/monitor/metrics/alert?view=azure-cli-latest#az\\_monitor\\_metrics\\_alert\\_create](https://docs.microsoft.com/en-us/cli/azure/monitor/metrics/alert?view=azure-cli-latest#az_monitor_metrics_alert_create)

upvoted 1 times

✉️  **faizalzain** 1 year ago

the answer is C

upvoted 4 times

✉️  **Zsolt72** 1 year ago

can be the C as well if it is measured in millicore 800mCore is 80% with a single core

upvoted 1 times

✉️  **Alluru** 1 year ago

CPU Usage > 800. Answer is C.

upvoted 4 times

✉️  **AndresMza** 1 year ago

According to the provided documentation, there is no thing such as "CPU Usage > 800"

<https://docs.microsoft.com/en-us/cli/azure/monitor/metrics/alert?view=azure-cli-latest>

Where do you have that answer from?

upvoted 4 times

✉️  **ariel\_dev** 10 months, 1 week ago

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upvoted 2 times

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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
```

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 }
```

### Question

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

### Correct Answer: C

Scenario: Users of the ContentUploadService report that they occasionally see HTTP 502 responses on specific pages.

"502 bad gateway" and "503 service unavailable" are common errors in your app hosted in Azure App Service.

Microsoft Azure publicizes each time there is a service interruption or performance degradation.

The az monitor activity-log command manages activity logs.

Note: Troubleshooting can be divided into three distinct tasks, in sequential order:

1. Observe and monitor application behavior
2. Collect data
3. Mitigate the issue

Reference:

<https://docs.microsoft.com/en-us/cli/azure/monitor/activity-log>

✉  **Whirly**  1 year ago

Answer is az container attach

Ref: <https://docs.microsoft.com/en-us/azure/container-instances/container-instances-get-logs>

upvoted 33 times

✉  **ray01** 1 year ago

Correct. If one will take a look at "CS09" line, it's clear that "ContentUploadService" is a container, so the first step should be "az container attach"

upvoted 7 times

✉  **maukaba** 5 months ago

A web app can be deployed both as source code and as a docker container.

C it's correct see link <https://docs.microsoft.com/en-us/azure/app-service/troubleshoot-http-502-http-503>

upvoted 1 times

✉  **maukaba** 5 months ago

C it's correct see link <https://docs.microsoft.com/en-us/azure/app-service/troubleshoot-http-502-http-503>

upvoted 1 times

✉  **Zidimirite** 1 year ago

It's not deployed to a container. This is a regular webapp so A, az webapp log is the correct answer.

upvoted 2 times

✉  **SnakePlissken** 11 months, 1 week ago

The ContentAnalysisService is deployed with Azure Container Instances from a private Azure Container Registry named contosoimages.  
upvoted 6 times

✉  **DV007** 2 months, 4 weeks ago

The question is about the Content\*Upload\*Service, not the Content\*Analysis\*Service. The upload service is a container according to the CS## source code  
upvoted 2 times

✉  **ning** 7 months, 4 weeks ago

az container attach only gives STDOUT and STDERR, not web server log ...  
web server log can have option to see STDOUT / STDERR as well as all other possible log files  
upvoted 1 times

✉  **somenkr** 9 months, 2 weeks ago

It is , Read the question again.  
upvoted 1 times

✉  **clarionprogrammer**  1 year ago

It is not A. "az webapp log" by itself is not a command. It would need to be "az webapp log tail" or "az webapp log download".  
<https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest>  
upvoted 7 times

✉  **heisenberg33**  2 months, 1 week ago

**Selected Answer: D**

ContentUploadService is a container, see line CS06-CS09. Ref: <https://docs.microsoft.com/en-us/azure/container-instances/container-instances-get-logs#attach-output-streams>  
upvoted 1 times

✉  **leonidn** 2 months, 3 weeks ago

**Selected Answer: D**

ContentContainerService is hosted in container services. Hence, the correct answer is az container attach.  
<https://docs.microsoft.com/en-us/azure/container-instances/container-instances-get-logs#attach-output-streams>  
upvoted 2 times

✉  **lugospod** 3 months, 1 week ago

My two cents...  
Based on info on 502 and 503 on page <https://docs.microsoft.com/en-us/azure/app-service/troubleshoot-http-502-http-503>  
It is possible that the root cause is "our" app or unavailability of Azure service

For Azure services: Microsoft Azure publicizes each time there is a service interruption or performance degradation. Which leads to answer C  
For your own applications: A or D. A has no info which command it is using. If using DOWNLOAD it will give us some history info. If using TAIL it will give us real time info similar to D.  
So if this happens occasionally, there is a small chance that it will happen right when we are watching so I would rather go and check the history info - A.

Now between A and C - both are correct because the problem could be caused by Azure also since it is occasionally occurring.

So we need more info to decide if the problem is A or C.

upvoted 1 times

✉  **ning** 8 months ago

A is correct, application level log ...  
az container attach is redirect of STD input, output and error ...  
upvoted 2 times

✉  **sea\_runner** 8 months, 4 weeks ago

C. seems to be Correct, because consider condition:  
- An alert must be raised if the ContentUploadService uses more than 80 percent of available CPU cores.  
and  
COMMANDS  
az monitor activity-log alert - Manage activity log alerts.  
upvoted 4 times

✉  **maukaba** 5 months ago

C it's correct see link <https://docs.microsoft.com/en-us/azure/app-service/troubleshoot-http-502-http-503>  
upvoted 1 times

✉  **nycollas** 10 months, 1 week ago

"The ContentAnalysisService is deployed with Azure Container Instances from a private Azure Container Registry named contosoimages" - this is wrong because the manifest file below is concerning the ContentUploadService (which is a Linux container).]  
Then, it is mentioned that the ContentAnalysisService is an Azure function (which returns a number expressing the likelihood for a content to be inappropriate).  
Therefore, from my point of view, the correct answer is D.

upvoted 3 times

✉  **ferut** 11 months ago

My choice is -->

[A] az webapp log : can be further use to show and download logs  
<https://docs.microsoft.com/en-us/cli/azure/webapp/log?view=azure-cli-latest>

[B] az ams live-output : manage live outputs for Az Media Service  
<https://docs.microsoft.com/en-us/cli/azure/monitor/activity-log?view=azure-cli-latest>

[C] az monitor activity-log : manage activity log  
<https://docs.microsoft.com/en-us/cli/azure/monitor/activity-log?view=azure-cli-latest>  
What is activity log? If you familiar with Events on Windows, than activity is something like that.  
<https://docs.microsoft.com/en-us/azure/azure-monitor/essentials/activity-log>

[D] az container attach : Attach local standard output and error streams to a container in a container group.  
[https://docs.microsoft.com/en-us/cli/azure/container?view=azure-cli-latest#az\\_container\\_attach](https://docs.microsoft.com/en-us/cli/azure/container?view=azure-cli-latest#az_container_attach)

We're looking at logs at application level, which the application writes, we want to know what's behind the 502 error.

upvoted 2 times

✉  **ferut** 11 months ago

My choice is --> A

This is the explanation:

B --> the application log and the error we're looking for doesn't have to do with Az Media Service. It's not B  
C --> activity log, is a level too high. We won't find the application log on the container's activities. We need to look at something like  
..Exception thrown ... with the call stacks. It's not C  
D --> attaching the container, will spit out the log as it happens. We need some logs for things that already happen. This is handy if you want to  
monitor the container with your pair balls of eye. It's not D

A is the most suitable answer.

upvoted 7 times

✉  **ReniRechner** 1 month, 3 weeks ago

A (like D) has no historical information (unless it has been configured before).

Since we don't know if this has been done, you won't get the data from previous incidents.

Thus only C remains.

Remember: This is only the first step.

The second step should be to find the right point to gather more detailed information.

upvoted 2 times

✉  **aperez1979** 1 year ago

The service is deploy to aci so the answer is d.

upvoted 2 times

✉  **Pomphard** 1 year ago

It doesn't say it's deployed to aci anywhere.

upvoted 1 times

✉  **SnakePlissken** 11 months, 1 week ago

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

upvoted 2 times

✉  **jokergester** 1 year ago

A should be the answer as this refers to webapp logs

C is for subscription level events - activity log

## Topic 17 - Testlet 19

✉  **Ziaurrinre** 1 year ago

C is not subscription level, but more like who did what to the management of the service. Like rebooting it, changing a configuration setting  
and such. A is indeed correct.

upvoted 1 times

✉  **Beitran** 1 year ago

Shouldn't it be az webapp log tail --provider http ?

upvoted 3 times

## Introductory Info

Case study -

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

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Architecture overview -

The company has a public website located at <http://www.cpndl.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.

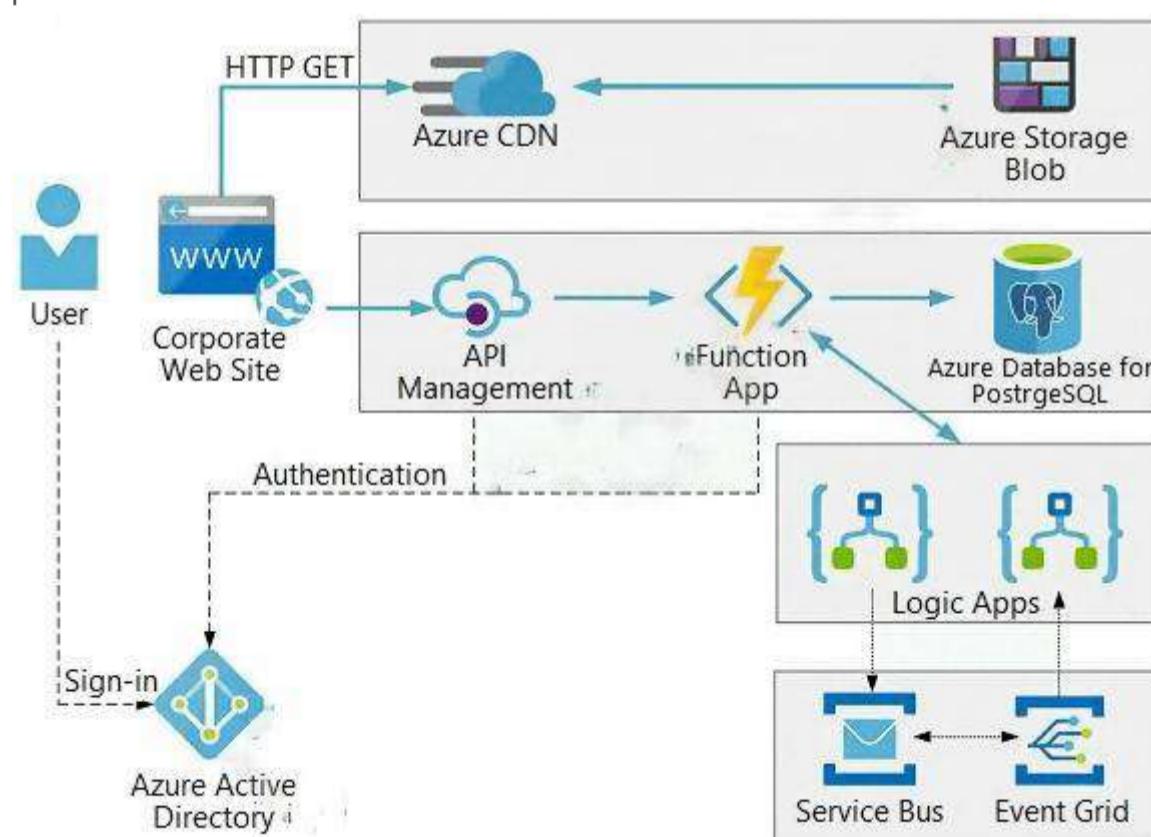
API Management and Azure Function App functions are used to process and store data in Azure Database for PostgreSQL. API Management is used to broker communications to the Azure Function app functions for Logic app integration. Logic apps are used to orchestrate the data processing while Service Bus and

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The solution uses Application Insights, Azure Monitor, and Azure Key Vault.

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The company has several applications and services that support their business. The company plans to implement serverless computing where possible. The overall architecture is shown below.



User authentication -

The following steps detail the user authentication process:

1. The user selects Sign in in the website.
2. The browser redirects the user to the Azure Active Directory (Azure AD) sign in page.

3. The user signs in.
4. Azure AD redirects the user's session back to the web application. The URL includes an access token.
5. The web application calls an API and includes the access token in the authentication header. The application ID is sent as the audience ('aud') claim in the access token.
6. The back-end API validates the access token.

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

Azure Key Vault name: cpandlkeyvault

Secret name: PostgreSQLConn

Id: 80df3e46ffcd4f1cb187f79905e9a1e8

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Corporate website -

While testing the site, the following error message displays:

CryptographicException: The system cannot find the file specified.

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:

FunctionAppLogs -

```
| where FunctionName == "RequestUserApproval"
```

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.

Code -

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 }

```

Function app -

RequestUserApproval.cs:

```

RA01 public static class RequestUserApproval
RA02 {
RA03 [FunctionName("RequestUserApproval")]
RA04 public static async Task<IActionResult> Run(
RA05 [HttpTrigger(AuthorizationLevel.Function, "get", "post", Route = null)] HttpRequest req,
ILogger log)
RA06 {
RA07 log.LogInformation("RequestUserApproval function processed a request.");
RA08 ...
RA09 return ProcessRequest(req)
RA10 ? (ActionResult)new OkObjectResult($"User approval processed")
RA11 : new BadRequestObjectResult("Failed to process user approval");
RA12 }
RA13 private static bool ProcessRequest(HttpContext req)
RA14 {
RA15 ...
RA16 }
RA17 }

```

### Question

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.

### Correct Answer: A

Azure Functions offers built-in integration with Azure Application Insights to monitor functions.

The following areas of Application Insights can be helpful when evaluating the behavior, performance, and errors in your functions:

Live Metrics: View metrics data as it's created in near real-time.

Failures -

Performance -

Metrics -

Reference:

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

✉️  **Deep007** Highly Voted 1 year, 3 months ago

Given answer is correct.

Live Metrics Stream:

when your function app is connected to Application Insights, you can view log data and other metrics in near real time in the Azure portal using Live Metrics Stream. Open below link for this statement.

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

upvoted 23 times

✉️  **satyadharma** 6 months, 1 week ago

not a good option :- "If you enable Applications Insights during development, you might hit this limit during testing. Azure provides portal and email notifications when you're approaching your daily limit. If you miss those alerts and hit the limit, new logs won't appear in Application Insights queries. Be aware of the limit to avoid unnecessary troubleshooting time"

upvoted 1 times

✉️  **27close**  1 year, 5 months ago

Live Metrics Stream: when your function app is connected to Application Insights, you can view log data and other metrics in near real time in the Azure portal using Live Metrics Stream. Use this method when monitoring functions running on multiple-instances or on Linux in a Consumption plan. This method uses sampled data.. Answer is A  
<https://docs.microsoft.com/en-us/azure/azure-functions/functions-monitoring>

upvoted 11 times

✉️  **ning**  8 months ago

Should not B happen before A happen? I would think correct answer is B then A ...

If there is no log analytics, nor application insights connected, how can live stream happens?

upvoted 4 times

✉️  **DefaultName2** 5 months, 1 week ago

Current environment:

"The solution uses Application Insights, Azure Monitor, and Azure Key Vault."

A is correct

upvoted 1 times

✉️  **Zidimirite** 1 year ago

I thought: Why not B? But then realised it is in a development environment and those generally don't log to AppInsights. So A is indeed correct.

upvoted 3 times

✉️  **hstml** 7 months, 1 week ago

Why do they not log to AppInsights in a development environment? <https://docs.microsoft.com/en-us/azure/azure-functions/functions-monitoring>

upvoted 2 times

✉️  **ning** 8 months ago

"when your function app is connected to Application Insights, you can view log data and other metrics in near real time in the Azure portal using Live Metrics Stream. " If there are no application insights, there cannot be any Live Streaming for A

upvoted 1 times

✉️  **idrisfl** 1 year ago

The question specifically says "in a development environment". Live Metrics Stream is recommended for production applications. I would go for D.  
<https://docs.microsoft.com/en-us/azure/azure-monitor/app/live-stream>

upvoted 5 times

✉️  **rajwit** 1 year, 3 months ago

shouldn't be D as mentioned in Issues section it's 400 error

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

upvoted 3 times

✉️  **melli** 1 year, 3 months ago

I think the answer should be (D) - Add new diagnostics settings.

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-monitor-log-analytics?tabs=csharp>

"From the Monitoring section of your function app in the Azure portal, select Diagnostic settings, and then select Add diagnostic setting."

Live Metrics is used for monitoring a live system and should not be necessary in a development environment, because there are not that many events to use the "big canon".

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/live-stream>

upvoted 9 times

✉️  **Deep007** 1 year, 3 months ago

Streaming Logs

While developing an application, you often want to see what's being written to the logs in near real time when running in Azure.

There are two ways to view a stream of the log data being generated by your function executions.

Built-in log streaming: the App Service platform lets you view a stream of your application log files. This stream is equivalent to the output seen when you debug your functions during local development and when you use the Test tab in the portal. All log-based information is displayed. For more information, see Stream logs. This streaming method supports only a single instance, and can't be used with an app running on Linux in a Consumption plan.

Live Metrics Stream: when your function app is connected to Application Insights, you can view log data and other metrics in near real time in the Azure portal using Live Metrics Stream. Use this method when monitoring functions running on multiple-instances or on Linux in a Consumption plan. This method uses sampled data.

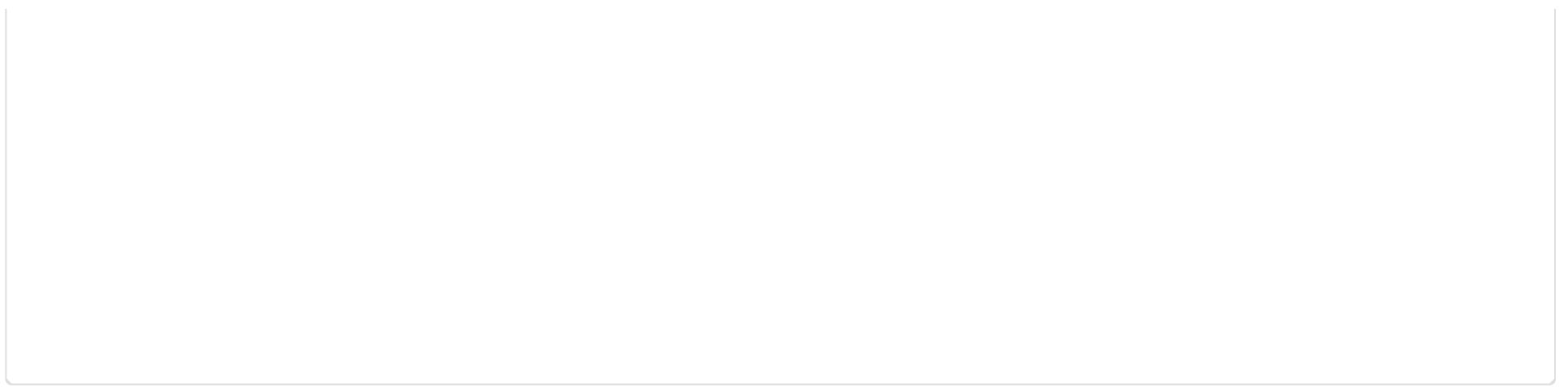
<https://docs.microsoft.com/en-us/azure/azure-functions/functions-monitoring>

upvoted 3 times

✉️  **JVTM** 1 year, 5 months ago

I do not understand the explanation: CONNECT Live Metrics Stream from Application Insights TO THE AZURE FUNCTION app and filter the metrics... Functions have InSights integrated by default. I presume, I should check collected data somehow. But not connect anything... ?

upvoted 3 times



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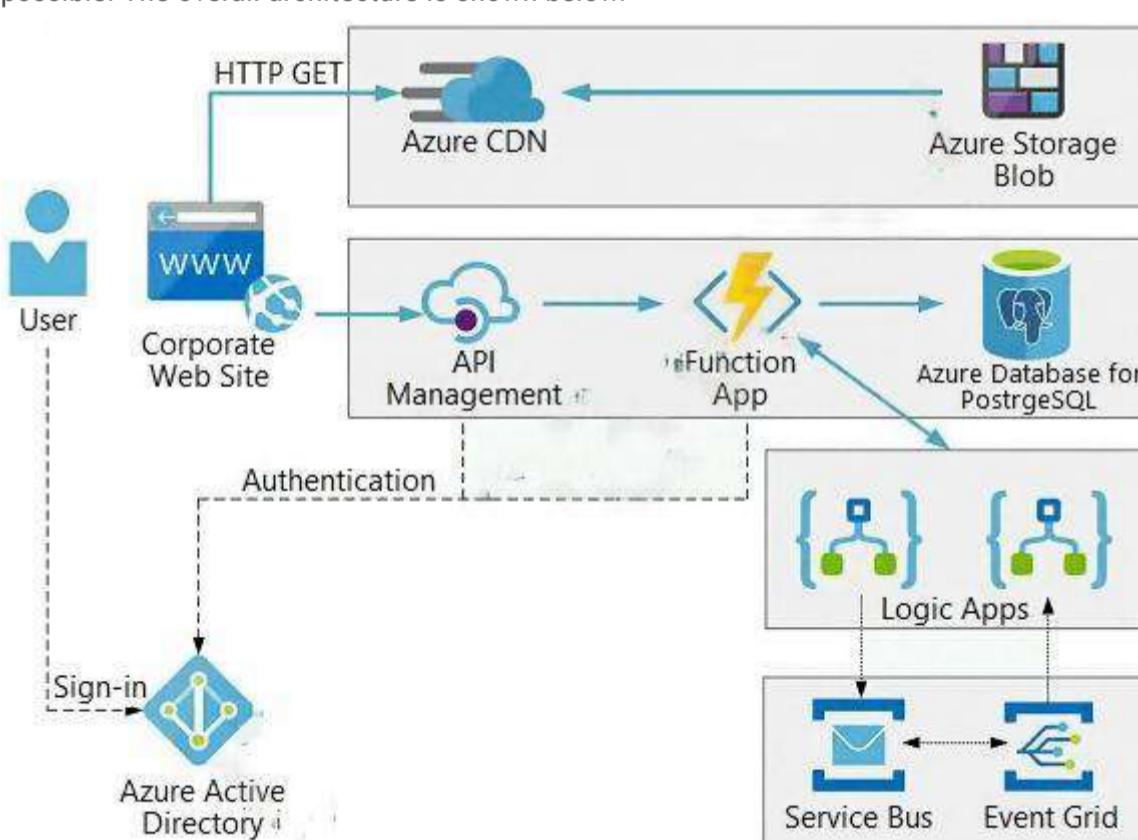
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ILogger log)
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RA08 ...
RA09 return ProcessRequest(req)
RA10 ? (ActionResult)new OkObjectResult($"User approval processed")
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RA12 }
RA13 private static bool ProcessRequest(HttpContext req)
RA14 {
RA15 ...
RA16 }
RA17 }

```

### Question

HOTSPOT -

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

## Answer Area

### Action

Restrict file access

Correct Answer:

### Setting

role-based access control (RBAC)  
managed identity  
shared access signature (SAS) token  
connection string

Enable file auditing

access tier  
change feed  
blob indexer  
storage account type

Box 1: role-based access control (RBAC)

Azure Storage supports authentication and authorization with Azure AD for the Blob and Queue services via Azure role-based access control (Azure RBAC).

Scenario: File access must restrict access by IP, protocol, and Azure AD rights.

Box 2: storage account type -

Scenario: The website uses files stored in Azure Storage

Auditing of the file updates and transfers must be enabled to comply with General Data Protection Regulation (GDPR).

Creating a diagnostic setting:

1. Sign in to the Azure portal.
2. Navigate to your storage account.
3. In the Monitoring section, click Diagnostic settings (preview).

Name	Resource Type	Resource Group	Diagnostics Status
mystorageaccount	Storage account	my-resource-group	Disabled
blob	Storage account	my-resource-group	Disabled
queue	Storage account	my-resource-group	Disabled
table	Storage account	my-resource-group	Disabled
file	Storage account	my-resource-group	Disabled

4. Choose file as the type of storage that you want to enable logs for.

5. Click Add diagnostic setting.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-introduction> <https://docs.microsoft.com/en-us/azure/storage/files/storage-files-monitoring>

clarionprogrammer Highly Voted 1 year ago

shared access signature (SAS) token  
change feed  
upvoted 53 times

mlantonis Highly Voted 10 months, 3 weeks ago

Box 1: shared access signature (SAS) token  
According to the diagram, blob storage is accessed from Azure CDN. Azure CDN doesn't support authentication with managed identity. If you war

to grant limited access to private storage containers, you can use the Shared Access Signature (SAS) feature of your Azure storage account. Also, using a managed identity you can't restrict access by IP as requested.

Box 2: change feed

The purpose of the change feed is to provide transaction logs of all the changes that occur to the blobs and the blob metadata in your storage account.

The file updates must be read-only, stored in the order in which they occurred, include only create, update, delete, and copy operations, and be retained for compliance reasons.

Reference:

<https://docs.microsoft.com/en-us/azure/cdn/cdn-sas-storage-support>

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

upvoted 26 times

✉️  **edengoforit** 3 months ago

File access must restrict access by IP, protocol, and Azure AD rights.

Auditing of the file updates and transfers must be enabled to comply with General Data Protection Regulation (GDPR). The file updates must be read-only, stored in the order in which they occurred, include only create, update, delete, and copy operations, and be retained for compliance reasons.

upvoted 1 times

✉️  **huhezculyvhzaljgs** 5 months, 2 weeks ago

Professor is back :)))

upvoted 4 times

✉️  **AzureDJ** [Most Recent] 1 month, 2 weeks ago

shared access signature (SAS) token

change feed

upvoted 1 times

✉️  **kozchris** 1 month, 4 weeks ago

Answer: SAS/Change Feed

From problem description:

"Security -

File access must restrict access by IP, protocol, and Azure AD rights."

The keyword here is IP.

From <https://docs.microsoft.com/en-us/azure/cdn/cdn-sas-storage-support>

"With a SAS, you can define various parameters of access to a blob, such as start and expiry times, permissions (read/write), and IP ranges."

SAS is from AD so you get the AD rights.

For Change Feed see: <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-change-feed?tabs=azure-portal>

upvoted 2 times

✉️  **leonidn** 2 months, 3 weeks ago

Agree on RBAC.

Change feed

The change feed provides ordered, guaranteed, durable, immutable, read-only log of these changes. <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-change-feed?tabs=azure-portal>

upvoted 1 times

✉️  **cool\_tool** 8 months, 2 weeks ago

RBAC

change feed

upvoted 6 times

✉️  **ning** 8 months ago

Correct, file access is AD User based rights. IP and Protocol, can be configured separately

upvoted 1 times

✉️  **Kuna\_Lambo** 1 year, 1 month ago

managed identity

change feed

upvoted 4 times

✉️  **inputoutput** 1 year, 1 month ago

According to the diagram, blob storage is accessed from Azure CDN. Azure CDN doesn't support authentication with managed identity. I think the correct answer is Shared Access Token. <https://docs.microsoft.com/en-us/azure/cdn/cdn-sas-storage-support>

upvoted 10 times

✉️  **rdemontis** 1 year, 1 month ago

Exactly, and using a managed identity you can't restrict access by IP as requested. User delegation SAS is the right choice in this case (you need AAD integration) and change feed is the service designed for file audits.

<https://docs.microsoft.com/en-us/rest/api/storageservices/create-user-delegation-sas>

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

upvoted 16 times

 **kwaazaar** 1 year ago

But RBAC is supported on file shares too. It needs Azure AD Domain Services, I think.

upvoted 1 times

 **jay158** 9 months, 1 week ago

See the arrow -- Flow is from Storage to CDN.

Diagram does not show, how Storage is populated.

No one will populate storage via CDN

upvoted 2 times

 **Kuna\_Lambo** 1 year, 1 month ago

Thanks, I think you are right.

upvoted 1 times

Topic 18 - Testlet 2

## Introductory Info

Case study -

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Background -

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

Current environment -

Architecture overview -

The company has a public website located at <http://www.cpndl.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.

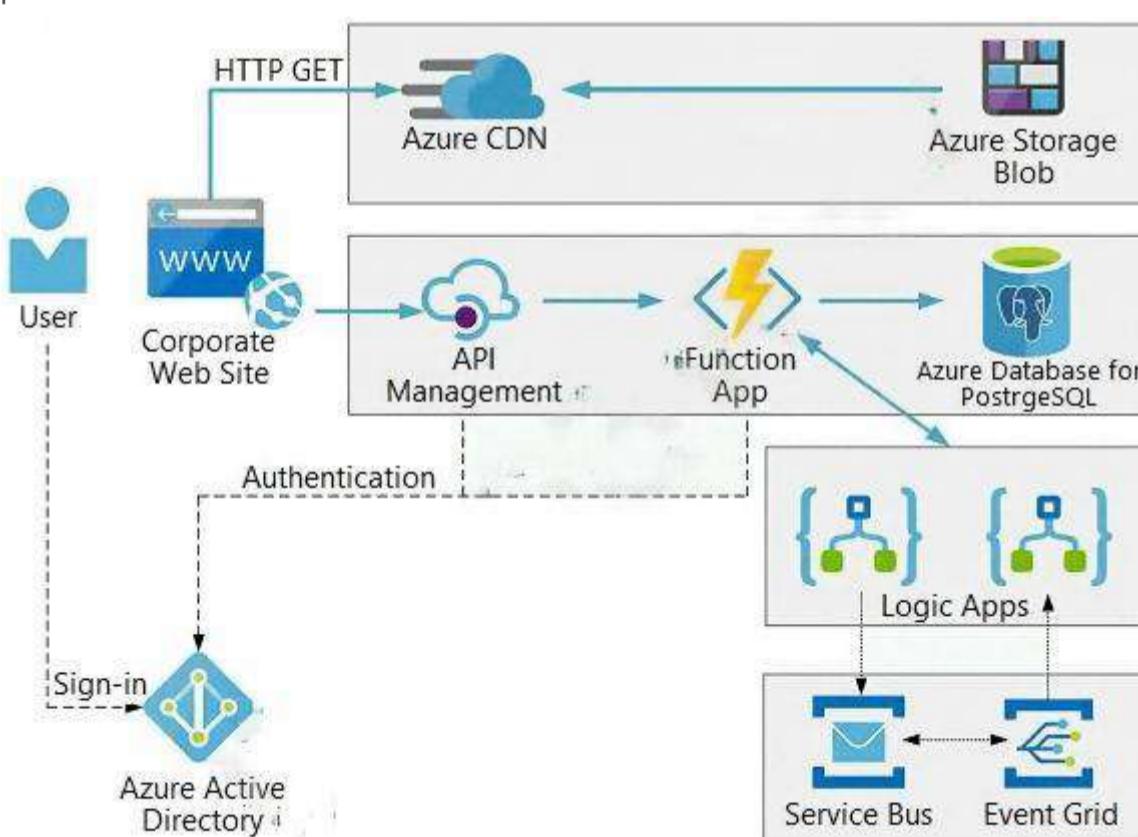
API Management and Azure Function App functions are used to process and store data in Azure Database for PostgreSQL. API Management is used to broker communications to the Azure Function app functions for Logic app integration. Logic apps are used to orchestrate the data processing while Service Bus and

Event Grid handle messaging and events.

The solution uses Application Insights, Azure Monitor, and Azure Key Vault.

Architecture diagram -

The company has several applications and services that support their business. The company plans to implement serverless computing where possible. The overall architecture is shown below.



User authentication -

The following steps detail the user authentication process:

1. The user selects Sign in in the website.
2. The browser redirects the user to the Azure Active Directory (Azure AD) sign in page.

3. The user signs in.
4. Azure AD redirects the user's session back to the web application. The URL includes an access token.
5. The web application calls an API and includes the access token in the authentication header. The application ID is sent as the audience ('aud') claim in the access token.
6. The back-end API validates the access token.

Requirements -

Corporate website -

Communications and content must be secured by using SSL.

Communications must use HTTPS.

Data must be replicated to a secondary region and three availability zones.

Data storage costs must be minimized.

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

Azure Event Grid must use Azure Service Bus for queue-based load leveling.

Events in Azure Event Grid must be routed directly to Service Bus queues for use in buffering.

Events from Azure Service Bus and other Azure services must continue to be routed to Azure Event Grid for processing.

Security -

All SSL certificates and credentials must be stored in Azure Key Vault.

File access must restrict access by IP, protocol, and Azure AD rights.

All user accounts and processes must receive only those privileges which are essential to perform their intended function.

Compliance -

Auditing of the file updates and transfers must be enabled to comply with General Data Protection Regulation (GDPR). The file updates must be read-only, stored in the order in which they occurred, include only create, update, delete, and copy operations, and be retained for compliance reasons.

Issues -

Corporate website -

While testing the site, the following error message displays:

CryptographicException: The system cannot find the file specified.

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:

FunctionAppLogs -

```
| where FunctionName == "RequestUserApproval"
```

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.

Code -

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 }

```

Function app -

RequestUserApproval.cs:

```

RA01 public static class RequestUserApproval
RA02 {
RA03 [FunctionName("RequestUserApproval")]
RA04 public static async Task<IActionResult> Run(
RA05 [HttpTrigger(AuthorizationLevel.Function, "get", "post", Route = null)] HttpRequest req,
RA06 ILogger log)
RA06 {
RA07 log.LogInformation("RequestUserApproval function processed a request.");
RA08 ...
RA09 return ProcessRequest(req)
RA10 ? (ActionResult)new OkObjectResult($"User approval processed")
RA11 : new BadRequestObjectResult("Failed to process user approval");
RA12 }
RA13 private static bool ProcessRequest(HttpContext req)
RA14 {
RA15 ...
RA16 }
RA17 }

```

### Question

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.

### Correct Answer: C

Async operation tracking -

The HTTP response mentioned previously is designed to help implement long-running HTTP `async` APIs with Durable Functions. This pattern is sometimes referred to as the polling consumer pattern.

Both the client and server implementations of this pattern are built into the Durable Functions HTTP APIs.

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:

FunctionAppLogs -

```
| where FunctionName == "RequestUserApproval"
```

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/durable/durable-functions-http-features>

✉  **rdemontis** Highly Voted  1 year, 1 month ago

Answer is correct. In addition you can see this pattern in microsoft documentation and it's known as Human Interaction.  
<https://docs.microsoft.com/en-us/azure/azure-functions/durable/durable-functions-overview?tabs=csharp#human>  
 upvoted 26 times

✉  **nflappo89** Highly Voted  10 months, 2 weeks ago

http trigger timeout is maxed to 230 seconds, so the only available option is to change to a durable one  
 upvoted 7 times

✉  **maukaba** 5 months ago

"Regardless of the function app timeout setting, 230 seconds is the maximum amount of time that an HTTP triggered function can take to respond to a request. This is because of the default idle timeout of Azure Load Balancer. For longer processing times, consider using the Durable Functions async pattern or defer the actual work and return an immediate response." REF: <https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale>

upvoted 2 times

✉️  **MrXBasit** Most Recent 9 months ago

Answer is 100% correct

upvoted 2 times

✉️  **farich** 10 months, 4 weeks ago

I think here the answer is just to increase the functionTimeout.

Durable Functions are used when you want to introduce a state, it is not just "if you have a long running function switch to Durable Functions".

Another argument against Durable Functions is that architectural change seem to be out of scope for this case study.

Another argument is that function can run for up to 30 mins.

upvoted 3 times

✉️  **maukaba** 5 months ago

Maximum timeout you can set is 10 min in consumption plan. Unless you go to premium which is unlimited:

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

upvoted 1 times

## Topic 19 - Testlet 20

## Introductory Info

### Case study -

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### Background -

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.

### Requirements -

#### Policy service -

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.

#### Policies -

#### Log policy -

All Azure App Service Web Apps must write logs to Azure Blob storage. All log files should be saved to a container named logdrop. Logs must remain in the container for 15 days.

#### Authentication events -

Authentication events are used to monitor users signing in and signing out. All authentication events must be processed by Policy service. Sign outs must be processed as quickly as possible.

#### PolicyLib -

You have a shared library named PolicyLib that contains functionality common to all ASP.NET Core web services and applications. The PolicyLib library must:

Exclude non-user actions from Application Insights telemetry.

Provide methods that allow a web service to scale itself.

Ensure that scaling actions do not disrupt application usage.

#### Other -

#### Anomaly detection service -

You have an anomaly detection service that analyzes log information for anomalies. It is implemented as an Azure Machine Learning model. The model is deployed as a web service. If an anomaly is detected, an Azure Function that emails administrators is called by using an HTTP WebHook.

#### Health monitoring -

All web applications and services have health monitoring at the /health service endpoint.

#### Issues -

**Policy loss -**

When you deploy Policy service, policies may not be applied if they were in the process of being applied during the deployment.

**Performance issue -**

When under heavy load, the anomaly detection service undergoes slowdowns and rejects connections.

**Notification latency -**

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

**App code -**

**EventGridController.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.

```

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); message
EG29 var scoreRequest = new job
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 JobGlobalParameters = 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 }

```

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 }
```

### Question

DRAG DROP -

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

- All
- WebHook
- EventHub
- subjectEndsWith
- Mictosoft.Storage
- subjectBeginsWith
- Microsoft.Storage.BlobCreated

#### Answer Area

```
{
 "name": "newlogs",
 "properties": {
 "topic": "/subscriptions/. . ./providers/Microsoft.EventGrid/topics/. . .",
 "destination": {
 "endpointType" : " [code segment] ",
 "filter": {
 "code segment": "/blobServices/default/containers/logdrop/",
 "includedEventTypes": [" [code segment] "] },
 "labels": [],
 "eventDeliverySchema": "EventGridSchema"
```

### Correct Answer:

#### Code segment

- All
- WebHook
- EventHub
- subjectEndsWith
- Mictosoft.Storage
- subjectBeginsWith
- Microsoft.Storage.BlobCreated

#### Answer Area

```
{
 "name": "newlogs",
 "properties": {
 "topic": "/subscriptions/. . ./providers/Microsoft.EventGrid/topics/. . .",
 "destination": {
 "endpointType" : " [WebHook] ",
 "filter": {
 "subjectBeginsWith": "/blobServices/default/containers/logdrop/",
 "includedEventTypes": [" Microsoft.Storage.BlobCreated "] },
 "labels": [],
 "eventDeliverySchema": "EventGridSchema"
```

Box 1:WebHook -

Scenario: If an anomaly is detected, an Azure Function that emails administrators is called by using an HTTP WebHook. endpointType: The type of endpoint for the subscription (webhook/HTTP, Event Hub, or queue).

Box 2: SubjectBeginsWith -

Box 3: Microsoft.Storage.BlobCreated

Scenario: Log Policy -

All Azure App Service Web Apps must write logs to Azure Blob storage. All log files should be saved to a container named logdrop. Logs must remain in the container for 15 days.

Example subscription schema -

```
{
 "properties": {
 "destination": {
```

```
"endpointType": "webhook",
"properties": {
"endpointUrl": "https://example.azurewebsites.net/api/HttpTriggerCSharp1?
code=VXbGWce53I48Mt8wuotr0GPmyJ/nDT4hgdFj9DpBiRt38qqnnm50Fg=="
},
},
"filter": {
"includedEventTypes": ["Microsoft.Storage.BlobCreated", "Microsoft.Storage.BlobDeleted"],
"subjectBeginsWith": "blobServices/default/containers/mycontainer/log",
[1]
"isSubjectCaseSensitive ": "true"
}
}
}

Reference:
https://docs.microsoft.com/en-us/azure/event-grid/subscription-creation-schema
```

✉  **clarionprogrammer**  1 year ago

Looks correct based on the provided reference.

<https://docs.microsoft.com/en-us/azure/event-grid/subscription-creation-schema>

upvoted 14 times

✉  **edengoforit**  3 months ago

What is a webhook and how do you use it?

Webhooks are automated messages sent from apps when something happens. They have a message—or payload—and are sent to a unique URL—essentially the app's phone number or address. Webhooks are almost always faster than polling, and require less work on your end. They're much like SMS notifications.

upvoted 2 times

✉  **gfiorini** 5 months ago

The question is really worded poorly. The subscription is for events that are inserted into the container and a webhook is invoked when a log file is created in the storage container. I assume that the webhook point to a function (?) that analyze the log with a machine learning model and THEN if there is an anomaly call an azure function to notify administrator via mail. Am I missing something ?

upvoted 2 times

✉  **mc0re** 8 months, 1 week ago

> an Azure Function that emails administrators is called by using an HTTP WebHook

The question is about the EventGrid subscription, not how another Function is called. How do they fit together?

upvoted 3 times

✉  **MiraA** 6 months, 2 weeks ago

I am missing "properties" section within "destination" key to define either "endpointUrl" or "resourceId".

<https://docs.microsoft.com/en-us/azure/event-grid/subscription-creation-schema#example-subscription-schema>

<https://docs.microsoft.com/en-us/azure/event-grid/handler-event-hubs#event-hub>

upvoted 1 times

✉  **MiraA** 6 months, 2 weeks ago

Endpoint properties based on the "destination" type:

<https://docs.microsoft.com/en-us/azure/templates/microsoft.eventgrid/eventssubscriptions?tabs=json#endpointproperties-object>

upvoted 1 times

✉  **UnknowMan** 11 months ago

Correct !

upvoted 2 times

✉  **UnknowMan** 11 months, 1 week ago

Correct !

upvoted 2 times

✉  **jokergester** 1 year ago

<https://docs.microsoft.com/en-us/azure/templates/microsoft.eventgrid/eventssubscriptions?tabs=json#template-format>

upvoted 1 times

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EG14 }
EG15
EG16 {
EG17 EnsureLogging(@event["subject"].ToString());
EG18 }
EG19 }
EG20 return null;
EG21 }
EG22 private void EnsureLogging(string resource)
EG23 {
EG24 . .
EG25 }
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EG27 {
EG28 var content = GetLogData(uri); message
EG29 var scoreRequest = new job
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 JobGlobalParameters = new Dictionary<string, string>() { }
EG47 { };
EG48 var result = await (new HttpClient()).PostAsJsonAsync("...", scoreRequest);
EG49 var rawModelResult = await result.Content.ReadAsStringAsync();
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EG51 if (modelResult["notify"].HasValues)
EG52 {
EG53 .
EG54 }
EG55 }
EG56 private (string name, string resourceGroup) ParseResourceId(string resourceId)
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LE10 }
LE11 }
```

### Question

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

### Correct Answer: D

Application Insights provides three additional data types for custom telemetry:

Trace - used either directly, or through an adapter to implement diagnostics logging using an instrumentation framework that is familiar to you, such as Log4Net or System.Diagnostics.

Event - typically used to capture user interaction with your service, to analyze usage patterns.

Metric - used to report periodic scalar measurements.

Scenario:

Policy service must use Application Insights to automatically scale with the number of policy actions that it is performing.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/data-model>

✉  **Kitkit** Highly Voted 1 year, 2 months ago

Answer is correct. User can use metric telemetry to get different application metrics like: requestsPerSecond, requestsInQueue, and use these values to know when to scale

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/data-model-metric-telemetry>

upvoted 18 times

✉  **mlantonis** Highly Voted 10 months, 3 weeks ago

Application Insights provides three additional data types for custom telemetry:

- Trace: used either directly, or through an adapter to implement diagnostics logging using an instrumentation framework that is familiar to you, such as Log4Net or System.Diagnostics.
- Event: typically used to capture user interaction with your service, to analyze usage patterns.
- Metric: used to report periodic scalar measurements.

Scenario:

Policy service must use Application Insights to automatically scale with the number of policy actions that it is performing.

So, it is D.

upvoted 10 times

✉  **mlantonis** 10 months, 3 weeks ago

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/data-model>

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/data-model-metric-telemetry>

upvoted 3 times

✉  **SivajiTheBoss** Most Recent 1 month, 1 week ago

correct answer provided: Application Insights metric

upvoted 1 times

✉  **UnknowMan** 11 months, 1 week ago

## Introductory Info

### Case study -

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### Background -

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.

### Requirements -

#### Policy service -

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.

### Policies -

#### Log policy -

All Azure App Service Web Apps must write logs to Azure Blob storage. All log files should be saved to a container named logdrop. Logs must remain in the container for 15 days.

#### Authentication events -

Authentication events are used to monitor users signing in and signing out. All authentication events must be processed by Policy service. Sign outs must be processed as quickly as possible.

#### PolicyLib -

You have a shared library named PolicyLib that contains functionality common to all ASP.NET Core web services and applications. The PolicyLib library must:

Exclude non-user actions from Application Insights telemetry.

Provide methods that allow a web service to scale itself.

Ensure that scaling actions do not disrupt application usage.

### Other -

#### Anomaly detection service -

You have an anomaly detection service that analyzes log information for anomalies. It is implemented as an Azure Machine Learning model. The model is deployed as a web service. If an anomaly is detected, an Azure Function that emails administrators is called by using an HTTP WebHook.

#### Health monitoring -

All web applications and services have health monitoring at the /health service endpoint.

### Issues -

**Policy loss -**

When you deploy Policy service, policies may not be applied if they were in the process of being applied during the deployment.

**Performance issue -**

When under heavy load, the anomaly detection service undergoes slowdowns and rejects connections.

**Notification latency -**

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

**App code -**

**EventGridController.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.

```

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); message
EG29 var scoreRequest = new job
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 JobGlobalParameters = 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 }

```

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 }
```

#### Question

DRAG DROP -

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);
 }
}
```

Correct Answer:

### Code segments

/health  
/status  
RequestTelemetry  
PageViewTelemetry  
ITelemetryProcessor  
ITelemetryInitializer

### Answer Area

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

Scenario: Exclude non-user actions from Application Insights telemetry.

Box 1: ITelemetryProcessor -

To create a filter, implement ITelemetryProcessor. This technique gives you more direct control over what is included or excluded from the telemetry stream.

Box 2: ITelemetryProcessor -

Box 3: ITelemetryProcessor -

Box 4: RequestTelemetry -

Box 5: /health -

To filter out an item, just terminate the chain.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/api-filtering-sampling>

✉️  surmistry  1 year ago

"ITelemetryProcessor" typo, no "n"

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/api-filtering-sampling#create-a-telemetry-processor-c>

upvoted 9 times

✉️  fr369 3 months, 2 weeks ago

Also the constructor is incorrect. Should be "public Filter(" instead of "public (Filter".

upvoted 4 times

✉️  Mev4953 3 months, 1 week ago

Yes, you are right. It should be;

public Filter (ITelemetryProcessor next)

upvoted 2 times

✉️  Saterial  1 year ago

Looks Good

upvoted 8 times

✉️  SivajiTheBoss  1 month, 2 weeks ago

Answer: ITelemetryProcessor, ITelemetryProcessor, ITelemetryProcessor, RequestTelemetry, /health

Reference: <https://docs.microsoft.com/en-us/azure/azure-monitor/app/api-filtering-sampling>

```
public class SuccessfulDependencyFilter : ITelemetryProcessor
{
```

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Select and Place:

Code segments	Answer Area
Process	public class IncludeEventId : <span style="border: 1px dashed #ccc; padding: 2px;">code segment</span>
Initialize	{ public void <span style="border: 1px dashed #ccc; padding: 2px;">code segment</span> ( <span style="border: 1px dashed #ccc; padding: 2px;">ITelemetry telemetry</span> ) {  <span style="border: 1px dashed #ccc; padding: 2px;">code segment</span> .Properties["EventId"] = <span style="border: 1px dashed #ccc; padding: 2px;">code segment</span> ; } }
telemetry.Sequence	
ITelemetryProcessor	
ITelemetryInitializer	
telemetry.Context	
EventGridController.EventId.Value	
((EventTelemetry)telemetry).Properties["EventId"]	

## Correct Answer:

Code segments	Answer Area
Process	public class IncludeEventId : ITelemetryInitializer
Initialize	{ public void Initialize ( <span style="border: 1px dashed #ccc; padding: 2px;">ITelemetry telemetry</span> ) {  <span style="border: 1px dashed #ccc; padding: 2px;">telemetry.Context</span> .Properties["EventId"] = ((EventTelemetry)telemetry).Properties["EventId"] ; } }
telemetry.Sequence	
ITelemetryProcessor	
ITelemetryInitializer	
telemetry.Context	
EventGridController.EventId.Value	
((EventTelemetry)telemetry).Properties["EventId"]	

Scenario: You have a shared library named PolicyLib that contains functionality common to all ASP.NET Core web services and applications.

The PolicyLib library must:

- Exclude non-user actions from Application Insights telemetry.
- Provide methods that allow a web service to scale itself.
- Ensure that scaling actions do not disrupt application usage.

Box 1: ITelemetryInitializer -

Use telemetry initializers to define global properties that are sent with all telemetry; and to override selected behavior of the standard telemetry modules.

Box 2: Initialize -

Box 3: Telemetry.Context -

Box 4: ((EventTelemetry)telemetry).Properties["EventID"]

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/api-filtering-sampling>

 **azuregenerator** Highly Voted 11 months, 3 weeks ago

\* EventId is held by class EventGridController

\* You can add properties to telemetry by implementing ITelemetryInitializer which defines the Initialize method.

\* ITelemetry.Context.Properties is correct, but shouldnt be used any more as obsolete

## Topic 20 - Testlet 21

```
public void Initialize(Itelemetry telemetry)
{
 telemetry.Context.Properties["EventId"] = EventgridController.EventId.Value;
}
```

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/api-custom-events-metrics#sampling-filtering-and-processing-telemetry>  
[https://docs.microsoft.com/en-us/dotnet/api/microsoft.applicationinsights.datacontracts.telemetrycontext.properties?view=azure-dotnet#Microsoft\\_ApplicationInsights\\_DataContracts\\_TelemetryContext\\_Properties](https://docs.microsoft.com/en-us/dotnet/api/microsoft.applicationinsights.datacontracts.telemetrycontext.properties?view=azure-dotnet#Microsoft_ApplicationInsights_DataContracts_TelemetryContext_Properties)

upvoted 24 times

✉  **AzureDJ** (Most Recent) 1 month, 2 weeks ago

The given answer is correct. Box 4 is inside a function which takes in a parameter called: telemetry. The telemetry parameter, serves a purpose: to be used in the function in: ((EventTelemetry)telemetry).Properties["EventID"].

upvoted 1 times

✉  **AzureDJ** 1 month, 2 weeks ago

The given answer is correct, except Box 4 should be: EventGridController.EventId.Value

upvoted 1 times

✉  **UnknowMan** 11 months, 1 week ago

Not correct.

=> Use the EventId static prop of EventgridController

upvoted 4 times

✉  **Frakandel** 12 months ago

How static is the content of Event Grid Event ID... I agree with atomicicebreaker, bt doubt between "IProcess, Process, Context & EventHub" and "IInitialise, Initialise, Context & EventHub"

upvoted 1 times

✉  **Kuna\_Lambo** 1 year, 1 month ago

Box #4 is ok?

upvoted 4 times

✉  **rdemontis** 1 year, 1 month ago

No, in my opinion it has no sense assign event id to telemetry object from the same object itself. you should take in from other objects, and in this case the only option possible seems to be EventGridController class.

upvoted 15 times

✉  **MrZoom** 1 year ago

Agreed. It states that "The application must include the Event Grid Event ID field in all Application Insights telemetry.".

upvoted 3 times

✉  **atomicicebreaker** 1 year ago

Yup, and the property is indeed set in a controller

upvoted 3 times

✉  **MiraA** 6 months, 2 weeks ago

Yes, it is set here.

Controller accepts JSON with the set of the events. The events are processed using foreach() and this is the place where EventGridController.EventId is set.

The trick is the EventId is defined as:

public static AsyncLocal<string> EventId = ...

and AsyncLocal "represents ambient data that is local to a given asynchronous control flow, such as an asynchronous method.".

<https://docs.microsoft.com/en-us/dotnet/api/system.threading.asynclocal-1?view=net-5.0>

upvoted 1 times

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### Background -

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.

### Receipt processing -

Employees may upload receipts in two ways:

Uploading using an Azure Files mounted folder

Uploading using the web application

### Data Storage -

Receipt and employee information is stored in an Azure SQL database.

### Documentation -

Employees are provided with a getting started document when they first use the solution. The documentation includes details on supported operating systems for

Azure File upload, and instructions on how to configure the mounted folder.

### Solution details -

#### Users table -

Column	Description
UserId	unique identifier for an employee
ExpenseAccount	employees expense account number in the format 1234-123-1234
AllowedAmount	limit of allowed expenses before approval is needed
SupervisorId	unique identifier for employee's supervisor
SecurityPin	value used to validate user identity

### Web Application -

You enable MSI for the Web App and configure the Web App to use the security principal name WebAppIdentity.

### Processing -

Processing is performed by an Azure Function that uses version 2 of the Azure Function runtime. Once processing is completed, results are stored in Azure Blob

Storage and an Azure SQL database. Then, an email summary is sent to the user with a link to the processing report. The link to the report must remain valid if the email is forwarded to another user.

#### Logging -

Azure Application Insights is used for telemetry and logging in both the processor and the web application. The processor also has TraceWriter logging enabled.

Application Insights must always contain all log messages.

#### Requirements -

##### Receipt processing -

Concurrent processing of a receipt must be prevented.

##### Disaster recovery -

Regional outage must not impact application availability. All DR operations must not be dependent on application running and must ensure that data in the DR region is up to date.

#### Security -

User's SecurityPin must be stored in such a way that access to the database does not allow the viewing of SecurityPins. The web application is the only system that should have access to SecurityPins.

All certificates and secrets used to secure data must be stored in Azure Key Vault.

You must adhere to the principle of least privilege and provide privileges which are essential to perform the intended function.

All access to Azure Storage and Azure SQL database must use the application's Managed Service Identity (MSI).

Receipt data must always be encrypted at rest.

All data must be protected in transit.

User's expense account number must be visible only to logged in users. All other views of the expense account number should include only the last segment, with the remaining parts obscured.

In the case of a security breach, access to all summary reports must be revoked without impacting other parts of the system.

#### Issues -

##### Upload format issue -

Employees occasionally report an issue with uploading a receipt using the web application. They report that when they upload a receipt using the Azure File

Share, the receipt does not appear in their profile. When this occurs, they delete the file in the file share and use the web application, which returns a 500 Internal

Server error page.

##### Capacity issue -

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

##### 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.

#### Application code -

##### 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 GetDRBBlob(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 }

```

Database.cs -

```

DB01 public class Database
DB02 {
DB03 private string ConnectionString =
DB04
DB05 public async Task<object> LoadUserDetails(string userId)
DB06 {
DB07
DB08 return await policy.ExecuteAsync(async () =>
DB09 {
DB10 using (var connection = new SqlConnection(ConnectionString))
DB11 {
DB12 await connection.OpenAsync();
DB13 using (var command = new SqlCommand("...", connection))
DB14 using (var reader = command.ExecuteReader())
DB15 {
DB16 . . .
DB17 }
DB18 }
DB19 });
DB20 }
DB21 }

```

ReceiptUploader.cs -

```
RU01 public class ReceiptUploader
RU02 {
RU03 public async Task UploadFile(string file, byte[] binary)
RU04 {
RU05 var httpClient = new HttpClient();
RU06 var response = await httpClient.PutAsync("...", new ByteArrayContent(binary));
RU07 while (ShouldRetry(response))
RU08 {
RU09 response = await httpClient.PutAsync("...", new ByteArrayContent(binary));
RU10 }
RU11 }
RU12 private bool ShouldRetry(HttpStatusCode response)
RU13 {
RU14 }
RU15 }
RU16 }
```

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
```

### Question

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

### Correct Answer: B

You can create a snapshot of a blob. A snapshot is a read-only version of a blob that's taken at a point in time. Once a snapshot has been created, it can be read, copied, or deleted, but not modified. Snapshots provide a way to back up a blob as it appears at a moment in time.

Scenario: Processing is performed by an Azure Function that uses version 2 of the Azure Function runtime. Once processing is completed, results are stored in

Azure Blob Storage and an Azure SQL database. Then, an email summary is sent to the user with a link to the processing report. The link to the report must remain valid if the email is forwarded to another user.

Reference:

<https://docs.microsoft.com/en-us/rest/api/storageservices/creating-a-snapshot-of-a-blob>

 **Arul1705**  1 year, 1 month ago

Answer is D: Use blob leases to prevent concurrency problems

upvoted 45 times

✉ **Shion2009** 1 year, 1 month ago

I guess this could be a problem with the "Processing" scenario:

"Then, an email summary is sent to the user with a link to the processing report. The link to the report must remain valid if the email is forwarded to another user."

It seems a lease will only be kept alive for 60 seconds, so it shouldn't be an option.

upvoted 2 times

✉ **rdemontis** 1 year, 1 month ago

Why should you avoid to use blob lease to guarantee access the blob file from the report link? Generally to give access to a blob from http you use SAS. In the SAS you can specify an expiration datetime according to your need. Blob lease is instead a way just to prevent concurrent access and puts a lock on blob only for write and delete operations. Any other can still view the content but can't modify or delete it. So in my opinion the correct answer is Blob lease. In addition I have found the same question on a udemy course test and the answer is just "Blob Lease".

<https://docs.microsoft.com/en-us/rest/api/storageservices/lease-blob>

upvoted 3 times

✉ **MrZoom** 1 year ago

Agreed. The question is about the receipt processing. The case states "Concurrent processing of a receipt must be prevented", which can be done with snapshots and leases are made for this specifically. So answer should be D.

upvoted 4 times

✉ **Bengkel** 1 year, 1 month ago

A lease does not lock a file for read operations, just for write and delete operations. The lock duration can be 15 to 60 seconds, or can be infinite. So I guess the effect is the same?

<https://docs.microsoft.com/en-us/rest/api/storageservices/lease-blob>

upvoted 2 times

✉ **Javiergz** Highly Voted 1 year, 1 month ago

I think it is lease (see this link)

<https://docs.microsoft.com/en-us/azure/storage/blobs/concurrency-manage?tabs=dotnet>

upvoted 10 times

✉ **SivajiTheBoss** Most Recent 1 month, 2 weeks ago

Answer: D. Use blob leases to prevent concurrency problems

Reason: To lock a blob for exclusive use, you can acquire a lease on it. When you acquire the lease, you specify the duration of the lease. A finite lease may be valid from between 15 to 60 seconds.

Reference: <https://docs.microsoft.com/en-us/azure/storage/blobs/concurrency-manage?tabs=dotnet#pessimistic-concurrency-for-blobs>

upvoted 1 times

✉ **massnonn** 2 months ago

Selected Answer: D

Answer is D

upvoted 2 times

✉ **vilainchien** 2 months ago

Selected Answer: D

Use blob leases to prevent concurrency problems

upvoted 2 times

✉ **leonidn** 2 months, 3 weeks ago

Selected Answer: D

For processing purposes "lease" is the simplest option.

upvoted 2 times

✉ **PhilLI** 3 months, 1 week ago

It's quite vague. Receipts are uploaded to Azure Files. Some people place a file, wait for a while, then delete it, and upload it via the webinterface. Should we cater for this situation as well where duplicates may be introduced?

File will be copied to blob by the code, but it is not clear how long it will stay there, and how to prevent rereading the same file. I would either use blob storage events, or timestamps to filter the files to be processed. If there is a risk to read the same file twice (shortly after upload when filtering on timestamp) then a lease seems ok: if you can't acquire the lease then another instance of your code is already working on it.

upvoted 1 times

✉ **PhilLI** 3 months, 1 week ago

I guess the concurrency is caused by the CRON job every 5 minutes. If processing of the available files takes longer than 5 minutes, concurrency issues may be caused.

upvoted 1 times

✉ **RajMasilamani** 7 months, 1 week ago

<https://docs.microsoft.com/en-us/rest/api/storageservices/lease-blob>

The answer would be Blob lease.

Release, to free the lease if it is no longer needed so that another client may immediately acquire a lease against the blob.

upvoted 1 times

✉  **RajMasilamani** 7 months ago

Answer is D

upvoted 1 times

✉  **rhr** 1 year ago

Given answer is correct

upvoted 2 times

✉  **azurelearner666** 10 months, 1 week ago

No, it's not. It's D, use blob leases.

upvoted 2 times

✉  **inputoutput** 1 year, 1 month ago

Can't blob leases be used to prevent concurrency issues?

upvoted 7 times

## Introductory Info

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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.

### Receipt processing -

Employees may upload receipts in two ways:

Uploading using an Azure Files mounted folder

Uploading using the web application

### Data Storage -

Receipt and employee information is stored in an Azure SQL database.

### Documentation -

Employees are provided with a getting started document when they first use the solution. The documentation includes details on supported operating systems for

Azure File upload, and instructions on how to configure the mounted folder.

### Solution details -

#### Users table -

Column	Description
UserId	unique identifier for an employee
ExpenseAccount	employees expense account number in the format 1234-123-1234
AllowedAmount	limit of allowed expenses before approval is needed
SupervisorId	unique identifier for employee's supervisor
SecurityPin	value used to validate user identity

### Web Application -

You enable MSI for the Web App and configure the Web App to use the security principal name WebAppIdentity.

### Processing -

Processing is performed by an Azure Function that uses version 2 of the Azure Function runtime. Once processing is completed, results are stored in Azure Blob

Storage and an Azure SQL database. Then, an email summary is sent to the user with a link to the processing report. The link to the report must remain valid if the email is forwarded to another user.

#### Logging -

Azure Application Insights is used for telemetry and logging in both the processor and the web application. The processor also has TraceWriter logging enabled.

Application Insights must always contain all log messages.

#### Requirements -

##### Receipt processing -

Concurrent processing of a receipt must be prevented.

##### Disaster recovery -

Regional outage must not impact application availability. All DR operations must not be dependent on application running and must ensure that data in the DR region is up to date.

#### Security -

User's SecurityPin must be stored in such a way that access to the database does not allow the viewing of SecurityPins. The web application is the only system that should have access to SecurityPins.

All certificates and secrets used to secure data must be stored in Azure Key Vault.

You must adhere to the principle of least privilege and provide privileges which are essential to perform the intended function.

All access to Azure Storage and Azure SQL database must use the application's Managed Service Identity (MSI).

Receipt data must always be encrypted at rest.

All data must be protected in transit.

User's expense account number must be visible only to logged in users. All other views of the expense account number should include only the last segment, with the remaining parts obscured.

In the case of a security breach, access to all summary reports must be revoked without impacting other parts of the system.

#### Issues -

##### Upload format issue -

Employees occasionally report an issue with uploading a receipt using the web application. They report that when they upload a receipt using the Azure File Share, the receipt does not appear in their profile. When this occurs, they delete the file in the file share and use the web application, which returns a 500 Internal Server error page.

##### Capacity issue -

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

##### 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.

#### Application code -

##### 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 GetDRBBlob(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 }

```

Database.cs -

```

DB01 public class Database
DB02 {
DB03 private string ConnectionString =
DB04
DB05 public async Task<object> LoadUserDetails(string userId)
DB06 {
DB07
DB08 return await policy.ExecuteAsync(async () =>
DB09 {
DB10 using (var connection = new SqlConnection(ConnectionString))
DB11 {
DB12 await connection.OpenAsync();
DB13 using (var command = new SqlCommand("...", connection))
DB14 using (var reader = command.ExecuteReader())
DB15 {
DB16 . . .
DB17 }
DB18 }
DB19 });
DB20 }
DB21 }

```

ReceiptUploader.cs -

```
RU01 public class ReceiptUploader
RU02 {
RU03 public async Task UploadFile(string file, byte[] binary)
RU04 {
RU05 var httpClient = new HttpClient();
RU06 var response = await httpClient.PutAsync("...", new ByteArrayContent(binary));
RU07 while (ShouldRetry(response))
RU08 {
RU09 response = await httpClient.PutAsync("...", new ByteArrayContent(binary));
RU10 }
RU11 }
RU12 private bool ShouldRetry(HttpStatusCode response)
RU13 {
RU14
RU15 }
RU16 }
```

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
```

### Question

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

### Correct Answer: D

If you want to read the files in parallel, you cannot use forEach. Each of the async callback function calls does return a promise. You can await the array of promises that you'll get with Promise.all.

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

```

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 }
```

Reference:

<https://stackoverflow.com/questions/37576685/using-async-await-with-a-foreach-loop>

✉  **trance13** Highly Voted 1 year ago

Receipts are uploaded to the File Storage (not Blob Storage) which does not support triggers. Concurrent processing of a (SINGLE!) receipt must be prevented - so parallel processing is OK. So answer D.

upvoted 22 times

✉  **ZodiaC** 9 months ago

1000% D !!!!!!! CORRECT!

upvoted 2 times

✉  **PaulMD** Highly Voted 12 months ago

Cleared AZ-204 today, the question appeared, the option "D" was not there, but a "replace the solution with durable functions". I went for that.

upvoted 13 times

✉  **SnakePlissken** 11 months, 2 weeks ago

Durable Functions is just an extension of Azure Functions that lets you write stateful functions in a serverless compute environment. It's not the solution for this problem. It proves that another answer is correct. I think that answer B, scaling, is the best option.

upvoted 5 times

✉  **leonidn** 2 months, 3 weeks ago

That makes sense. Running parallel tasks is not good practice for functions. Here we cannot predict the degree of parallelism. But using durable function is the best choice.

upvoted 1 times

✉  **edengoforit** 3 months ago

If that is the case, the answer should be C?

upvoted 1 times

✉  **ning** 8 months ago

Correct, if one instance of time trigger function is running, then there will not be a second instance starts, even when 5 minutes pass ... For a durable function, it can make sure immediate returns to allow second instance to start ...

upvoted 3 times

✉  **ReniRechner** Most Recent 1 month, 2 weeks ago

**Selected Answer: D**

A. Convert the trigger on the Azure Function to an Azure Blob storage trigger

=> won't help because we have Azure Fileshare

B. Ensure that the consumption plan is configured correctly to allow scaling

=> Trigger is time based. Multiple instances scanning the same folder => bad idea; also clearly stated in the requirements that parallel processing is not allowed

C. Move the Azure Function to a dedicated App Service Plan

=> the Trigger every 5 seconds should keep the function "alive". The function work is also not CPU bound so I cannot see a real benefit for ASP in this scenario

D. Update the loop starting on line PC09 to process items in parallel

=> might help.

D2 (alternative to D as by PaulMD) replace the solution with durable functions

=> looks even better than D

If D2 is an option I'd go for that.

Maybe they realized that the current "D" is not a really good solution and D2 is also way more "azure"

Otherwise D.

upvoted 2 times

✉  **kozchris** 1 month, 3 weeks ago

The answer is C since this is a cold start problem.

"When using Azure Functions in the dedicated plan, the Functions host is always running, which means that cold start isn't really an issue."

<https://azure.microsoft.com/en-us/blog/understanding-serverless-cold-start/>

upvoted 1 times

✉  **eMax** 3 months ago

The answer reference is about JavaScript, not C# :))))

upvoted 1 times

✉ **asdasdasg2** 3 months, 2 weeks ago

D is not correct - while this would speed up performance, the prompt states that users report high delay during BUSY PERIODS. Clearly, the fact that it does not upload files in parallel would not solve that.

The problem must be that the consumption plan is not scaling the function app correctly to handle the load. C could theoretically help, but B is better.

Correct answer: B

upvoted 1 times

✉ **ning** 8 months ago

Only thing possible is D ...

File mount, is not blob storage, so cannot be trigger ...

This is a time trigger, so scale up will not help, only one instance will run ...

Only leave us with D

upvoted 4 times

✉ **Onuoa92** 11 months ago

Nobody is given us a correct answer

upvoted 2 times

✉ **ZodiaC** 9 months ago

D is 1000% correct

upvoted 1 times

✉ **Molte** 3 months ago

your 1000% comments under every single question does not help at all!

upvoted 8 times

✉ **azuregenerator** 11 months, 3 weeks ago

I vote for B. Reasoning:

A. Convert the trigger on the Azure Function to an Azure Blob storage trigger

> We are not dealing with a defect, but a performance degradation, so this would not help.

B. Ensure that the consumption plan is configured correctly to allow scaling

> It seems that "Maximum Scale Out Limit" is set to a value not appropriate for the usage pattern

C. Move the Azure Function to a dedicated App Service Plan

> Wont help.

D. Update the loop starting on line PC09 to process items in parallel

> I don't think it is a good idea to call an async method from within a foreach loop, also not from within Parallel.ForEach.

<https://stackoverflow.com/questions/23137393/parallel-foreach-and-async-await>

upvoted 5 times

✉ **anirbanzeus** 11 months ago

well the function is started by a timer, meaning that the "event" that should trigger the scaling won't increase. Hence I do not think B is the correct choice (Ref: <https://docs.microsoft.com/en-us/azure/azure-functions/event-driven-scaling>).

Considering that we are uploading receipts to a Azure file storage A is also incorrect.

In the given scenario D is the one that makes the most sense.

upvoted 2 times

✉ **VR** 1 year ago

So what is the answer?

upvoted 4 times

✉ **kwaazaar** 1 year ago

D is the right answer, since the loop picks up all files in the container and scaling would make the files being processed more than once, potentially Change feed is not supported for file shares, so D is the only remaining option (though ugly as hell).

upvoted 2 times

✉ **jokergester** 1 year ago

A and C - converting to blob trigger with dedicated plan not consumption to avoid cold start and high availability of the function

D - is not enough since the trigger is scheduled to every 5 mins - so users will still need to wait even if it is already have been processed.

upvoted 1 times

✉ **nicolaus** 11 months, 1 week ago

Answer is C. A is not possible as reports can also be uploaded using Azure Files. Consumption plan has a cold start (up to 10 minutes), so moving to dedicated plan will help

upvoted 5 times

✉ **PhillI** 3 months, 1 week ago

2 questions about C:

Will a cold start be an issue at all when it is triggered by a time trigger?

Could it be a dedicated App Service plan has stronger CPU allowing to process the files faster?

Besides that: if parallel processing is an option, I would go for that specially with the autoscaling options of a consumption plan (but where time trigger doesn't help?)

upvoted 1 times

✉️  **aperez1979** 1 year ago

I think is better option change the trigger. A

upvoted 4 times

✉️  **kwaazaar** 1 year ago

Only blobs support change feed, not fileshare, which is used here.

<https://docs.microsoft.com/nl-nl/azure/storage/blobs/storage-blob-change-feed?tabs=azure-portal>

upvoted 2 times

✉️  **Beitran** 1 year ago

Indeed: "Concurrent processing of a receipt must be prevented."

upvoted 3 times

✉️  **trance13** 1 year ago

No one wants to process a single receipt concurrently, each distinct file will be processed in parallel.

upvoted 5 times

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You enable MSI for the Web App and configure the Web App to use the security principal name WebAppIdentity.

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In the case of a security breach, access to all summary reports must be revoked without impacting other parts of the system.

#### Issues -

##### Upload format issue -

Employees occasionally report an issue with uploading a receipt using the web application. They report that when they upload a receipt using the Azure File

Share, the receipt does not appear in their profile. When this occurs, they delete the file in the file share and use the web application, which returns a 500 Internal

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

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PC18 }
PC19 private static CloudBlockBlob GetDRBBlob(CloudBlockBlob sourceBlob)
PC20 {
PC21 . . .
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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();
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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 }

```

Database.cs -

```

DB01 public class Database
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DB03 private string ConnectionString =
DB04
DB05 public async Task<object> LoadUserDetails(string userId)
DB06 {
DB07
DB08 return await policy.ExecuteAsync(async () =>
DB09 {
DB10 using (var connection = new SqlConnection(ConnectionString))
DB11 {
DB12 await connection.OpenAsync();
DB13 using (var command = new SqlCommand("...", connection))
DB14 using (var reader = command.ExecuteReader())
DB15 {
DB16 . . .
DB17 }
DB18 }
DB19 });
DB20 }
DB21 }

```

ReceiptUploader.cs -

```
RU01 public class ReceiptUploader
RU02 {
RU03 public async Task UploadFile(string file, byte[] binary)
RU04 {
RU05 var httpClient = new HttpClient();
RU06 var response = await httpClient.PutAsync("...", new ByteArrayContent(binary));
RU07 while (ShouldRetry(response))
RU08 {
RU09 response = await httpClient.PutAsync("...", new ByteArrayContent(binary));
RU10 }
RU11 }
RU12 private bool ShouldRetry(HttpStatusCode response)
RU13 {
RU14 }
RU15 }
RU16 }
```

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
```

### Question

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

### Correct Answer: C

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

Sampling is a feature in Azure Application Insights. It is the recommended way to reduce telemetry traffic and storage, while preserving a statistically correct analysis of application data. The filter selects items that are related, so that you can navigate between items when you are doing diagnostic investigations. When metric counts are presented to you in the portal, they are renormalized to take account of the sampling, to minimize any effect on the statistics.

Sampling reduces traffic and data costs, and helps you avoid throttling.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/sampling>

I had the exam last Friday and I notice that they change one sentence in case study from:

Application Insights must always contain all log messages.

to:

Application Insights currently contain all log messages.

So I chosen C. Implement Application Insights Sampling.

upvoted 19 times

✉  **kozchris** Most Recent ⓘ 1 month, 4 weeks ago

The answer is "B".

From the problem description:

"Developers report that the number of log messages in the trace output for the processor is too high"

The keywords are "too high".

The answer is to change the minimum logging level.

upvoted 2 times

✉  **chingdm** 1 month, 3 weeks ago

agreed, it also said "trace output for the processor is too high, resulting in lost log messages" so it seems that sampling is already enabled and the logs are too many so resulting in lost messages since sampling only takes only portion of all the logs, so it helps if changing the minimum log level to reduce the logs or disable sampling but this is not in the answer selection.

upvoted 1 times

✉  **chingdm** 1 month, 3 weeks ago

also this requirement "Application Insights must always contain all log messages." will eliminate enable sampling answer because app insights will filter some logs during sampling

upvoted 1 times

✉  **mandusya** 4 months ago

We had similar a few weeks ago

sampling worked fine

upvoted 1 times

✉  **phvogel** 5 months, 3 weeks ago

From <https://docs.microsoft.com/en-us/azure/azure-monitor/app/api-filtering-sampling>

"Sampling reduces the volume of telemetry without affecting your statistics."

"Filtering with telemetry processors lets you filter out telemetry in the SDK before it's sent to the server" (and the other options would also eliminate the log traces)

So only sampling will meet the requirement of containing all log messages.

upvoted 2 times

✉  **ning** 8 months ago

I am thinking of A to exclude TraceWrite logging ...

Since all log messages are required, so you cannot sampling or change log levels, those are leading to lose log entries ...

LogCategoryFilter I cannot find anything with that from documentation ...

upvoted 3 times

✉  **azuregenerator** 11 months, 3 weeks ago

A. Create an Application Insights Telemetry Filter

> A filter can be created by either implementing `ITelemetryProcessor` or by implementing `ITelemetryInitializer`. However MS recommends to use sampling

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/api-filtering-sampling#filtering>

B. Change the minimum log level in the host.json file for the function

> Can be ruled out because req. says app insights must always contain all log messages

C. Implement Application Insights Sampling

> Is the recommended way to reduce telemetry traffic, data costs and storage costs

> <https://docs.microsoft.com/en-us/azure/azure-monitor/app/sampling>

> <https://blog.ramondeklein.nl/2017/05/05/filtering-application-insights/>

D. Set a LogCategoryFilter during startup

> No idea what that is, but feels like pointint in the same direction as the B does

upvoted 4 times

✉  **BrettusMaximus** 11 months, 3 weeks ago

It can't be C. - AI Sampling.

Rule 1: Application Insights must always contain all log messages

If you read the Sampling doco carefully. It does filter logs and does not record all the transaction records (but yes it keeps a count for statistics onl (See adaptive and fixed sampling)) <https://docs.microsoft.com/en-us/azure/azure-monitor/app/sampling>

Fact 2: The processor also has TraceWriter logging enabled.

TraceWriter logs are generally used for debugging and are not "Official" transactional logs. <https://stackify.com/logging-azure-functions/>

Options A, B or D are candidates to filter these logs.

Option B and D would stop the actual logs being generated but may also remove some transactional logs. It would also not let the developers do their debugging (the purpose of TraceWriter in the first place).

Thus this leaves the only option A.

A. Create an Application Insights Telemetry Filter (to filter the trace writer logging)

upvoted 2 times

✉️ **aperez1979** 1 year ago

I think it could be the b

upvoted 1 times

✉️ **MrZoom** 1 year ago

The case states "The processor also has TraceWriter logging enabled.

Application Insights must always contain all log messages."

For this reason B isn't an option, and neither is A or D. These would all change what log messages are sent to AI, which isn't according to reqs. So this leaves C. Sampling just groups messages together with a count, causing less traffic to AI but the same results.

upvoted 9 times

✉️ **clarionprogrammer** 1 year ago

B is correct.

Because it says "Application Insights must always contain all log messages.", sampling is not a valid answer. In fact, sampling could be the very reason that log messages are lost.

See: <https://docs.microsoft.com/en-us/azure/azure-monitor/app/asp-net-trace-logs>

"I don't see some log entries that I expected".

upvoted 2 times

✉️ **kwaazaar** 1 year ago

Sampling is enabled by default and can be turned off (althoiugh AI ingress may still drop entries when overloaded). For metrics sampling does exactly as MrZoom describes.

As I see it, irrelevant logs must be prevented. My first step would be to adjust the minimum loglevel,if possible. A telemetry processor to filter telemetry/logs technically could work to, but is intended for filtering specific entries.

upvoted 1 times

## Topic 21 - Testlet 22

## Introductory Info

### Case study -

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### 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.

### Requirements. Data -

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.

### Requirements. Security -

You have the following security requirements:

Users of Coho Winery applications must be able to provide access to documents, resources, and applications to external partners.

External partners must use their own credentials and authenticate with their organization's identity management solution.

External partner logins must be audited monthly for application use by a user account administrator to maintain company compliance.

Storage of e-commerce application settings must be maintained in Azure Key Vault.

E-commerce application sign-ins must be secured by using Azure App Service authentication and Azure Active Directory (AAD).

Conditional access policies must be applied at the application level to protect company content.

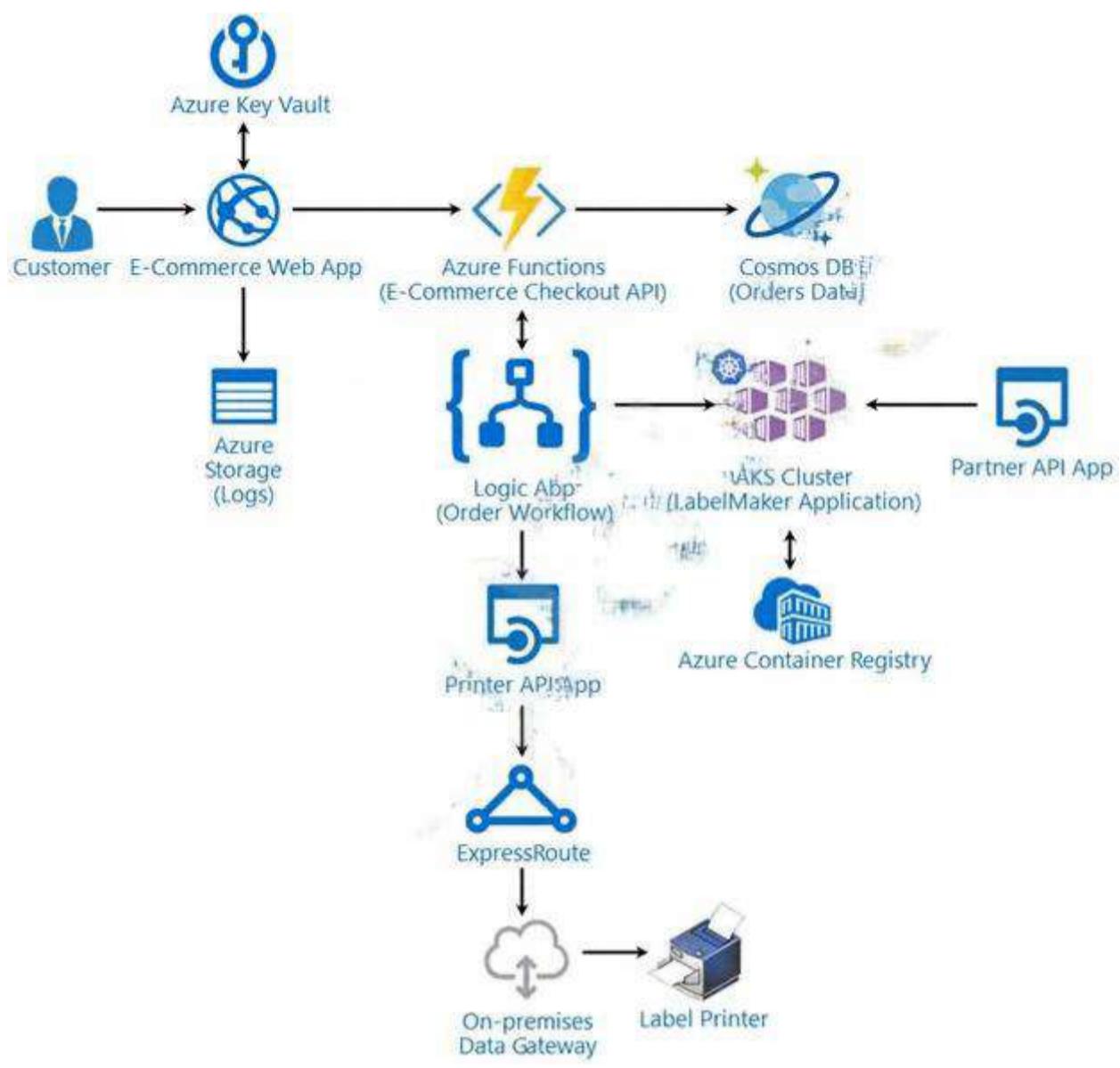
The LabelMaker application must be secured by using an AAD account that has full access to all namespaces of the Azure Kubernetes Service (AKS) cluster.

### Requirements. LabelMaker app -

Azure Monitor Container Health must be used to monitor the performance of workloads that are deployed to Kubernetes environments and hosted on Azure Kubernetes Service (AKS).

You must use Azure Container Registry to publish images that support the AKS deployment.

### Architecture -



#### Issues -

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.

Order.json -

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

```
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].
```

#### Question

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.

#### Correct Answer: CD

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

Check runs history: Each time that the trigger fires for an item or event, the Logic Apps engine creates and runs a separate workflow instance for each item or event. If a run fails, follow these steps to review what happened during that run, including the status for each step in the workflow plus the inputs and outputs for each step.

Check the workflow's run status by checking the runs history. To view more information about a failed run, including all the steps in that run in their status, select the failed run.

Example:

## Runs history

DataOperationsLogicApp

Refresh

All

▼

Start time earlier than

▼

Pick a date

▼

Pick a time

Search to filter items by identifier

Status	Start time	Identifi...	Duration	Static Results
Failed	9/23/2019, 7:08 PM	085863...	640 Milliseconds	
Failed	9/23/2019, 7:08 PM	085863...	1.55 Seconds	

Check the trigger's status by checking the trigger history

To view more information about the trigger attempt, select that trigger event, for example:

## Recurrence

DataOperationsLogicApp

All

▼

▼

Pick a date

▼

Pick a time

Recurrence

X

Status	Start time	Fired
Skipped	11/4/2019, 9:07 AM	
Failed	11/4/2019, 9:00 AM	
Succeeded	11/3/2019, 6:23 PM	Fired
Succeeded	11/3/2019, 6:23 PM	Fired

Reference:

<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-diagnosing-failures>

✉  **Zack** 9 months, 3 weeks ago

Answer seems correct

upvoted 4 times

✉  **mkqwert** 5 months ago

very convenience answer

upvoted 1 times

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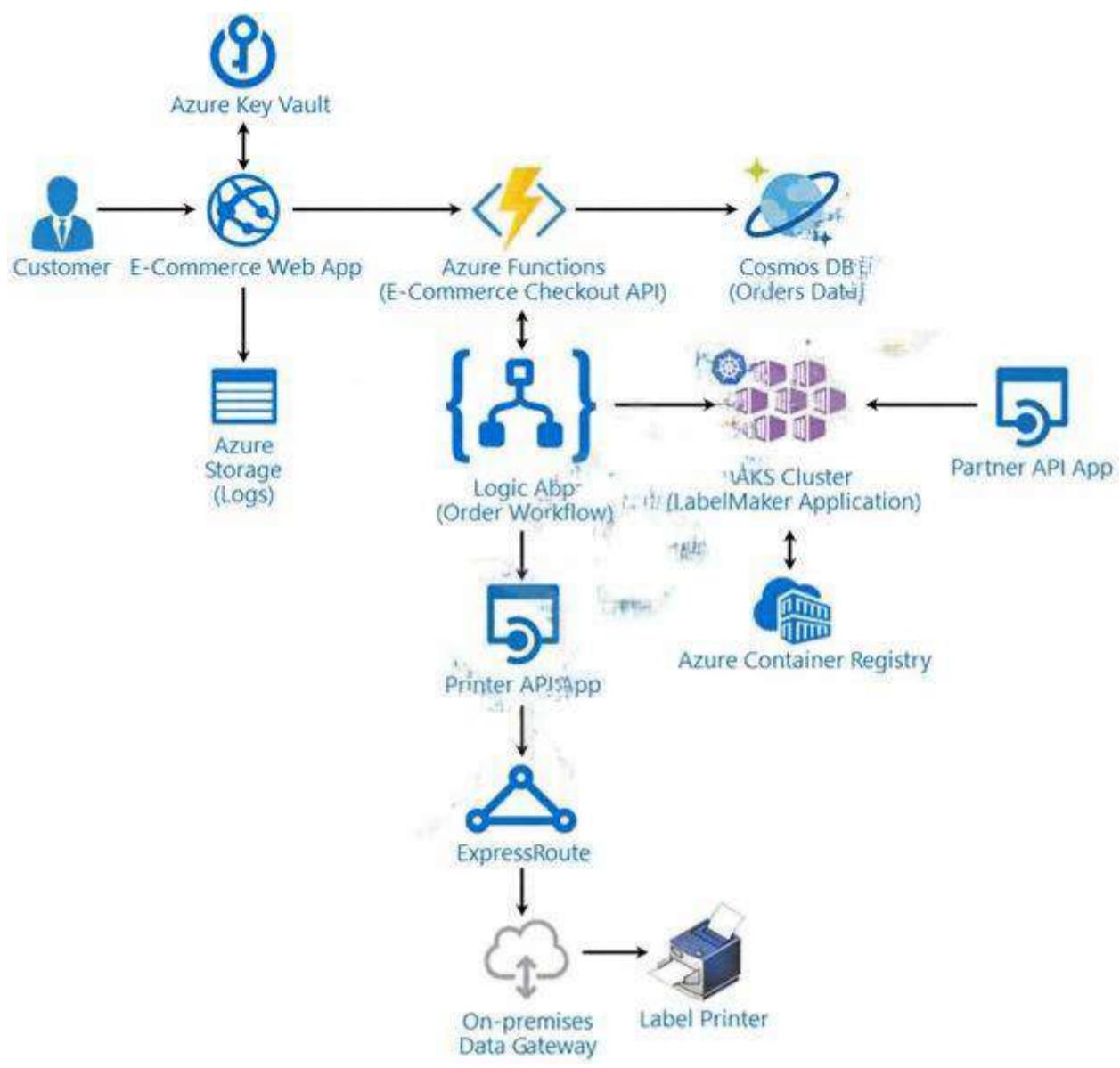
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#### Issues -

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

#### Order.json -

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

### 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].
```

#### Question

HOTSPOT -

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 |

 }
 }
}
```

Correct Answer:

## Answer Area

```
"print_label": {
 "type": "Http",
 "inputs": {
 "method": "POST",
 "uri": "https://www.cohowinery.com/printer/printlabel",
 "retryPolicy": {
 "type": "fixed",
 "interval": "PT60S",
 "count": 5
 }
 }
}
```

The image shows three dropdown menus from a configuration interface. The first menu, under 'retryPolicy' for 'type', has options: 'default', 'none', 'fixed' (which is selected and highlighted in green), and 'exponential'. The second menu, under 'interval', has options: 'PT10S', 'PT30S', 'PT60S' (selected and highlighted in green), and 'PT1D'. The third menu, under 'count', has options: '5' (selected and highlighted in green), '10', and '60'.

Box 1: fixed -

The 'Default' policy does 4 exponential retries and from my experience the interval times are often too short in situations.

Box 2: PT60S -

We could set a fixed interval, e.g. 5 retries every 60 seconds (PT60S).

PT60S is 60 seconds.

Scenario: 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.

Box 3: 5 -

Reference:

<https://michalsacewicz.com/error-handling-in-power-automate/>

✉  **jay158** Highly Voted 9 months, 2 weeks ago

1. Fixed
2. PT10S
3. 5

PT10 means retry after 10sec ,  
<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-exception-handling>

upvoted 27 times

✉  **vilainchien** 2 months ago

Hi, I don't understand why PT10S is the correct answer. The function could fail immediately and the printer only accept 5 requests in 1 minute. If you set 5 retries with an interval of 10 seconds, you will have 6 requests in 1 minute?

upvoted 1 times

✉  **chingdm** 1 month, 3 weeks ago

you have to also consider the time of executing the printer request, say printer timed-out in 0 seconds and first attempt issued, say the printer timed-out in 10 seconds, then request would wait 10 seconds before trying again, so the second retry attempt would be in the 20th seconds, so it will be less than 5 attempts in 1 minute.

upvoted 1 times

 **ensa** 6 months, 1 week ago

Currently it is 10, because fail after 10 min. we should increase the time interval and I am not sure to choose PT30 or PT60  
upvoted 1 times

 **ensa** 6 months, 1 week ago

Sorry, Jay158 is right. There is requirement in the question  
upvoted 1 times

 **Branners** 9 months ago

Agreed. PT10S means a 10 second delay between each try defined as the retry value.  
upvoted 3 times

 **koreshulya** Highly Voted  9 months, 3 weeks ago

I guess interval should be PT10S.  
"The label printer must only receive up to 5 attempts within one minute".  
upvoted 7 times

 **vokep77043** 8 months ago

One minute is 60 seconds - so it won't be 5 attempts... lol  
upvoted 1 times

 **lexowe9241** 7 months, 1 week ago

<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-exception-handling#fixed-interval> "This retry policy attempts to get the latest news two more times after the first failed request with a 30-second delay between each attempt:"  
"retryPolicy": {  
  "type": "fixed",  
  "interval": "PT30S",  
  "count": 2  
}

Back to our case: PT10S and 5 attempts means : 1st attempt plus 5 more. That is 60seconds in total.  
upvoted 5 times

 **SivajiTheBoss** Most Recent  1 month, 1 week ago

Correct Answer:  
1. Fixed  
2. PT10S  
3. 5

<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-exception-handling>  
upvoted 1 times

 **leonidn** 2 months, 3 weeks ago

Fixed + PT10S, 5.  
None and default do not require "interval" parameter. Exponential requires additional parameters. "Fixed" is the only option that fits the schema. PT10S means that after the timeout occurs, the logic app waits 10 more seconds and tries again. It means that there will be up to 5 attempts in a minute. That fits the requirement. Extended interval does not make sense here from the user experience perspective. It is more desirable to reduce the time interval. As well as setting more than 5 attempts does not make sense. If printer cannot recover after 5 attempts it's not make sense to continue trying.  
upvoted 3 times

 **RajMasilamani** 7 months, 1 week ago

Answer to address or fix the issue.So the time interval increased to 60 seconds and for 5 attempts.As problem stated for the given fixed values its giving an error.To overcome this we need to increase the retry time .  
upvoted 1 times

 **Gwak** 9 months, 3 weeks ago

I think Given ans is right "PT60 and count 5" means try 5 times in 60sec.  
upvoted 7 times

 **j888** 8 months ago

If you read the following:  
<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-exception-handling#fixed-interval>

pt60s = 60s delay between each attempt.  
PT10s will be the better answer, 5 attempts with each 10 seconds delay satisfy the requirement "The label printer must only receive up to 5 attempts within one minute"

**Topic 22 - Testlet 23**

## Introductory Info

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Background -

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.

Shipping Data -

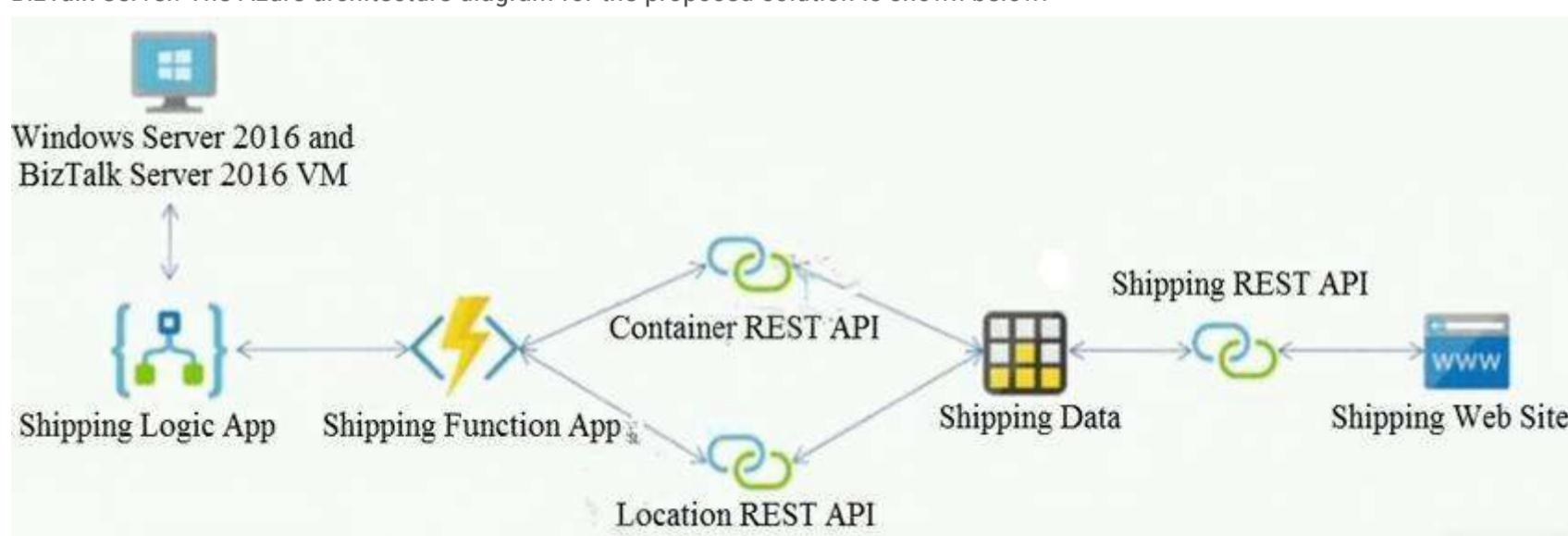
The application uses MongoDB JSON document storage database for all container and transport information.

Shipping Web Site -

The site displays shipping container tracking information and container contents. The site is located at <http://shipping.wideworldimporters.com/>

Proposed solution -

The on-premises shipping application must be moved to Azure. The VM has been migrated to a new Standard\_D16s\_v3 Azure VM by using Azure Site Recovery and must remain running in Azure to complete the BizTalk component migrations. You create a Standard\_D16s\_v3 Azure VM to host BizTalk Server. The Azure architecture diagram for the proposed solution is shown below:



Requirements -

#### 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.

#### Shipping Function app -

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

#### REST APIs -

The REST API's that support the solution must meet the following requirements:

Secure resources to the corporate VNet.

Allow deployment to a testing location within Azure while not incurring additional costs.

Automatically scale to double capacity during peak shipping times while not causing application downtime.

Minimize costs when selecting an Azure payment model.

#### Shipping data -

Data migration from on-premises to Azure must minimize costs and downtime.

#### Shipping website -

Use Azure Content Delivery Network (CDN) and ensure maximum performance for dynamic content while minimizing latency and costs.

#### Issues -

#### 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.

#### Shipping website and REST APIs -

The following error message displays while you are testing the website:

Failed to load http://test-shippingapi.wideworldimporters.com/: No 'Access-Control-Allow-Origin' header is present on the requested resource.

Origin 'http://test.wideworldimporters.com/' is therefore not allowed access.

#### Question

##### DRAG DROP -

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.



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

Step 1: Create an integration account in the Azure portal

You can define custom metadata for artifacts in integration accounts and get that metadata during runtime for your logic app to use. For example, you can provide metadata for artifacts, such as partners, agreements, schemas, and maps - all store metadata using key-value pairs.

Step 2: Link the Logic App to the integration account

A logic app that's linked to the integration account and artifact metadata you want to use.

Step 3: Add partners, schemas, certificates, maps, and agreements

Step 4: Create a custom connector for the Logic App.

Reference:

<https://docs.microsoft.com/bs-latn-ba/azure/logic-apps/logic-apps-enterprise-integration-metadata>

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Background -

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.

Shipping Data -

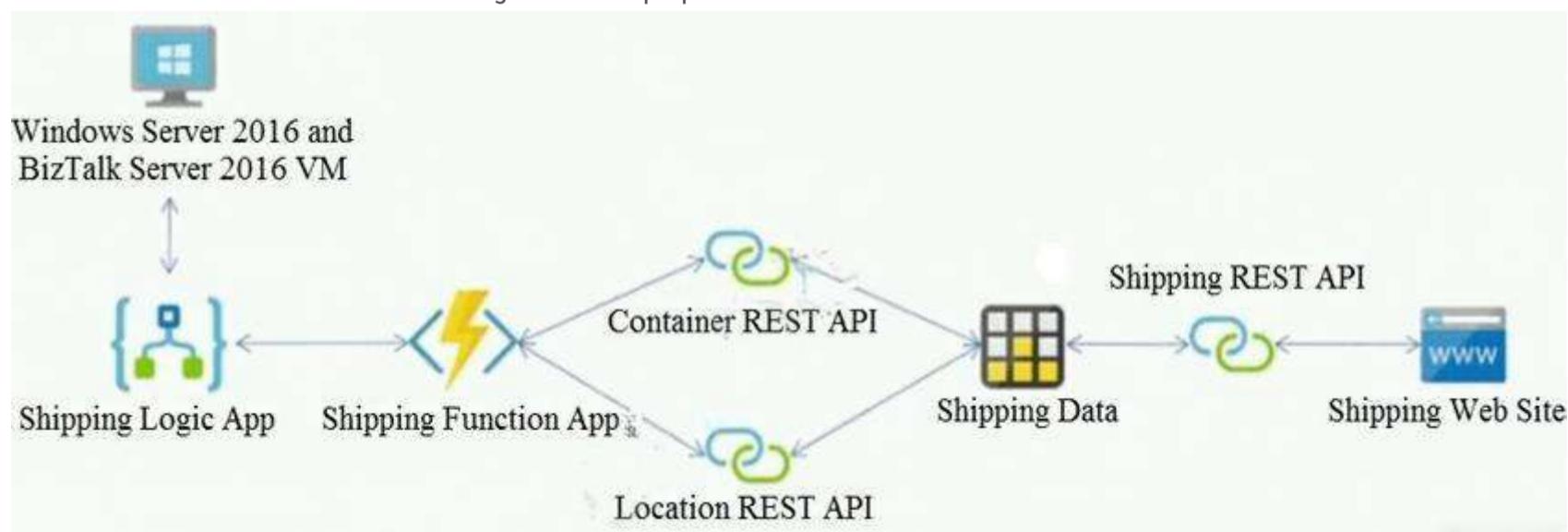
The application uses MongoDB JSON document storage database for all container and transport information.

Shipping Web Site -

The site displays shipping container tracking information and container contents. The site is located at <http://shipping.wideworldimporters.com/>

Proposed solution -

The on-premises shipping application must be moved to Azure. The VM has been migrated to a new Standard\_D16s\_v3 Azure VM by using Azure Site Recovery and must remain running in Azure to complete the BizTalk component migrations. You create a Standard\_D16s\_v3 Azure VM to host BizTalk Server. The Azure architecture diagram for the proposed solution is shown below:



Requirements -

#### 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.

#### Shipping Function app -

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

#### REST APIs -

The REST API's that support the solution must meet the following requirements:

Secure resources to the corporate VNet.

Allow deployment to a testing location within Azure while not incurring additional costs.

Automatically scale to double capacity during peak shipping times while not causing application downtime.

Minimize costs when selecting an Azure payment model.

#### Shipping data -

Data migration from on-premises to Azure must minimize costs and downtime.

#### Shipping website -

Use Azure Content Delivery Network (CDN) and ensure maximum performance for dynamic content while minimizing latency and costs.

#### Issues -

#### 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.

#### Shipping website and REST APIs -

The following error message displays while you are testing the website:

Failed to load http://test-shippingapi.wideworldimporters.com/: No 'Access-Control-Allow-Origin' header is present on the requested resource.

Origin 'http://test.wideworldimporters.com/' is therefore not allowed access.

#### Question

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

#### Correct Answer: C

Before you can connect to on-premises data sources from Azure Logic Apps, download and install the on-premises data gateway on a local computer. The gateway works as a bridge that provides quick data transfer and encryption between data sources on premises (not in the cloud) and your logic apps.

The gateway supports BizTalk Server 2016.

Note: Microsoft have now fully incorporated the Azure BizTalk Services capabilities into Logic Apps and Azure App Service Hybrid Connections.

Logic Apps Enterprise Integration pack bring some of the enterprise B2B capabilities like AS2 and X12, EDI standards support

Scenario: 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.

Reference:

<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-gateway-install>

✉️  **programmingbot**  1 year, 8 months ago

Agreed: On-premises Data Gateway  
upvoted 25 times

✉️  **BrettusMaximus**  11 months, 3 weeks ago

B. Site to Site s2s VPN  
Maintain on-premises connectivity to support legacy applications and final BizTalk migrations.  
I read this as legacy apps need to connect to the BizTalk server in Azure. This is how the work flow starts.  
upvoted 1 times

✉️  **Sylph** 1 year, 1 month ago

The provided answer is probably correct because you can connect to REST/SOAP services over the Data Gateway using a custom connector.

Snip from documentation:

"You can also create custom connectors that connect to data sources over HTTP or HTTPS by using REST or SOAP. Although the gateway itself doesn't incur extra costs, the Logic Apps pricing model applies to these connectors and other operations in Azure Logic Apps."  
<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-gateway-connection#supported-data-sources>

upvoted 1 times

✉️  **paru123456789** 1 year, 1 month ago

Answer: On premises data gateway  
upvoted 1 times

✉️  **fadikh** 1 year, 1 month ago

Hasn't the VM been already migrated to Azure?  
upvoted 1 times

✉️  **khoant** 1 year, 3 months ago

Answer is correct. The on-premises shipping application must be moved to Azure.  
upvoted 1 times

✉️  **amanp** 1 year, 5 months ago

S2S uses a connection to connect the Vnet to on-premises private network. This does not help in logic app creation. Hence, the given answer is correct  
upvoted 1 times

The question does NOT ask if S2S VPN would "help in logic app creation."

The question does ask for on-prem connectivity for legacy apps. Data Gateway provides access to on-prem data sources for tools like PowerBI or Analysis Services (which are not needed by the workflow), not legacy apps or support final BizTalk migration. These need general on-prem to VNet connectivity.

The answer is S2S VPN.

upvoted 7 times

✉️  **pac1311** 1 year, 2 months ago

Your answer is incorrect, the question does ask for on-prem connection to legacy app, see the following text from the question in the shipping logic app part.  
- Maintain on-premises connectivity to support legacy applications and final BizTalk migrations.

upvoted 1 times

✉️  **Brak** 1 year, 2 months ago

Exactly. Data Gateway does not provide "connectivity to support legacy apps." So it's not the answer. That leaves S2S.  
upvoted 2 times

✉️  **pieronegri** 1 year, 1 month ago

you are right Brak, that would be used in conjunction with Integration Service Environment for Logic apps so to secure them with the on premise VNet  
upvoted 2 times

✉️  **dineshkm06tnj** 1 year, 5 months ago

Agreed: On-premises Data Gateway  
upvoted 2 times

✉️  **sebainones** 1 year, 6 months ago

Agreed with "On-premises data Gateway".  
But what piece of information should I use/consider to discard "S2S VPN" as valid answer?  
upvoted 3 times

✉️  **MrZoom** 1 year ago

You shouldn't discard it. See comments from Brak and pieronegri, above. For info on ISE, see <https://docs.microsoft.com/en-us/azure/logic-apps/connect-virtual-network-vnet-isolated-environment>  
upvoted 2 times



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

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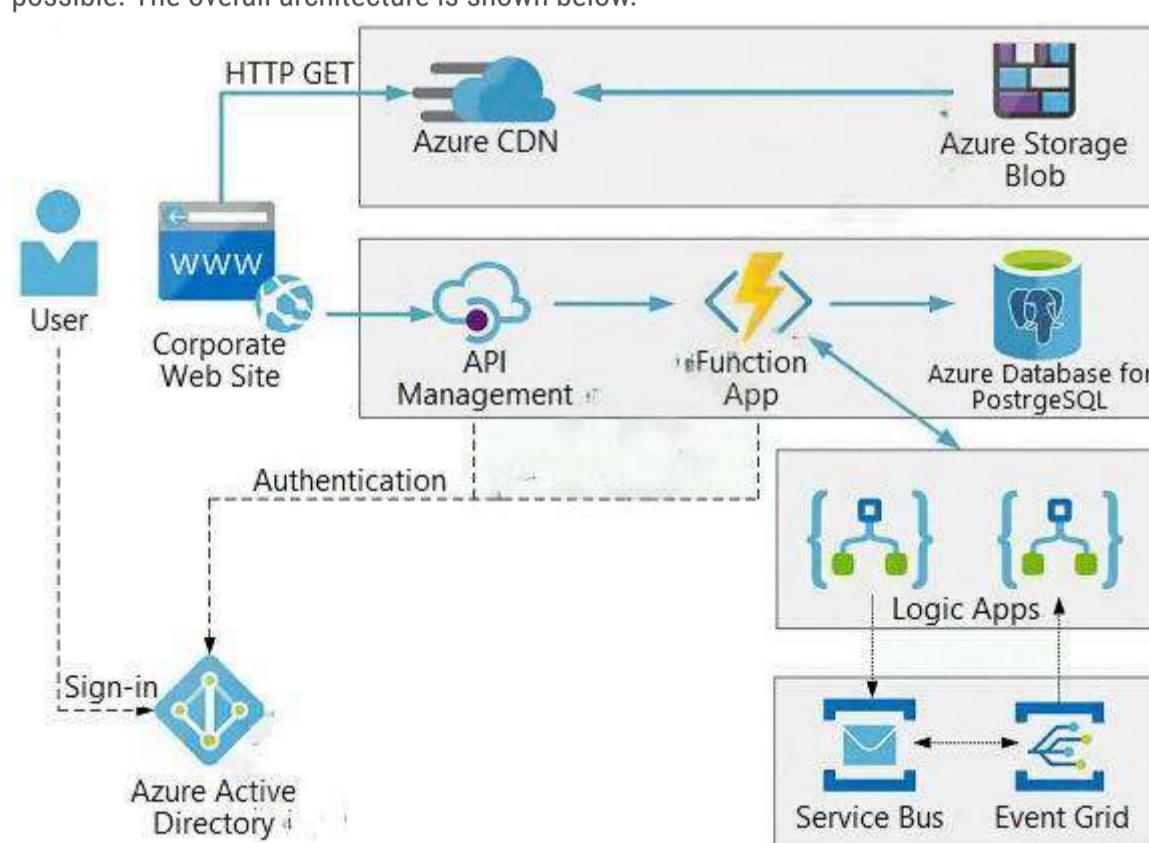
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The company has several applications and services that support their business. The company plans to implement serverless computing where possible. The overall architecture is shown below.



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The following steps detail the user authentication process:

1. The user selects Sign in in the website.
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3. The user signs in.
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6. The back-end API validates the access token.

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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.

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Azure Event Grid must use Azure Service Bus for queue-based load leveling.

Events in Azure Event Grid must be routed directly to Service Bus queues for use in buffering.

Events from Azure Service Bus and other Azure services must continue to be routed to Azure Event Grid for processing.

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Issues -

Corporate website -

While testing the site, the following error message displays:

CryptographicException: The system cannot find the file specified.

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

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FunctionAppLogs -

```
| where FunctionName == "RequestUserApproval"
```

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.

Code -

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 }

```

Function app -

RequestUserApproval.cs:

```

RA01 public static class RequestUserApproval
RA02 {
RA03 [FunctionName("RequestUserApproval")]
RA04 public static async Task<IActionResult> Run(
RA05 [HttpTrigger(AuthorizationLevel.Function, "get", "post", Route = null)] HttpRequest req,
ILogger log)
RA06 {
RA07 log.LogInformation("RequestUserApproval function processed a request.");
RA08 ...
RA09 return ProcessRequest(req)
RA10 ? (ActionResult)new OkObjectResult($"User approval processed")
RA11 : new BadRequestObjectResult("Failed to process user approval");
RA12 }
RA13 private static bool ProcessRequest(HttpContext req)
RA14 {
RA15 ...
RA16 }
RA17 }

```

### Question

HOTSPOT -

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 <div style="border: 1px solid #ccc; padding: 2px; width: 150px; height: 100px; margin-bottom: 10px;"></div> <div style="border: 1px solid #ccc; padding: 2px; width: 150px; height: 100px; margin-bottom: 10px;"></div>	<div style="border: 1px solid #ccc; padding: 2px; width: 150px; height: 100px; margin-bottom: 10px;"></div> <div style="border: 1px solid #ccc; padding: 2px; width: 150px; height: 100px; margin-bottom: 10px;"></div>	<div style="border: 1px solid #ccc; padding: 2px; width: 150px; height: 100px; margin-bottom: 10px;"></div> <div style="border: 1px solid #ccc; padding: 2px; width: 150px; height: 100px; margin-bottom: 10px;"></div>
		create --source-resource-id \$topicid --name \$name --
endpoint-type		
<div style="border: 1px solid #ccc; padding: 2px; width: 150px; height: 100px; margin-bottom: 10px;"></div> <div style="border: 1px solid #ccc; padding: 2px; width: 150px; height: 100px; margin-bottom: 10px;"></div> <div style="border: 1px solid #ccc; padding: 2px; width: 150px; height: 100px; margin-bottom: 10px;"></div>		
--endpoint \$endpoint		

Correct Answer:

### Answer Area

az <div style="border: 1px solid #ccc; padding: 2px; width: 150px; height: 100px; background-color: #e0f2e0; margin-bottom: 10px;"></div> <div style="border: 1px solid #ccc; padding: 2px; width: 150px; height: 100px; background-color: #e0f2e0; margin-bottom: 10px;"></div>	<div style="border: 1px solid #ccc; padding: 2px; width: 150px; height: 100px; background-color: #e0f2e0; margin-bottom: 10px;"></div> <div style="border: 1px solid #ccc; padding: 2px; width: 150px; height: 100px; background-color: #e0f2e0; margin-bottom: 10px;"></div>	<div style="border: 1px solid #ccc; padding: 2px; width: 150px; height: 100px; margin-bottom: 10px;"></div> <div style="border: 1px solid #ccc; padding: 2px; width: 150px; height: 100px; margin-bottom: 10px;"></div>
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Box 1: eventgrid -

To create event subscription use: az eventgrid event-subscription create

Box 2: event-subscription -

Box 3: servicebusqueue -

Scenario: Azure Service Bus and Azure Event Grid

Azure Event Grid must use Azure Service Bus for queue-based load leveling.

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[https://docs.microsoft.com/en-us/cli/azure/eventgrid/event-subscription?view=azure-cli-latest#az\\_eventgrid\\_event\\_subscription\\_create](https://docs.microsoft.com/en-us/cli/azure/eventgrid/event-subscription?view=azure-cli-latest#az_eventgrid_event_subscription_create)

✉  **malay1232489**  1 year, 1 month ago

correcto...

<https://docs.microsoft.com/en-us/azure/event-grid/handler-service-bus>

upvoted 23 times

✉  **MrZoom** 1 year ago

Agreed. Note that the casus also denotes the opposite integration: "Events from Azure Service Bus and other Azure services must continue to be routed to Azure Event Grid for processing". But none of the given options seem to do just this, so the given answer is correct.

upvoted 3 times

✉  **lugospod**  3 months ago

Got this one 01/2022. Went with most voted (to avoid writing answers again)

upvoted 5 times

✉  **BishopeL**  8 months ago

Absolutely correct

upvoted 1 times

✉  **rustycables** 8 months ago

Given is valid... but DYOR.

[https://docs.microsoft.com/en-us/cli/azure/eventgrid/event-subscription?view=azure-cli-latest#az\\_eventgrid\\_event\\_subscription\\_create](https://docs.microsoft.com/en-us/cli/azure/eventgrid/event-subscription?view=azure-cli-latest#az_eventgrid_event_subscription_create)

upvoted 2 times

✉  **MrXBasit** 9 months ago

Correcto

upvoted 2 times

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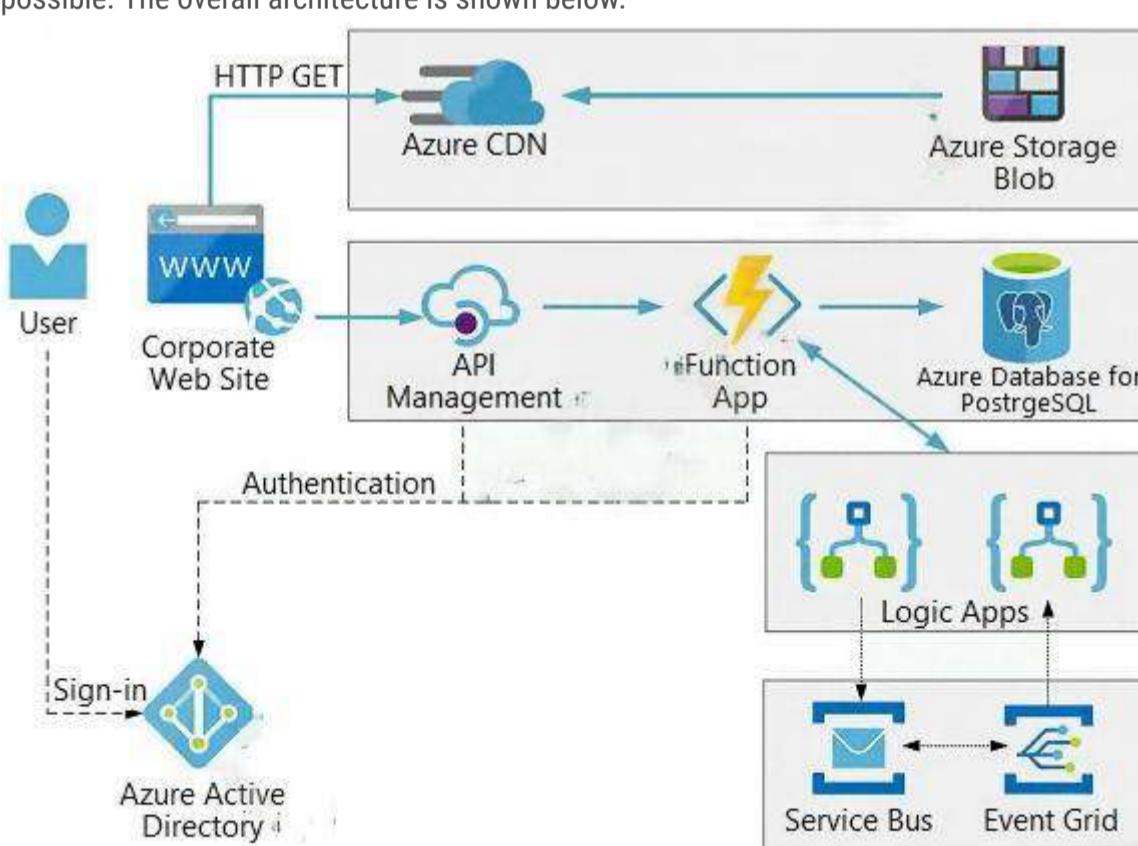
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```

### Question

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

### Correct Answer: C

As a solution architect/developer, you should consider using Service Bus queues when:

☞ Your solution needs to receive messages without having to poll the queue. With Service Bus, you can achieve it by using a long-polling receive operation using the TCP-based protocols that Service Bus supports.

Reference:

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted>

✉  **BrettusMaximus** Highly Voted 11 months, 3 weeks ago

Answer is Correct C. Service Bus

Only C. ServiceBus Queue and B. Service Bus Topic give a guarantee of delivery.

Since Topics can only receive messages from a Queue that leaves only C.

upvoted 14 times

✉  **agcertif** Highly Voted 1 year, 1 month ago

Azure Event Grid must use Azure Service Bus for queue-based load leveling.

upvoted 8 times

✉  **ZodiaC** 9 months ago

YEP CORRECT IS C ! 100% >

I HATE THIS QUESTION,, Who create this one LOL

upvoted 4 times

✉  **kozchris** Most Recent 1 month, 3 weeks ago

Easy, C - Service Bus Queue.

From the problem description:

"Events in Azure Event Grid must be routed directly to Service Bus queues for use in buffering."

upvoted 3 times

✉️  **lugospod** 3 months ago

Got this one 01/2022. Went with service bus queue since it was requested.

upvoted 4 times

✉️  **phvogel** 5 months, 3 weeks ago

I think Service Bus is the right answer but not because of the guarantee of delivery (Event Grid already promises "at least once" delivery). I'd pick it because of the dead letter queue that ensures that every message could be processed (or, at least, looked at).

In fact, without the dead letter queue, I'd pick Storage Queue because of its larger capacity and longer hold times (you could imagine the Logic App -- already using the Service Bus for load leveling -- falling so far behind that the number of messages hits the capacity limit on the Service Bus).

It's just a terrible, terrible question.

upvoted 3 times

✉️  **yoloswag** 10 months ago

Horrible question, just why Microsoft, why...

upvoted 7 times

✉️  **shoguns6** 10 months, 2 weeks ago

Bit confusing, as per arch diagram, from azure event grid, arrows end at LogicApp, meaning, logic app is subscriber to event grid... will it not be 'logic app connector'?

upvoted 2 times

✉️  **Spooky7** 10 months, 3 weeks ago

Question doesn't make sense. Event Grid events are the consequence of Service Bus messages (when new message appears in Service Bus than Event Grid emits an event to subscribers). So how Service Bus can be an answer which ensures that all EventGrid events are processed?

upvoted 1 times

✉️  **pac1311** 1 year, 2 months ago

Weird question, not sure about the answer probably service bus queue or storage queue

upvoted 1 times

✉️  **danielcr** 1 year, 2 months ago

Check the Case Study: "Azure Event Grid must use Azure Service Bus for queue-based load leveling." so.... C, Azure Server Bus queue (IMHO)

upvoted 5 times

✉️  **cbn** 1 year, 2 months ago

Question is bit confusing. Not sure on the answer.

upvoted 2 times

✉️  **cbn** 1 year, 2 months ago

Looking more into the question, the given answer looks correct.

Event grid sends all events to the service bus queue, and it is the best place to check if all events received by event grid are processed correctly

upvoted 7 times

## Topic 24 - Testlet 25

## Introductory Info

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Policy service must use Application Insights to automatically scale with the number of policy actions that it is performing.

#### Policies -

#### Log policy -

All Azure App Service Web Apps must write logs to Azure Blob storage. All log files should be saved to a container named logdrop. Logs must remain in the container for 15 days.

#### Authentication events -

Authentication events are used to monitor users signing in and signing out. All authentication events must be processed by Policy service. Sign outs must be processed as quickly as possible.

#### PolicyLib -

You have a shared library named PolicyLib that contains functionality common to all ASP.NET Core web services and applications. The PolicyLib library must:

Exclude non-user actions from Application Insights telemetry.

Provide methods that allow a web service to scale itself.

Ensure that scaling actions do not disrupt application usage.

#### Other -

#### Anomaly detection service -

You have an anomaly detection service that analyzes log information for anomalies. It is implemented as an Azure Machine Learning model. The model is deployed as a web service. If an anomaly is detected, an Azure Function that emails administrators is called by using an HTTP WebHook.

#### Health monitoring -

All web applications and services have health monitoring at the /health service endpoint.

#### Issues -

**Policy loss -**

When you deploy Policy service, policies may not be applied if they were in the process of being applied during the deployment.

**Performance issue -**

When under heavy load, the anomaly detection service undergoes slowdowns and rejects connections.

**Notification latency -**

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

**App code -**

**EventGridController.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.

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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 EnsureLogging(@event["subject"].ToString());
EG17 }
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 itGlobalParameters = 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 }

```

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 }
```

### Question

DRAG DROP -

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

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

topic  
status  
eventType  
Succeeded  
operationName  
resourceProvider

#### Answer Area

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

Correct Answer:

#### Code segments

topic  
status  
eventType  
Succeeded  
operationName  
resourceProvider

#### Answer Area

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

Scenario, Log policy: All Azure App Service Web Apps must write logs to Azure Blob storage.

Box 1: Status -

Box 2: Succeeded -

Box 3: operationName -

Microsoft.Web/sites/write is resource provider operation. It creates a new Web App or updates an existing one.  
Reference:

<https://docs.microsoft.com/en-us/azure/role-based-access-control/resource-provider-operations>

 **MrZoom**  1 year ago

Answer seems to be correct.

Once a new web app is created, an event is triggered from the resource group...

<https://docs.microsoft.com/en-us/azure/event-grid/event-schema-resource-groups?tabs=event-grid-event-schema>

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EG49 var rawModelResult = await result.Content.ReadAsStringAsync();
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EG58 . . .
EG59 }
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LoginEvent.cs
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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 }
```

### Question

HOTSPOT -

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`

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`metadataVersion`

### Answer Area

`public string` ( `get; set;` )

`id`  
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`public string` ( `get; set;` )

`id`  
`eventType`  
`dataVersion`  
`metadataVersion`

Correct Answer:

Box 1: id -

id is a unique identifier for the event.

#### Box 2: eventType -

eventType is one of the registered event types for this event source.

#### Box 3: dataVersion -

dataVersion is the schema version of the data object. The publisher defines the schema version.

Scenario: Authentication events are used to monitor users signing in and signing out. All authentication events must be processed by Policy service. Sign outs must be processed as quickly as possible.

The following example shows the properties that are used by all event publishers:

```
[
{
 "topic": string,
 "subject": string,
 "id": string,
 "eventType": string,
 "eventTime": string,
 "data": {
 object-unique-to-each-publisher
 },
 "dataVersion": string,
 "metadataVersion": string
}
]
```

Reference:

<https://docs.microsoft.com/en-us/azure/event-grid/event-schema>

✉  **somenkr**  9 months, 2 weeks ago

Answer is correct : metadataVersion string Not required, but if included, must match the Event Grid Schema  
upvoted 5 times

✉  **UnknowMan**  11 months, 1 week ago

Correct (Metadataversion have not a Setter so is Dataversion), Id and eventType is required in Event Grid Schema  
upvoted 2 times

✉  **faizalzain** 1 year ago

the last one i think should be metadataversion  
upvoted 2 times

✉  **ning** 8 months ago

No, metadataversion is determined by event grid, not sender  
upvoted 2 times

✉  **jay158** 9 months, 1 week ago

NO , the only allowed value at present for metadataversion is 1  
<https://docs.microsoft.com/en-us/azure/event-grid/event-schema>  
upvoted 2 times

✉  **Mike\_St** 1 year, 1 month ago

As shown in the example in the explanation of the answer, all 4 values are needed BUT, from programmer stand point... ID should not be public and have getter and setter... it should be a private immutable value... so in my opinion it should be eventType dataVersion and metadataVersion (i am not 100% certain of that answer)

upvoted 4 times

✉  **rdemontis** 1 year, 1 month ago

I think answer is correct because id is a required field in EventGrid Schema and if you look at the EventGridEvent class from Microsoft libraries the property has both getter and setter methods defined.  
[https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.eventgrid.models.eventgridevent.id?view=azure-dotnet#Microsoft\\_Azure\\_EventGrid\\_Models\\_EventGridEvent\\_Id](https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.eventgrid.models.eventgridevent.id?view=azure-dotnet#Microsoft_Azure_EventGrid_Models_EventGridEvent_Id)  
upvoted 8 times

✉  **aperez1979** 1 year ago

I agree, metadaversion only get <https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.eventgrid.models.eventgridevent.metadataversion?view=azure-dotnet>  
upvoted 9 times

✉  **clarionprogrammer** 1 year ago

Good point. I can't believe their question choice is so nit-picky.  
upvoted 2 times

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EG25 }
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LE07 public string Serialize()
LE08 {
LE09 return JsonConvert.SerializeObject(this);
LE10 }
LE11 }
```

### Question

HOTSPOT -

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"} // Box 1
 })
);
 client.WebApps.() // Box 2
 UploadLoggingSettings
 UpdateApplicationSetting
 (
 id.resourceGroup,
 id.name, appSettings);
```

Correct Answer:

### Answer Area

```
 var client = new WebSiteManagementClient(. . .);
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 id.resourceGroup,
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```

Box 1: logdrop -

All log files should be saved to a container named logdrop.

Box 2: 15 -

Logs must remain in the container for 15 days.

Box 3: UpdateApplicationSettings

All Azure App Service Web Apps must write logs to Azure Blob storage.

Reference:

<https://blog.hompus.nl/2017/05/29/adding-application-logging-blob-to-a-azure-web-app-service-using-powershell/>

### Topic 25 - Testlet 3

✉  **rdemontis** Highly Voted 1 year, 1 month ago

answer is correct

upvoted 14 times

✉  **SivajiTheBoss** Most Recent 1 month, 1 week ago

Correct Answer provided

upvoted 1 times

✉  **AzureDJ** 1 month, 1 week ago

Given answer is correct

upvoted 1 times

✉  **mc0re** 8 months, 1 week ago

This is too simple. One doesn't need to know anything except for the requirements...

upvoted 3 times

✉  **BroGood** 10 months ago

given answer is correct

upvoted 2 times

✉  **UnknowMan** 11 months, 1 week ago

Correct :)

upvoted 2 times

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Background -

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.

Requirements -

Policy service -

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.

Policies -

Log policy -

All Azure App Service Web Apps must write logs to Azure Blob storage. All log files should be saved to a container named logdrop. Logs must remain in the container for 15 days.

Authentication events -

Authentication events are used to monitor users signing in and signing out. All authentication events must be processed by Policy service. Sign outs must be processed as quickly as possible.

PolicyLib -

You have a shared library named PolicyLib that contains functionality common to all ASP.NET Core web services and applications. The PolicyLib library must:

Exclude non-user actions from Application Insights telemetry.

Provide methods that allow a web service to scale itself.

Ensure that scaling actions do not disrupt application usage.

Other -

Anomaly detection service -

You have an anomaly detection service that analyzes log information for anomalies. It is implemented as an Azure Machine Learning model. The model is deployed as a web service. If an anomaly is detected, an Azure Function that emails administrators is called by using an HTTP WebHook.

Health monitoring -

All web applications and services have health monitoring at the /health service endpoint.

Issues -

Policy loss -

When you deploy Policy service, policies may not be applied if they were in the process of being applied during the deployment.

Performance issue -

When under heavy load, the anomaly detection service undergoes slowdowns and rejects connections.

Notification latency -

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

App code -

EventGridController.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.

```

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 }

```

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 }
```

### Question

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.

#### Correct Answer: AB

Azure Functions can run on either a Consumption Plan or a dedicated App Service Plan. If you run in a dedicated mode, you need to turn on the Always On setting for your Function App to run properly. The Function runtime will go idle after a few minutes of inactivity, so only HTTP triggers will actually "wake up" your functions. This is similar to how WebJobs must have Always On enabled.

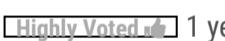
Scenario: Notification latency: Users report that anomaly detection emails can sometimes arrive several minutes after an anomaly is detected.

Anomaly detection service: You have an anomaly detection service that analyzes log information for anomalies. It is implemented as an Azure Machine Learning model. The model is deployed as a web service.

If an anomaly is detected, an Azure Function that emails administrators is called by using an HTTP WebHook.

Reference:

<https://github.com/Azure/Azure-Functions/wiki/Enable-Always-On-when-running-on-dedicated-App-Service-Plan>

✉  **andsol**  1 year, 1 month ago

Correct

upvoted 23 times

✉  **mlantonis**  10 months, 3 weeks ago

Correct Answer: A and B

Always On enables waking up on HTTP trigger, but does not prevent the exceeding the max time out time of 230 seconds.

If your function app is on the Consumption plan, there can be up to a 10-minute delay in processing new blobs if a function app has gone idle. To avoid this latency, you can switch to an App Service plan with Always On enabled. You can also use an Event Grid trigger with your Blob storage account.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/dedicated-plan#always-on>

<https://github.com/Azure/Azure-Functions/wiki/Enable-Always-On-when-running-on-dedicated-App-Service-Plan>

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-event-overview>

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-trigger?tabs=csharp#event-grid-trigger>  
upvoted 10 times

✉  **SivajiTheBoss**  1 month, 1 week ago

A and B is correct

upvoted 1 times

✉  **Naval708** 11 months ago

## Introductory Info

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### Background -

#### Overview -

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.

### Azure Active Directory -

Contoso, Ltd. uses Azure Active Directory (Azure AD) for both internal and guest accounts.

### Requirements -

#### ContentAnalysisService -

The company's data science group built ContentAnalysisService which accepts user generated content as a string and returns a probable value for inappropriate content. Any values over a specific threshold must be reviewed by an employee of Contoso, Ltd. You must create an Azure Function named CheckUserContent to perform the content checks.

### Costs -

You must minimize costs for all Azure services.

### Manual review -

To review content, the user must authenticate to the website portion of the ContentAnalysisService using their Azure AD credentials. The website is built using

React and all pages and API endpoints require authentication. In order to review content a user must be part of a ContentReviewer role. All completed reviews must include the reviewer's email address for auditing purposes.

### High availability -

All services must run in multiple regions. The failure of any service in a region must not impact overall application availability.

### Monitoring -

An alert must be raised if the ContentUploadService uses more than 80 percent of available CPU cores.

### Security -

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.

User agreements -

When a user submits content, they must agree to a user agreement. The agreement allows employees of Contoso, Ltd. to review content, store

cookies on user devices, and track user's IP addresses.

Information regarding agreements is used by multiple divisions within Contoso, Ltd.

User responses must not be lost and must be available to all parties regardless of individual service uptime. The volume of agreements is

expected to be in the millions per hour.

Validation testing -

When a new version of the ContentAnalysisService is available the previous seven days of content must be processed with the new version to verify that the new version does not significantly deviate from the old version.

Issues -

Users of the ContentUploadService report that they occasionally see HTTP 502 responses on specific pages.

Code -

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
```

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 "orgRestrictions" : [],
AM11 "parentalControlSettings" : {
AM12 "countriesBlockedForMinors" : [],
AM13 "legalAgeGroupRule" : "Allow"
AM14 },
AM15 "
AM16 "passwordCredentials" : []
AM17 }
```

**Question**

HOTSPOT -

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 === '

&& event.data.target.
 === 'contentanalysisservice'

&& event.
 .contains('contosoimages'))

{
 startValidationTesting();
}
```

## Answer Area

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

The screenshot shows a code editor with a dropdown menu open. The first dropdown contains the event types: 'ImagePushed', 'RepositoryItem', 'ImageDeployed', and 'RepositoryUpdated'. The second dropdown contains the target service names: 'aci', 'image', 'service', and 'repository'. The third dropdown contains the repository names: 'topic', 'service', 'repository', and 'imageCollection'. The 'service' option is highlighted in the second dropdown, and the 'imageCollection' option is highlighted in the third dropdown.

Correct Answer:

Box 1: RepositoryUpdated -

When a new version of the ContentAnalysisService is available the previous seven days of content must be processed with the new version to verify that the new version does not significantly deviate from the old version.

Box 2: service -

Box 3: imageCollection -

Reference:

<https://docs.microsoft.com/en-us/azure/devops/notifications/oob-supported-event-types>

✉ **halmosi** Highly Voted 1 year, 1 month ago

Incorrect...

1. ImagePushed
2. repository
3. topic

<https://docs.microsoft.com/hu-hu/azure/event-grid/event-schema-container-registry?tabs=event-grid-event-schema>  
upvoted 66 times

✉ **gbtest** 9 months, 4 weeks ago

Yes, imho the answer should be ImagePushed, repository and topic. As the Example Event shows a Event Grid event schema, with explained the schema. The schema of the Azure Container Registry EventGrid events doesn't contain fields like imagecollection, service, etc. Note that for eventType only ImagePushed, ImageDeleted, ChartPushed and ChartDeleted (last two raised from Helm charts) are valid. So 1 should be ImagePushed, send the json notes a data.target.repository

upvoted 2 times

✉ **rdemontis** 1 year, 1 month ago

thanks for the tip! The answer indicated by the test seems to be completely "off topic" ;-)

upvoted 5 times

✉ **clarionprogrammer** 1 year ago

In English...

<https://docs.microsoft.com/en-us/azure/event-grid/event-schema-container-registry?tabs=event-grid-event-schema>  
upvoted 2 times

✉ **Shion2009** 1 year, 1 month ago

I'm not sure if this is correct. Take a look at Background Overview:

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

"contentanalysisservice" is not the name of a repository and "contosoimages" is the name of the ACR.  
upvoted 1 times

✉ **jvyas** 11 months ago

"contentanalysisservice" is the name of the repository/service. check the line AM08 in application manifest file.

upvoted 2 times

□  **Shion2009** 1 year, 1 month ago

Okay, halmosi's answer seems possible:  
<https://docs.microsoft.com/de-de/azure/event-grid/event-schema-container-registry?tabs=event-grid-event-schema>

upvoted 3 times

□  **Pozz4ever** 1 year ago

Sorry I Don't understand... as you said contentanalysiservice in the new of the service, I suppose, and contosoimages is the name of the ACR. so how can it be repository and topic?

upvoted 1 times

□  **kapetan** 1 year ago

An event does not have service, repository or imageCollection as top-level data, it has a topic. Regarding the repository, from the choises available, the target has only repository as property. It is all documented in the already given link:  
<https://docs.microsoft.com/en-us/azure/event-grid/event-schema-container-registry?tabs=event-grid-event-schema>

upvoted 7 times

□  **Pozz4ever** 1 year ago

thanks

upvoted 1 times

□  **sien** Highly Voted 1 year ago

Indeed,  
ImagePushed  
Repository and  
Topic

upvoted 6 times

□  **SivajiTheBoss** Most Recent 1 month, 1 week ago

100 % correct answer: Cross referenced in Udemy  
ImagePushed  
Repository  
Topic

upvoted 1 times

□  **leonidn** 2 months, 3 weeks ago

ImagePushed  
Repository  
Topic

<https://docs.microsoft.com/en-us/azure/event-grid/event-schema-container-registry?tabs=event-grid-event-schema>

upvoted 2 times

□  **mc0re** 8 months, 1 week ago

"Image pushed into a repository" is not the same as "image deployed, container is running". One cannot start testing on a pushed image, only after it has been deployed.

upvoted 2 times

□  **MiraA** 6 months, 2 weeks ago

Hmm, maybe some multi-step task will be used so "ImagePushed" event means the image will be run as a container in a moment? Or is there some functionality in that private ACR which will run/deploy the updated image automatically?

<https://docs.microsoft.com/en-us/azure/container-registry/container-registry-tasks-multi-step>

upvoted 1 times

□  **Harichakradhar** 9 months ago

100 % correct  
ImagePushed  
Repository  
Topic

upvoted 4 times

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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
```

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 }
```

### Question

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

#### Correct Answer: B

Scenario:

You must minimize costs for all Azure services.

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

Best for long-running scenarios where Durable Functions can't be used. Consider an App Service plan in the following situations:

- ⇒ You have existing, underutilized VMs that are already running other App Service instances.
- ⇒ You want to provide a custom image on which to run your functions.
- ⇒ Predictive scaling and costs are required.

Note: When you create a function app in Azure, you must choose a hosting plan for your app. There are three basic hosting plans available for

Azure Functions:

Consumption plan, Premium plan, and Dedicated (App Service) plan.

Incorrect Answers:

A: A Premium plan would be more costly.

C: Need the VNET functionality.

Reference:

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

✉  **ning**  8 months ago

A is correct! I guess the guy gives the answer confused with which one is cheaper. Premium is cheaper than app service place. It can auto scale, warm starting and with VNET integration. In addition, it can run custom container as well, just the same as app service plan.

upvoted 17 times

✉  **xavi1** 2 months, 1 week ago

Premium does NOT support VNET in multiple regions: <https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale#networking-features>, i believe it's B

upvoted 3 times

✉  **wangga** 1 month, 2 weeks ago

I agree, VNET and multiple regions only available for AppService plan

upvoted 1 times

✉  **troy89** 2 months ago

Are you sure? When I compare the costs (same ACU, memory, etc.) then App Service Plan is always cheaper.

upvoted 1 times

✉ **altafpatel1984** 4 months, 2 weeks ago

but here will use existing app service plan, will not create new one. so using existing app service plan will be cost effective.  
upvoted 2 times

✉ **ning** 8 months ago

Too add some more stuff here, ASE(application service environment) is very different app service plan and way more expensive, in addition, those two docker images are in azure registry so, definitely can be supported by premium plan.  
upvoted 1 times

✉ **j888** [Highly Voted] 8 months ago

I believed the answer is correct.

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

"You pay for function apps in an App Service Plan as you would for other App Service resources. This differs from Azure Functions Consumption plan or Premium plan hosting..."

So.. ASE can be made available on the App service plan that hosting the function

upvoted 6 times

✉ **naicud** [Most Recent] 3 weeks, 4 days ago

I think B is correct

The virtual network integration feature is used in Azure App Service dedicated compute pricing tiers. If your app is in an App Service Environment, it's already in a virtual network and doesn't require use of the VNet integration feature to reach resources in the same virtual network:

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-networking-options#:~:text=The%20virtual%20network%20integration%20feature,in%20the%20same%20virtual%20network>.

upvoted 1 times

✉ **SivajiTheBoss** 1 month, 2 weeks ago

Correct Answer: A

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

upvoted 1 times

✉ **Mev4953** 3 months ago

The given answer and explanation seem correct.

upvoted 1 times

✉ **altafpatel1984** 5 months ago

"If you just want to run your function app in a virtual network, you can do this using the Premium plan."

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

upvoted 3 times

✉ **phvogel** 5 months, 3 weeks ago

I'm liking the App Service plan (B). It's 10 cents an hour cheaper than Premium at the S1 level (even cheaper at higher levels) and has the VNet integration the case study requires. The only thing that Premium adds is private endpoints which aren't required here.

<https://azure.microsoft.com/en-us/pricing/details/app-service/windows/>

upvoted 3 times

✉ **KalaIsuran** 9 months, 3 weeks ago

Option: A.

Reason : As per the security rule : All Internal services must only be accessible from internal Virtual Networks (VNets). Since the AZ function consumption plan does n't support vnet, So choose the next option Premium Plan

upvoted 3 times

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

with this document, ASE provides vNet integration. So, answer should be ASE for sure.

upvoted 2 times

✉ **ZodiaC** 9 months ago

ANY LINKS?

upvoted 1 times

✉ **SWedig** 9 months ago

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

upvoted 1 times

✉ **Jurgen1234** 9 months, 4 weeks ago

Should be A Imho, both the UploadService and AnalysisService run in container instances on in app service plans

upvoted 1 times

✉ **ning** 7 months, 1 week ago

Completely wrong! Container instance is different from app service plan. two very different ways to host container images. there is no way you

## Topic 27 - Testlet 5

✉ **PhillI** 3 months, 1 week ago

after choosing Docker Image you can still select an App Service Plan ....

## Introductory Info

### Case study -

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### 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.

### Requirements. Data -

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.

### Requirements. Security -

You have the following security requirements:

Users of Coho Winery applications must be able to provide access to documents, resources, and applications to external partners.

External partners must use their own credentials and authenticate with their organization's identity management solution.

External partner logins must be audited monthly for application use by a user account administrator to maintain company compliance.

Storage of e-commerce application settings must be maintained in Azure Key Vault.

E-commerce application sign-ins must be secured by using Azure App Service authentication and Azure Active Directory (AAD).

Conditional access policies must be applied at the application level to protect company content.

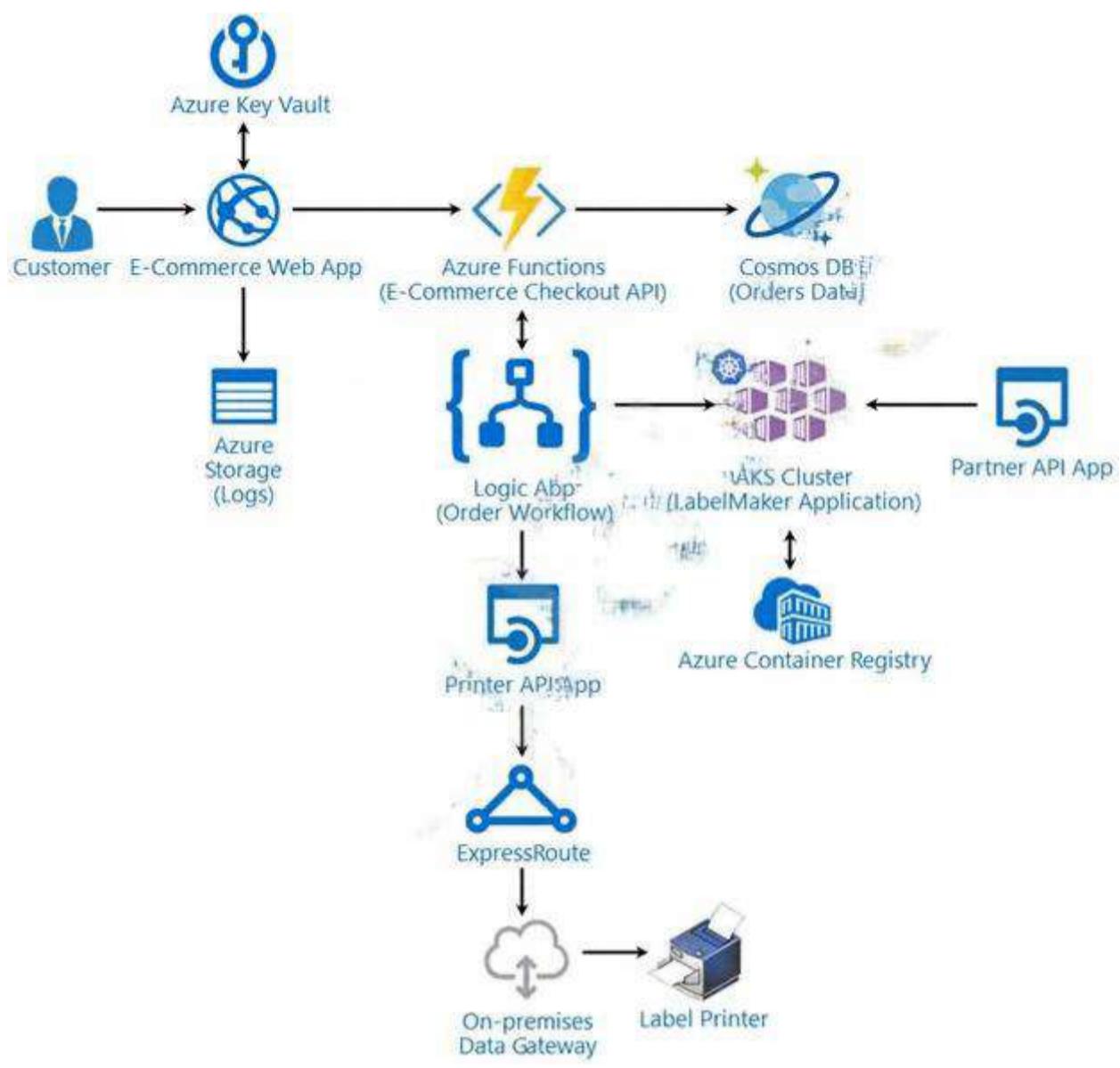
The LabelMaker application must be secured by using an AAD account that has full access to all namespaces of the Azure Kubernetes Service (AKS) cluster.

### Requirements. LabelMaker app -

Azure Monitor Container Health must be used to monitor the performance of workloads that are deployed to Kubernetes environments and hosted on Azure Kubernetes Service (AKS).

You must use Azure Container Registry to publish images that support the AKS deployment.

### Architecture -



#### Issues -

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.

#### Order.json -

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-3422N" ,
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 }
```

**Question**

DRAG DROP -

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**

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.

**Answer area**

Correct Answer:

## Actions

Create an alias of the image with a new build number.

Download the image to your local computer.

## Answer area

Build a new application image by using dockerfile.

Create an alias of the image with the fully qualified path to the registry.

Log in to the registry and push image.

Step 1: Build a new application image by using dockerfile

Step 2: Create an alias if the image with the fully qualified path to the registry

Before you can push the image to a private registry, you've to ensure a proper image name. This can be achieved using the docker tag command. For demonstration purpose, we'll use Docker's hello world image, rename it and push it to ACR.

# pulls hello-world from the public docker hub

```
$ docker pull hello-world
```

```
tag the image in order to be able to push it to a private registry
$ docker tag hello-word <REGISTRY_NAME>/hello-world
```

```
push the image
```

```
$ docker push <REGISTRY_NAME>/hello-world
```

Step 3: Log in to the registry and push image

In order to push images to the newly created ACR instance, you need to login to ACR form the Docker CLI. Once logged in, you can push any existing docker image to your ACR instance.

Scenario:

Coho Winery plans to move the application to Azure and continue to support label creation.

LabelMaker app -

Azure Monitor Container Health must be used to monitor the performance of workloads that are deployed to Kubernetes environments and hosted on Azure Kubernetes Service (AKS).

You must use Azure Container Registry to publish images that support the AKS deployment.

Reference:

<https://thorsten-hans.com/how-to-use-a-private-azure-container-registry-with-kubernetes-9b86e67b93b6> <https://docs.microsoft.com/en-us/azure/container-registry/container-registry-tutorial-quick-task>

 **jay158** Highly Voted 9 months, 2 weeks ago

Correct

<https://docs.microsoft.com/en-us/azure/container-registry/container-registry-get-started-docker-cli?tabs=azure-cli>  
upvoted 7 times

 **AnKiLa** 9 months, 1 week ago

Agree

But it's an update - so this link looks better for me:  
<https://docs.microsoft.com/en-us/azure/container-registry/container-registry-tutorial-deploy-update>

upvoted 3 times

 **meoukg** Most Recent 1 month, 1 week ago

Got it on 03/2022, I chose as below:

Step 1: Build a new application image by using dockerfile  
Step 2: Create an alias if the image with the fully qualified path to the registry  
Step 3: Log in to the registry and push image  
upvoted 1 times

 **SivajiTheBoss** 1 month, 2 weeks ago

Correct answer given.

Step 1: Build a new application image by using dockerfile

```
FROM node:8.9.3-alpine
RUN mkdir -p /usr/src/app
COPY ./app/ /usr/src/app/
WORKDIR /usr/src/app
RUN npm install
CMD node /usr/src/app/index.js
```

```
docker build ./aci-helloworld -t aci-test-app
```

```
docker images
```

```
docker run -d -p 8080:80 aci-test-app
```

(Example to build image only and run locally)

Step 2: Create an alias if the image with the fully qualified path to the registry

```
docker tag mcr.microsoft.com/oss/nginx/nginx:1.15.5-alpine myregistry.azurecr.io/samples/nginx
```

Step 3: Log in to the registry and push image

```
docker push myregistry.azurecr.io/samples/nginx
```

upvoted 2 times

✉ **mc0re** 8 months, 1 week ago

Strange question. I realize that from the provided options this is the only solution one can assemble. But the project describes LabelMaker app to be a set of images running in AKS. Pushing a new image into ACR won't change a thing, as one needs to update the YAML deployment file for Kubernetes to pick up the image, and then tell AKS to reconcile.

upvoted 2 times

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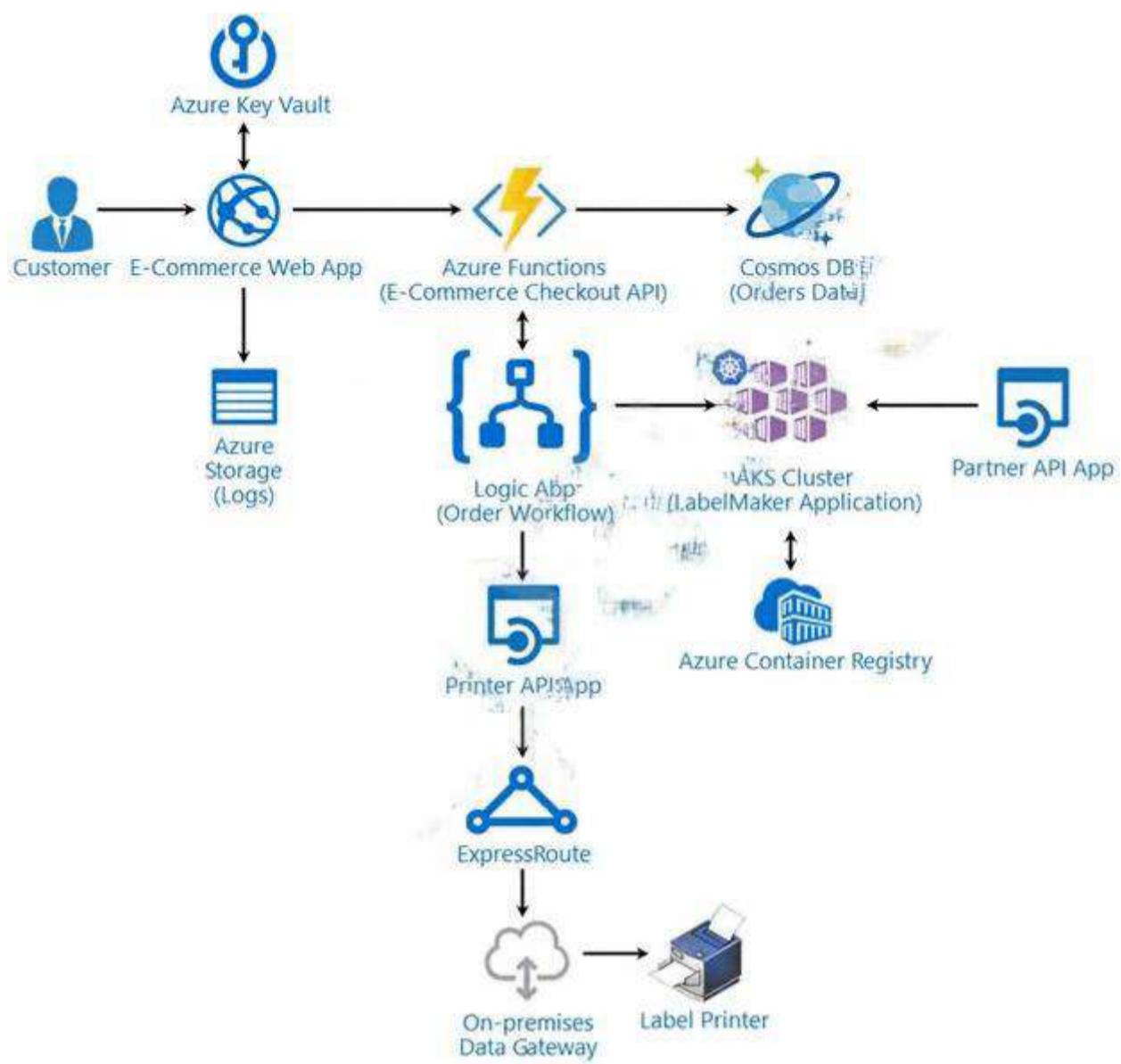
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### Order.json

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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-3422N" ,
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 }
```

### Question

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.

### Correct Answer: C

Methods to Get User Identity and Claims in a .NET Azure Functions App include:

⇒ ClaimsPrincipal from the Request Context

The ClaimsPrincipal object is also available as part of the request context and can be extracted from the HttpRequest.HttpContext.

⇒ User Claims from the Request Headers.

App Service passes user claims to the app by using special request headers.

Reference:

<https://levelup.gitconnected.com/four-alternative-methods-to-get-user-identity-and-claims-in-a-net-azure-functions-app-df98c40424bb>

✉  **j888**  8 months, 3 weeks ago

<https://docs.microsoft.com/en-us/azure/app-service/configure-authentication-user-identities>

The answer C

upvoted 12 times

✉  **Jonas\_86** 7 months ago

your link is interesting but I think the answer you provide is FALSE.

As I understood from the link, if you want to access user claims from Azure Function then the C answer is OK but if you want to get it from webapp then the A answer is the good one.

Please, recheck the link above

upvoted 5 times

✉  **phvogel** 5 months, 3 weeks ago

To quote the link provided:

"For all language frameworks, App Service makes the claims in the incoming token (whether from an authenticated end user or a client application) available to your code by injecting them into the request headers. External requests aren't allowed to set these headers, so they are present only if set by App Service...."

So the first thing that happens in the Web App is to read the information from the request headers that was inserted by the App Service as part of authenticating the user in order to provide the user's claims.

upvoted 4 times

✉  **troy89** 2 months ago

I would say this is correct because the JWT is sent in the header and it contains the claims. No need to access the GraphAPI

upvoted 1 times

✉  **wsellmair** 2 months, 2 weeks ago

in Function you can access the user claims from headers, ClaimsPrincipal

For Azure Functions, ClaimsPrincipal.Current is not populated for .NET code, but you can still find the user claims in the request headers, or get the ClaimsPrincipal object from the request context or even through a binding parameter. See working with client identities in Azure Functions for more information.

<https://docs.microsoft.com/en-us/azure/app-service/configure-authentication-user-identities>

upvoted 1 times

✉  **MiraA** Highly Voted 6 months, 2 weeks ago

Answer is A.

Check this tutorial related to a web app accessing Microsoft Graph to get signed user's display name and his/her photo from Azure AD. It seems it corresponds to "access data from the user claim object" requirement.

<https://docs.microsoft.com/en-us/azure/app-service/scenario-secure-app-access-microsoft-graph-as-user>

Note: Reading HTTP headers (the answer C) could give basic information only - but the user claim contains more detailed data.

<https://docs.microsoft.com/en-us/azure/app-service/configure-authentication-user-identities>

upvoted 6 times

✉  **troy89** 2 months, 1 week ago

Yeah, but to access the GraphAPI you need the information from the token which is sent in the header, so in both ways, the first step is to read the header values.

upvoted 1 times

✉  **wsellmair** Most Recent 2 months ago

Selected Answer: C

<https://docs.microsoft.com/en-us/azure/app-service/configure-authentication-user-identities>

upvoted 1 times

✉  **wsellmair** 2 months, 2 weeks ago

in Function you can access the user claims from headers, ClaimsPrincipal

For Azure Functions, ClaimsPrincipal Current is not populated for .NET code, but you can still find the user claims in the request headers, or get the

## Topic 28 - Testlet 6

<https://docs.microsoft.com/en-us/azure/app-service/configure-authentication-user-identities>

upvoted 1 times

✉  **justyoung17** 7 months ago

I think it's (A) though because it's a e-commerce 'web app' which is not an 'Azure function'.

upvoted 6 times

✉  **ensa** 6 months, 1 week ago

But Azure function will get data from web app and App Service passes user claims to the app by using special request headers. External requests aren't allowed to set these headers, so they are present only if set by the App Service. Then

[`FunctionName("ClaimsDemo")`]

`public static IActionResult Run`

`([HttpTrigger(AuthorizationLevel.Anonymous, "get", "post", Route = null)])`

`HttpRequest req, ILogger log`

`{`

`//Extract User ID and Claims from the request headers`

`var principal_name = req.Headers["X-MS-CLIENT-PRINCIPAL-NAME"].FirstOrDefault();`

`var principal_id = req.Headers["X-MS-CLIENT-PRINCIPAL-ID"].FirstOrDefault();`

`So CCCCCCCCCCCCCCCCCCCCC`

upvoted 1 times

✉  **ning** 8 months ago

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Background -

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.

Current environment -

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.

Requirements -

The application components must meet the following requirements:

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.

Retail store locations -

Azure Functions must process data immediately when data is uploaded to Blob storage. Azure Functions must update Azure Cosmos DB by using native SQL language queries.

Audit store sale transaction information nightly to validate data, process sales financials, and reconcile inventory.

Delivery services -

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.

Inventory services -

The company has contracted a third-party to develop an API for inventory processing that requires access to a specific blob within the retail store storage account for three months to include read-only access to the data.

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.

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.

**Question**

HOTSPOT -

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.

Hot Area:

## Answer Area

### Configuration

### Value

Binding

	▼
Blob storage	
Azure Cosmos DB	
Event Grid	
HTTP	

Binding Direction

	▼
Input	
Output	

Trigger

	▼
Blob storage	
Azure Cosmos DB	
Event Grid	
HTTP	

## Answer Area

### Configuration      Value

Binding

Blob storage	▼
Azure Cosmos DB	▼
Event Grid	▼
HTTP	▼

Correct Answer:

Binding Direction

Input	▼
Output	▼

Trigger

Blob storage	▼
Azure Cosmos DB	▼
Event Grid	▼
HTTP	▼

Scenario: Retail store locations: Azure Functions must process data immediately when data is uploaded to Blob storage.

Box 1: HTTP -

Binding configuration example: [https://<storage\\_account\\_name>.blob.core.windows.net](https://<storage_account_name>.blob.core.windows.net)

### Topic 29 - Testlet 7

Box 3: Blob storage -

The Blob storage trigger starts a function when a new or updated blob is detected.

Azure Functions integrates with Azure Storage via triggers and bindings. Integrating with Blob storage allows you to build functions that react to changes in blob data as well as read and write values.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-trigger>

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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.

**Question**

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

**Correct Answer: ABD**

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

Before you enable and configure point-in-time restore, enable its prerequisites for the storage account: soft delete, change feed, and blob

versioning.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/blobs/point-in-time-restore-manage>

**Topic 30 - Testlet 8**

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### Background -

#### Overview -

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.

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The solution will use eight CPU cores.

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An alert must be raised if the ContentUploadService uses more than 80 percent of available CPU cores.

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Information regarding agreements is used by multiple divisions within Contoso, Ltd.

User responses must not be lost and must be available to all parties regardless of individual service uptime. The volume of agreements is expected to be in the millions per hour.

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When a new version of the ContentAnalysisService is available the previous seven days of content must be processed with the new version to verify that the new version does not significantly deviate from the old version.

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Users of the ContentUploadService report that they occasionally see HTTP 502 responses on specific pages.

#### Code -

##### ContentUploadService -

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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
```

## 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 }
```

## Question

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

### Correct Answer: B

Azure Event Hub is used for telemetry and distributed data streaming.

This service provides a single solution that enables rapid data retrieval for real-time processing as well as repeated replay of stored raw data. It can capture the streaming data into a file for processing and analysis.

It has the following characteristics:

- ⇒ low latency
- ⇒ capable of receiving and processing millions of events per second
- ⇒ at least once delivery

Reference:

<https://docs.microsoft.com/en-us/azure/event-grid/compare-messaging-services>

✉  **perry230** Highly Voted 1 year, 10 months ago

Correct: "Information regarding agreements is used by multiple divisions within Contoso, Ltd. User responses must not be lost and must be available to all parties regardless of individual service uptime. The volume of agreements is expected to be in the millions per hour."

upvoted 24 times

✉  **Juanlu** 1 year, 4 months ago

As @coolest said: B is correct, so the answer is correct. Note: "You can use Event Capture to store the agreements into Azure blob storage for long term storage".

upvoted 1 times

✉  **GCMan** 1 year, 5 months ago

I think Azure Event Hub is correct but I see arguments of a couple other options.

upvoted 1 times

✉  **coolest** Highly Voted 1 year, 8 months ago

B - Azure Event Hub is Correct.

If you are looking at millions of agreements per hour, you need to use a data ingestion service like the Azure Event Hub. You can use Event Capture to store the agreements into Azure blob storage for long term storage.

upvoted 13 times

✉  **meoukg** Most Recent 1 month, 1 week ago

Got it on 03/2022!

upvoted 1 times

✉ **aruni\_mishra** 3 months, 2 weeks ago

Azure Event Hubs enables you to automatically capture the streaming data in Event Hubs in an Azure Blob storage or Azure Data Lake Storage Gen 1 or Gen 2 account of your choice, with the added flexibility of specifying a time or size interval.

<https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-capture-overview>

Ans: Azure Event Hub

upvoted 1 times

✉ **altafpatel1984** 5 months ago

Azure Storage Queue can process 2000 messages per second. i.e. 72 million messages per hour. Since message is to be processed here, it cannot be event and hence Storage Queue will be used to store data and hence answer is A - Storage Queue

<https://docs.microsoft.com/en-us/learn/modules/communicate-between-apps-with-azure-queue-storage/2-create-the-azure-storage-infrastructure>

upvoted 2 times

✉ **Bartimaeus** 1 month, 3 weeks ago

It's 7.2 million, but it's only target throughput - max is 20\_000/s = 72 million

upvoted 1 times

✉ **paru123456789** 1 year, 1 month ago

Answer: B

upvoted 3 times

✉ **cbn** 1 year, 2 months ago

"Information regarding agreements is used by multiple divisions within Contoso, Ltd."

- This needs multiple subscribers. Storage queue cannot be used for this.

"The volume of agreements is expected to be in the millions per hour."

- This leads to choice for Event Hub / Service bus topic

"When a new version of the ContentAnalysisService is available the previous seven days of content must be processed with the new version"

- This is not about agreements, however an Event Hub supports this scenario as well.

I will go with C (Event Hub)

upvoted 4 times

✉ **cbn** 1 year, 2 months ago

Sorry, I mean B (Event Hub)

upvoted 2 times

✉ **mvr** 1 year, 2 months ago

Ok, yeah, so we need to handle millions. So Storage Queue or Event Hub.

But then, do we need messages or events?

It says we need to store (maybe temporarily, until processed), and events do not contain content to be stored. So I'd say Storage Queue. Right?

upvoted 3 times

✉ **matejka** 1 year, 3 months ago

Azure Event Hub is correct as it is able to handle millions of events per second. But the question is very confusing as it states "to store..." and Event Hub is not designed to persistently store data. It stores the events and should route those to e.g. storage account or so.

upvoted 1 times

✉ **khoant** 1 year, 3 months ago

should be B

upvoted 1 times

✉ **Cornholioz** 1 year, 3 months ago

I still don't know for sure. The scenario gives a few facts and the question asks to store the agreements. Couldn't find a strong argument to say Event Hub is better than Queue in this case. I can eliminate Service Bus Topic and Event Grid Topic, because of the traffic numbers. But between the other two, it's hard.

Even after all the research, I'm only making a guess here: Event Hub

upvoted 1 times

✉ **luppittegui** 1 year, 4 months ago

Who talks about store? The case says: "When a user submits content, they must agree to a user agreement", so ALWAYS a user submits content, they MUST agree.

"Event Hubs Standard tier currently supports a maximum retention period of seven days." so it's more than enough for an approval process

upvoted 1 times

✉ **aroravibhu** 1 year, 4 months ago

Shouldn't be eventhub as question is stressing on "store the agreement after processing". We can't store messages in event hub, should be Azure Service Bus topic

upvoted 1 times

✉ **AidanT** 1 year, 6 months ago

I wouldn't store it in any of those options!

upvoted 9 times

✉ **viji3281** 1 year, 7 months ago  
the selected answer is correct

upvoted 2 times

✉ **rrongcheng** 1 year, 9 months ago  
Why not A?

"Azure Queue Storage is a service for storing large numbers of messages. You access messages from anywhere in the world via authenticated calls using HTTP or HTTPS. A queue message can be up to 64 KB in size. A queue may contain millions of messages, up to the total capacity limit of a storage account."

<https://docs.microsoft.com/en-us/azure/storage/queues/storage-queues-introduction#:~:text=Azure%20Queue%20Storage%20is%20a,limit%20of%20a%20storage%20account>.

upvoted 5 times

✉ **pieronegri** 1 year, 1 month ago

it says "Information regarding agreements is used by multiple divisions within Contoso, Ltd."  
It means pub sub pattern, which is not gracefully supported by storage queue.

upvoted 1 times

✉ **eladt** 1 year, 9 months ago

Should be "C. Azure Service Bus topic" - its the only one with max\unlimited retention period.  
All the others keeps the data for temp period.

upvoted 1 times

✉ **quokka** 1 year, 8 months ago

wrong. storage queue can also be infinite. <https://docs.microsoft.com/en-us/rest/api/storageservices/put-message#uri-parameters>

upvoted 2 times

## Introductory Info

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ContentUploadService -

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CS04 name: contentUploadService
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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
```

#### 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" : []
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```

#### Question

HOTSPOT -

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.

Hot Area:

#### Answer Area

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

## Answer Area

Correct Answer:

```
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)
 {
 ...
 }
}
```

Box 1: [BlobTrigger(..)]

Box 2: [Blob(..)]

Azure Blob storage output binding for Azure Functions. The output binding allows you to modify and delete blob storage data in an Azure Function.

The attribute's constructor takes the path to the blob and a FileAccess parameter indicating read or write, as shown in the following example:

```
[FunctionName("ResizeImage")]

public static void Run(
 [BlobTrigger("sample-images/{name}")] Stream image,
 [Blob("sample-images-md/{name}", FileAccess.Write)] Stream imageSmall)
{
 ...
}
```

Scenario: You must create an Azure Function named CheckUserContent to perform the content checks.

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Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-output>

✉  **MohmmadFayez**  9 months ago

1- Queue Trigre[]  
2- Blob[]  
upvoted 24 times

✉  **MiraA** 6 months, 2 weeks ago

The "content" parameter is of type "string" so it must be QueueTrigger.  
For example BlobTrigger uses Stream type, CosmosDBTrigger uses IReadOnlyList<> type, it seems the Table Storage has no trigger binding.

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-triggers-bindings?tabs=csharp#supported-bindings>  
<https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-queue-trigger>  
<https://docs.microsoft.com/cs-cz/azure/azure-functions/functions-bindings-storage-blob-trigger>  
<https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-cosmosdb-v2-trigger>  
upvoted 12 times

✉  **Mev4953** 3 months ago

BlobTrigge can also use string parameter

```
[FunctionName("BlobTriggerCSharp")]
public static void Run([BlobTrigger("samples-workitems/{name}")] Stream myBlob, string name, ILogger log)
{
```

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-trigger?tabs=csharp>

upvoted 2 times

✉  **PhILLI** 3 months, 1 week ago

Agree with Azure Queue Storage trigger indeed (see example on <https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-queue-trigger?tabs=csharp#example>)  
upvoted 1 times

✉  **Lucario95** 4 months, 3 weeks ago

This is correct according to the data type of "content" for the first binding and "output" for the second.  
upvoted 1 times

✉  **clarionprogrammer** Highly Voted  1 year ago

Correct.

Ref: <https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-output?tabs=csharp>  
<https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-storage-blob-input?tabs=csharp>

upvoted 11 times

✉  **shawnz** Most Recent  2 months, 2 weeks ago

the question said accept user upload content as a string.  
and user upload to blob to trigger the content check.  
so blobtrigger and blob are correct.  
upvoted 3 times

✉  **leonidn** 2 months, 3 weeks ago

"content" is of type string. Then QueueTrigger is the only what that is applicable. Agree with "blob".  
upvoted 2 times

✉  **gfiorini** 5 months ago

It is really annoying the way the question is worded. Where in the specs is written the source and the target of the Function ?! It is true that we can infer it from the possible answers. But why dont ask then "which are valid input / output" for the function ?  
upvoted 4 times

✉  **phvogel** 5 months, 3 weeks ago

The question has nothing to do with the architecture or design. It's actually asking if you can recognize valid trigger and output bindings. The only valid bindings are Queue Trigger (string) and Blob output (File.Write supports writing to a stream).  
upvoted 1 times

✉  **ning** 7 months, 4 weeks ago

I believe this is blobtrigger --> user upload contents into blob storage ...  
Need send to a service ... So I am think send to a queue for processing ...  
Just from the given info ...  
upvoted 2 times

✉  **mcanic** 3 months, 3 weeks ago

Blob trigger receives stream, Service Bus Queue trigger receives string, therefore the first option is not blob trigger but a queue trigger  
upvoted 1 times

✉  **ning** 7 months, 4 weeks ago

Depends on your interpretation for what is final step for azure function, whether to send the contents to the service, or remove the contents from the blob storage ... The requirements are not clear ...  
upvoted 2 times

✉  **j888** 8 months, 3 weeks ago

This is tricky, storage will be my general choice, however this statement "Messages are sent to contentuploadservice" leading me to believe this is service bus.  
upvoted 1 times

✉  **j888** 8 months, 3 weeks ago

I was wrong.  
The service bus trigger would be  
public static void Run([ServiceBusTrigger("CustomerQueue"....)  
upvoted 1 times

✉  **SuperPeteY** 11 months, 3 weeks ago

I believe the answer is QueueTrigger and Queue. This is an architectural design issue -- the entire reason to do user content auditing is to prohibit bad content from being stored and used. Therefore, use a queue to store these messages until they are verified. No need to store content in a blob until then -- Azure Storage Queue perfect solution.  
upvoted 5 times

✉  **Spooky7** 10 months, 3 weeks ago

Well, based what information was given it seems that entire design looks little bit different. User post content and it is saved in BlobStorage and available immediately. After that check is done and if content is invalid then it is replaced. So given answer is correct.  
upvoted 4 times

✉  **kwaazaar** 1 year ago

Correct

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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
```

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" : {
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AM14 "legalAgeGroupRule" : "Allow"
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### Question

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

#### Correct Answer: A

Scenario: All Internal services must only be accessible from Internal Virtual Networks (VNets)

There are three Network Location types – Private, Public and Domain

Reference:

<https://devblogs.microsoft.com/powershell/setting-network-location-to-private/>

Mo\_Mo\_01 Highly Voted 1 year ago

A

<https://docs.microsoft.com/en-us/azure/container-instances/container-instances-virtual-network-concepts#unsupported-networking-scenarios>

C

<https://docs.microsoft.com/en-us/azure/container-instances/container-instances-region-availability#windows-container-groups>  
upvoted 30 times

jokergester 1 year ago

yep currently, container groups are not supported on Windows containers  
upvoted 3 times

anandhpakash Highly Voted 11 months, 1 week ago

Private  
Linux

upvoted 7 times

SivajiTheBoss Most Recent 1 month, 2 weeks ago

Both A and C

Currently, only Linux containers are supported in a container group deployed to a virtual network.  
upvoted 1 times

leonidn 2 months, 3 weeks ago

A & C

Container group deployment to a virtual network is generally available for Linux containers. <https://docs.microsoft.com/en-us/azure/container-instances/container-instances-virtual-network-concepts#unsupported-networking-scenarios>

All Internal services must only be accessible from internal Virtual Networks (VNets).  
upvoted 2 times

✉ **Mev4953** 3 months, 1 week ago  
10.23.121.112 is private range IP  
upvoted 1 times

✉ **MiraA** 6 months, 2 weeks ago  
What about this tutorial with sample YAML file?  
<https://docs.microsoft.com/en-us/azure/container-instances/container-instances-multi-container-yaml#configure-a-yaml-file>

There is "type: Public" but no "ip" value together with "type: Microsoft.ContainerInstance/containerGroups".

Does it mean the "Public" option is supported now?  
Or specifying "ip" with value "10.x.x.x" in the assignment still means the private network?  
upvoted 1 times

✉ **mc0re** 8 months, 1 week ago  
Where did the "container group" requirement come from?  
upvoted 2 times

✉ **MiraA** 6 months, 2 weeks ago  
See line CS02:  
type: Microsoft.ContainerInstance/containerGroups  
upvoted 2 times

✉ **SnakePlissken** 11 months, 2 weeks ago  
Besides, IP address is in the private address range 10.0.0.0/24, so it can only be private.  
upvoted 6 times

✉ **kwaazaar** 1 year ago  
According to the articles mentioned by Mo\_Mo\_01:  
Exposing to internet/public is not yet supported, so must be private (A).

## Topic 31 - Testlet 9

upvoted 5 times

✉ **gbtest** 9 months, 4 weeks ago  
That's correct, but also noticed by the question 'Which two actions should you perform? Each correct answer presents part of the solution.  
NOTE: Each correct selection is worth one point.'  
There should be two answers, so i go for A and C.  
upvoted 3 times

✉ **Idkhow** 10 months, 1 week ago  
it's a service after all so i agree  
upvoted 2 times

## Introductory Info

Case study -

This is a case study. Case studies are not timed separately. You can use as much exam time as you would like to complete each case. However, there may be additional case studies and sections on this exam. You must manage your time to ensure that you are able to complete all questions included on this exam in the time provided.

To answer the questions included in a case study, you will need to reference information that is provided in the case study. Case studies might contain exhibits and other resources that provide more information about the scenario that is described in the case study. Each question is independent of the other questions in this case study.

At the end of this case study, a review screen will appear. This screen allows you to review your answers and to make changes before you move to the next section of the exam. After you begin a new section, you cannot return to this section.

To start the case study -

To display the first question in this case study, click the Next button. Use the buttons in the left pane to explore the content of the case study before you answer the questions. Clicking these buttons displays information such as business requirements, existing environment, and problem statements. When you are ready to answer a question, click the Question button to return to the question.

Background -

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

Current environment -

Architecture overview -

The company has a public website located at <http://www.cpndl.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.

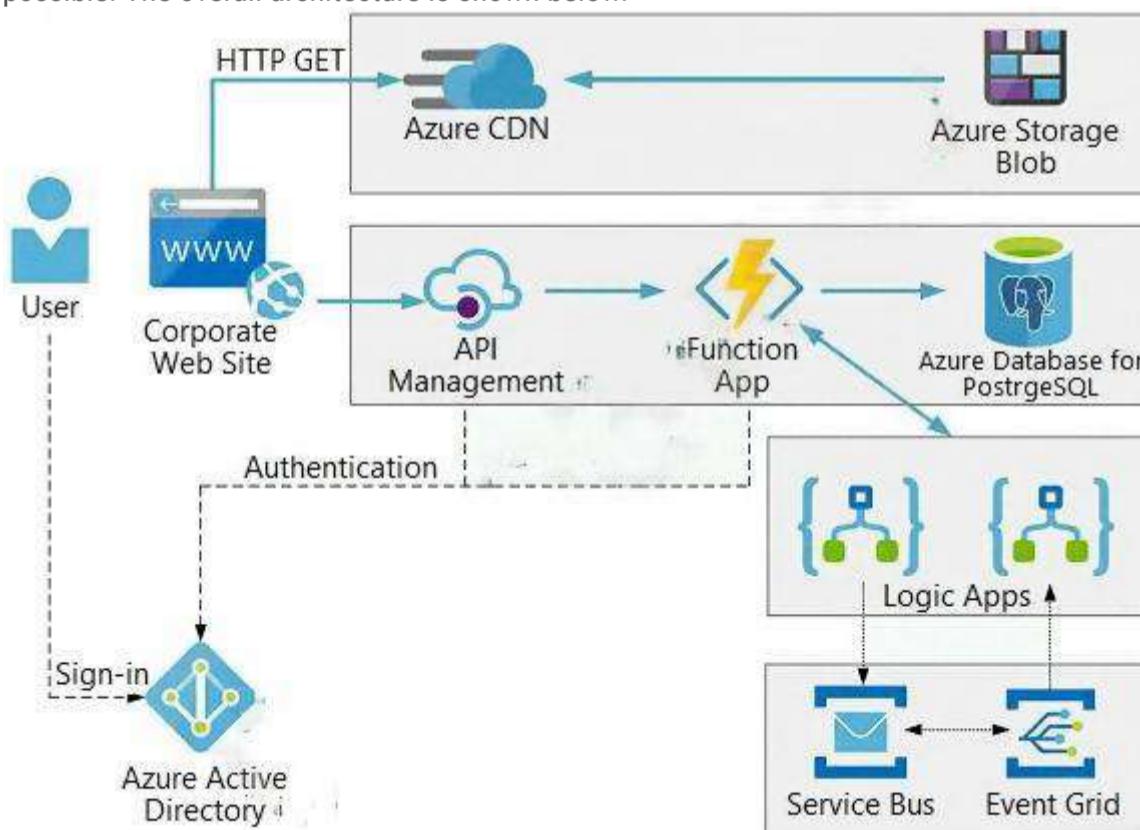
API Management and Azure Function App functions are used to process and store data in Azure Database for PostgreSQL. API Management is used to broker communications to the Azure Function app functions for Logic app integration. Logic apps are used to orchestrate the data processing while Service Bus and

Event Grid handle messaging and events.

The solution uses Application Insights, Azure Monitor, and Azure Key Vault.

Architecture diagram -

The company has several applications and services that support their business. The company plans to implement serverless computing where possible. The overall architecture is shown below.



User authentication -

The following steps detail the user authentication process:

1. The user selects Sign in in the website.
2. The browser redirects the user to the Azure Active Directory (Azure AD) sign in page.

3. The user signs in.
4. Azure AD redirects the user's session back to the web application. The URL includes an access token.
5. The web application calls an API and includes the access token in the authentication header. The application ID is sent as the audience ('aud') claim in the access token.
6. The back-end API validates the access token.

Requirements -

Corporate website -

Communications and content must be secured by using SSL.

Communications must use HTTPS.

Data must be replicated to a secondary region and three availability zones.

Data storage costs must be minimized.

Azure Database for PostgreSQL -

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

Azure Key Vault name: cpndlkeyvault

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

Azure Event Grid must use Azure Service Bus for queue-based load leveling.

Events in Azure Event Grid must be routed directly to Service Bus queues for use in buffering.

Events from Azure Service Bus and other Azure services must continue to be routed to Azure Event Grid for processing.

Security -

All SSL certificates and credentials must be stored in Azure Key Vault.

File access must restrict access by IP, protocol, and Azure AD rights.

All user accounts and processes must receive only those privileges which are essential to perform their intended function.

Compliance -

Auditing of the file updates and transfers must be enabled to comply with General Data Protection Regulation (GDPR). The file updates must be read-only, stored in the order in which they occurred, include only create, update, delete, and copy operations, and be retained for compliance reasons.

Issues -

Corporate website -

While testing the site, the following error message displays:

CryptographicException: The system cannot find the file specified.

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:

FunctionAppLogs -

```
| where FunctionName == "RequestUserApproval"
```

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.

Code -

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 }
```

Function app -

RequestUserApproval.cs:

```
RA01 public static class RequestUserApproval
RA02 {
RA03 [FunctionName("RequestUserApproval")]
RA04 public static async Task<IActionResult> Run(
RA05 [HttpTrigger(AuthorizationLevel.Function, "get", "post", Route = null)] HttpRequest req,
RA06 ILogger log)
RA06 {
RA07 log.LogInformation("RequestUserApproval function processed a request.");
RA08 ...
RA09 return ProcessRequest(req)
RA10 ? (ActionResult)new OkObjectResult($"User approval processed")
RA11 : new BadRequestObjectResult("Failed to process user approval");
RA12 }
RA13 private static bool ProcessRequest(HttpContext req)
RA14 {
RA15 ...
RA16 }
RA17 }
```

### Question

HOTSPOT -

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.

Hot Area:

## 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

Correct Answer:

## 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.

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Resource group \* (New) cplcorporatesite

[Create new](#)

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Storage account name ⓘ \*

corporatewebsitecontent ✓

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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

Account Kind: StorageV2 (general-purpose v2)

Scenario: Azure Storage blob will be used (refer to the exhibit). Data storage costs must be minimized.

General-purpose v2 accounts: Basic storage account type for blobs, files, queues, and tables. Recommended for most scenarios using Azure Storage.

Incorrect Answers:

- ✗ BlockBlobStorage accounts: Storage accounts with premium performance characteristics for block blobs and append blobs. Recommended for scenarios with high transaction rates, or scenarios that use smaller objects or require consistently low storage latency.
- ✗ General-purpose v1 accounts: Legacy account type for blobs, files, queues, and tables. Use general-purpose v2 accounts instead when possible.

Replication: Geo-redundant Storage

Scenario: Data must be replicated to a secondary region and three availability zones.

Geo-redundant storage (GRS) copies your data synchronously three times within a single physical location in the primary region using LRS. It then copies your data asynchronously to a single physical location in the secondary region.

## Incorrect Answers:

Geo-zone-redundant storage (GZRS), but it would be more costly.

Access tier: Cool -

Data storage costs must be minimized.

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

Hot - Optimized for storing data that is accessed frequently.

Cool - Optimized for storing data that is infrequently accessed and stored for at least 30 days.

Reference:

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

✉  **Paolo93** Highly Voted 9 months, 3 weeks ago

Replication should be GZRS.

Requirements ask "Data must be replicated to a secondary region and three availability zones". GRS option doesn't copy data in different availability zones

upvoted 22 times

✉  **gunz123** 9 months, 2 weeks ago

Geo-redundant storage (GRS) copies your data synchronously three times within a single physical location in the primary region using LRS. It then copies your data asynchronously to a single physical location in the secondary region. Within the secondary region, your data is copied synchronously three times using LRS.

Geo-zone-redundant storage (GZRS) copies your data synchronously across three Azure availability zones in the primary region using ZRS. It then copies your data asynchronously to a single physical location in the secondary region. Within the secondary region, your data is copied synchronously three times using LRS.

upvoted 3 times

✉  **gunz123** 9 months, 2 weeks ago

GZRS is correct answer

<https://docs.microsoft.com/en-us/azure/storage/common/storage-redundancy>

upvoted 3 times

✉  **MrXBasit** 9 months ago

I also agree the answer should be gpv2, gzrs and cool

upvoted 1 times

✉  **Fengtong** 8 months, 1 week ago

Why is not RA-GZRS? Isn't it much cheaper than GZRS?

upvoted 2 times

✉  **vokep77043** 8 months ago

No, RA is additional option which costs MORE.

upvoted 1 times

✉  **jkes80** Highly Voted 9 months, 2 weeks ago

What about cool vs hot in the last box? Shouldn't this be hot, because the site gets accessed frequently?

upvoted 10 times

✉  **ning** 7 months, 4 weeks ago

That is also my question? Any where mention performance requirements? Only thing to make it cool, is that behind CDN, cached inside CDN maybe?

upvoted 1 times

✉  **alperc** 5 months ago

No, even though its behind CDN, it should still be hot, because the CDN will most likely ask Storage Account several times a day. Cool will only be considered if the read frequency of storage account will be less than 1 per month.

upvoted 5 times

✉  **ReniRechner** 1 month, 3 weeks ago

But is only important to minimize storage costs, not storage access costs.

If they had said "minimize total storage costs" I also would have chosen hot.

upvoted 1 times

✉  **SivajiTheBoss** Most Recent 1 month, 2 weeks ago

Correct Answer: StorageV2, GZRS & Cool.

upvoted 1 times

✉  **leonidn** 2 months, 3 weeks ago

1. StorageV2 is a recommended kind.  
2. GZRS because "Data must be replicated to a secondary region and three availability zones." and are not required for reading access in the secondary region. Due to GZRS is cheaper than RA-GZRS, we select it.  
3. There are no specific requirements that lead us to which access tier is better. Cool has an advantage when we care about storage cost and we do not change files. We store SPA. It is not supposed to be huge. But due to we expect that the modern development process may be turned into multiple releases per day, I believe that hot is preferable. And again, because we do not have specific requirements and default is used to be "hot", I select "hot":

upvoted 5 times

✉  **lugospod** 3 months ago

Got this one 01/2022. Went with most voted (to avoid writing answers again)

upvoted 3 times

✉  **Lucario95** 4 months, 3 weeks ago

I agree with StorageV2, GZRS and COOL

upvoted 1 times

✉  **Lucario95** 3 months, 2 weeks ago

Thinking back, HOT should be better because of @alperc reply.

upvoted 1 times

✉  **phvogel** 5 months, 3 weeks ago

GZRS to get the data copied both to three zones within the region AND to another region.

General Storage V2 because BlobStorage is more expensive and doesn't support GZRS