# Exam Session - Cert Prep: Developing Solutions for Microsoft Azure (AZ-204)

cloudacademy.com/quiz/exam/3736890/results

#1

Your developers need to be able to send messages between the web and worker roles. They have asked you for architectural help. Which of the following options would be well suited to pass messages between a web and worker role?

✓ Azure Queue Storage

✗ Azure Blob Storage

✗ Azure File Storage

✗ Azure Table Storage

Explanation

Storage queues allow for asynchronous messaging.  You can 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/storage-dotnet-how-to-use-queues

Covered in this lecture

Queues

Course:Developing Long-Running Tasks on Azure

1m

#2

ASP.NET applications that run in Azure web app can create which of the following kinds of logs?

✓
Application tracing, Web server, Detailed error message, Failed request tracing

✗
Application tracing, Web server, Detailed error message, Access request tracing

✗
Application tracing, Web server, Error message, Access request tracing

✗
Application tracing, Web server, Error message, Successful request tracing

Explanation

ASP.NET applications running in Azure web apps can create the following types of logs:

- Application tracing
- Web server
- Detailed error message
- Failed request tracing.

https://azure.microsoft.com/en-us/documentation/articles/web-sites-dotnet-troubleshoot-visual-studio/
#3

In Azure Event Hubs, the Event Hubs REST API provides operations for working with two resources: Azure Resource Manager and Event Hubs service. Which statement describes a scenario when the Azure Resource Manager REST APIs are useful?

✗
They are useful in scenarios that enable the container level.

✗
They are useful in scenarios that enable the namespace level.

✗
They are useful in scenarios that enable the entity level.

✓
They are useful in scenarios that enable global authentication.

Explanation

The REST APIs fall into the following categories: Azure Resource Manager, Event Hubs service and, "Classic" or RDFE management. Azure Resource Manager are APIs that perform resource manager operations. They are useful in scenarios that enable global authentication, rather than at the namespace or entity level. Event Hubs service are APIs that enable operations directly on the Event Hubs service. "Classic" or RDFE management are APIs that provide programmatic access to much of the functionality available through the Azure portal. Please note that Event Hubs does not have RDFE REST APIs at this time.

https://docs.microsoft.com/en-us/rest/api/eventhub/#rest-operation-groups

#4

You are designing an Azure Functions Timer trigger and need to decide whether to use imperative or declarative binding in your function. Under which circumstance would imperative binding be the better choice?

✗
When the state of the input parameters need to be immutable

✓
When the input parameters are dependent on runtime factors

✗
When only the logic of the binding needs to be explicitly defined

✗
When the function's input and output are your primary concern

Explanation

With imperative binding, you can bind to any number of supported input and output binding on-the-fly in your function code. You might need imperative binding in cases where the computation of the binding path or other inputs needs to happen at run time in your function instead of at design time. By contrast, in declarative binding, job function bindings are defined in a JSON file without expressing the actual steps needed to complete the job. The goal is to address customer requirements as simply and concisely as possible.

https://docs.microsoft.com/en-us/azure/azure-functions/functions-triggers-bindings#advanced-binding-at-runtime-imperative-binding
Covered in this lecture
Use of Orchestrator and Activity Functions
Course:Introduction to Azure Functions

2m

#5

As the network administrator for a local manufacturer, you are responsible for analyzing the daily analysis reports for an Azure Redis Cache Premium tier instance. Generally, the reports look good; however, today you notice memory pressure on a server machine causing excessive page faults. What option below is the best solution for this problem?

✕ Configure a memory policy and remove expiration times on your keys.

✓ Configure a maxmemory-reserved value that is large enough to compensate for memory fragmentation.

✕ Scale to a smaller cache size.

✕ Combine your small cached objects into larger related objects.

Explanation

Memory pressure on the server side leads to all kinds of performance problems that can delay processing of requests. When memory pressure hits, page faulting can occur, causing the system to slow down significantly. Fortunately, several solutions exists. One, configure a memory policy and set expiration times on your keys. Two, configure a maxmemory-reserved value that is large enough to compensate for memory fragmentation. Three, break up your large cached objects into smaller related objects. Four, scale to a larger cache size. Five, if you are using a premium cache with Redis cluster enabled, you can increase the number of shards.

https://docs.microsoft.com/en-us/azure/redis-cache/cache-how-to-troubleshoot#memory-pressure-on-the-server

#6

You have successfully containerized your application within an Azure Container Registry, created an image of your application and pushed it into the container registry. You have also created an AKS cluster. Now you want to deploy the containerized application onto your AKS cluster. Which three steps do you need to complete? (Choose 3 answers)

✓ Get credentials to authenticate **kubectl** commands sent to the Kubernetes cluster.

✓ Create a manifest file declaring the required Kubernetes resources.

✓ Create the resources in the cluster

✗ Create a service principal to allow your cluster to interact with Azure resources

Explanation

You would need to complete all of the following steps in order to deploy your application to an AKS cluster except for creating a service principal. This step must already be completed in order for your AKS cluster to be provisioned and ready to host your application. You can also have AKS create a service principal for you using Azure CLI or Azure Portal.

https://docs.microsoft.com/en-us/azure/aks/tutorial-kubernetes-deploy-cluster#create-a-service-principal

#7

You are designing a messaging solution with the following requirements:Your application must store over 80 GB of messages in a queue, and the messages have a lifetime shorter than 7 days.Your application wants to track progress for processing a message inside of the queue.You require server-side logs of all of the transactions executed against your queues.Which of the following services will be included in your design?

✓ Azure Storage Queues

✗ Service Bus Queues

✗ Service Bus Topics

✗ Event Hubs

Explanation

This can be a difficult question, because Storage Queues and Service Bus Queues offer similar options. However Storage queues have a max queue size of 500 TB (versus 80GB for Service Bus queues), allowing for large amounts of data to be stored. Keep in mind, that's the max queue size, not the message size, which is 64 KB (48 KB when using Base64 encoding).

https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted
#8

You have configured an Azure Stream Analytics job and want to check its progress periodically using the metric graphing feature available in Azure Portal. You need to monitor the following metrics: Streaming units (percentage) Late input events (count) Early input events (count) Input Event Bytes (bytes) Runtime errors (count) Out-of-Order Events (count) You prefer to create the minimum number of graphs, for optimal efficiency. How many graphs will you need to create?

✗
5

✗
1

✓
3

✗
2

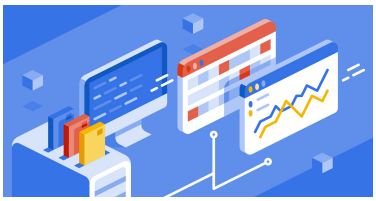
Explanation

All of the metrics on the same graph have to be the same unit of measure. There are three units of measure in the collection of metrics listed in this question - count, percentage, and number of bytes. Therefore, the correct answer is three.

/course/introduction-to-azure-stream-analytics/monitoring/
Covered in this lecture
Monitoring
Course:Introduction to Azure Stream Analytics

4m

#9



You are configuring your ARM template named AzureAppVMTemplate.json to deploy four virtual machines. The resource IDs for the virtual machines deployed in AzureAppVMTemplate.json will be passed to a separate ARM template titled AzureAppSecurity.json. What is required to pass the VM resource IDs from AzureAppVMTemplate.json to AzureAppSecurity.json successfully? (Choose 2 answers)

✓ AzureAppVMTemplate.json must be linked to AzureAppSecurity.json

✓ AzureAppVMTemplate can be a parent or child of AzureAppSecurity.json to pass the VM resource IDs to it.

✗ AzureAppVMTemplate.json must reference the AzureAppSecurity.json file.

✗ AzureAppVMTemplate.json template must be a parent of AzureAppSecurity.json template to pass the VM resource IDs to it.

Explanation

In order for AzureAppVMTemplate.json to pass the VM resource IDs to AzureAppSecurity.json, the two templates must be linked. It does not matter which template is the parent for this to succeed.

https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/overview

#10

There are four replicas of a multi-tier application separated into four resource groups with the following specifications:Each resource group is in a separate region - East US, West US, West Central US, and South Central US.Each resource group includes a replica of a three-tier application replica comprised of five VMs: two front-end VMs, two mid-tier application VMs, and one back-end database VM.You want to increase the resilience of your database solution by replacing the database hosted on an ARM virtual machine with Cosmos DB. You want to offer a consistent experience for each customer while minimizing the latency of your responses. Which consistency type would be ideal?

✗
Bounded Staleness

✓
Session

✗
Consistent Prefix

✗
Eventual

Explanation

Strong consistency guarantees that a read operation will return the most recent version of an item. This is the type of consistency that relational databases have. For a distributed database to achieve strong consistency, it has to ensure that each write operation has been propagated to all of the replicas before the operation is considered complete. There's an obvious problem with this approach. It's very slow, especially if the database is distributed over a wide geographic region. So how can Cosmos DB provide strong consistency for a global database? Well, it can't. If you choose strong consistency, then the database can only be in one region.

At the other end of the spectrum is eventual consistency. The only guarantee made by this approach is that if no new writes are made to an item, then eventually all of the replicas will have the same value for that item. This is a very weak guarantee because not only could a request return an old value, but it could return a value older than the one that you retrieved previously. This could happen if your second request connected to a replica that hadn't been updated yet. This is the level of consistency typically offered by NoSQL databases. It has the lowest latency, but the worst consistency.

Cosmos DB offers three other consistency levels that are in between these two extremes. As you add more consistency, both the latency and the cost generally go up.

Consistent Prefix is the same as eventual consistency except that it guarantees that read operations will never see out-of-order writes. That is, reads can still return older values, but never out of order.

Session consistency guarantees consistency for each client session. So the client will never see data older than what they have written during a session. This is relatively easy to provide because the system doesn't have to worry about conflicts between multiple clients. It just needs to keep things consistent for an individual client. This approach offers the lowest latency reads and writes. It's also by far the most popular consistency level chosen by Cosmos DB customers.

Bounded staleness guarantees that reads may lag behind writes by a limited amount of time. This costs as much as strong consistency, but it allows you to distribute your database across regions and has lower latency. This is the second most popular consistency level chosen by customers.

/course/designing-an-azure-data-implementation/designing-an-azure-data-implementation-cosmos-db/
Covered in this lecture
Cosmos DB
Course:Designing an Azure Data Implementation

12m

#11

Which tool can copy blobs from one Azure Storage container to another container programmatically, and delete data from the source container once the copy is complete?

✗ AzCopy

✓ Azure Storage Data Movement Library

✗ Azure Migrate

✗ Azure Storage Explorer

Explanation

It is possible to effectively move blobs between containers programmatically using the Microsoft Azure Storage Data Movement Library. This library contains methods that can be added to a C# project that can copy data between containers as well as delete the blobs after the copy process has been completed. To learn more about the Microsoft Azure Storage Data Movement Library refer to this URL (https://docs.microsoft.com/azure/storage/common/storage-use-data-movement-library).

/course/managing-azure-blob-storage/moving-blobs-between-storage-containers/?context_id=534&context_resource=lp

#12

Below is a section from an ARM Template.Which of the following options will cause the "adminPassword" property to be masked if deployed inside the portal?"parameters": { "adminPassword": {  "type": "_____"  },}

✓
secureString

✗
string

✗
secureObject

✗
array

Explanation

The secureString allows you to mask properties inside the portal.

https://docs.microsoft.com/en-us/azure/azure-resource-manager/resource-group-authoring-templates
#13

Your office has enabled Azure access to an on-premise application through Azure AD's single sign-on feature. Now branch offices, business partners and remote workers can access the application through a variety of portals, including Azure Myapps, Azure B2C, and Office 365.After management raises their concerns about a potential security risk due to widespread access, your IT department head suggests implementing MFA through Azure AD.Which access methods to your application below can require MFA to enhance application security?

✗
Azure B2B and Azure B2C

✗
Office 365 only

✗
Office 365 and Azure B2C

Office 365, Azure B2B and Azure B2C

Explanation

Azure AD B2B offers the ability to use authorization policies to protect corporate content. Conditional access policies like MFA can be used to protect corporate applications and data.

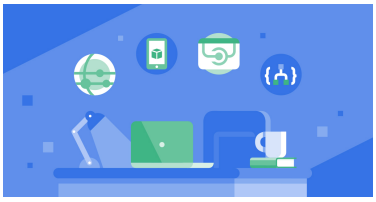
Applications registered with Azure AD B2C can be configured to handle many identity management tasks.

For example, you can allow users to sign up to use a registered application, you can enable a signed-up user to edit his profile, and you can even enable MFA in the application. Other identity management tasks that can be handled include allowing users to sign up and sign in with specific identity providers, such as Facebook, for example.

MFA can also be enabled for O365 users as well.

/course/designing-azure-identity-management/mfa-overview/

Covered in this lecture
MFA Overview
Course:Designing for Azure Identity Management



4m

#14

Your database administrator and you are brainstorming ways to monitor memory pressure on a newly installed Azure Redis Cache Premium tier instance. Your database administrator insists that using the cache misses Azure Portal metric is the best way to monitor memory pressure. Why do you advise against using cache misses for monitoring memory pressure?

Cache misses are normal and do not always reflect memory pressure.

Cache misses are more a reflection of server CPU utilization issues and latency issues.

Cache misses result from client/server regional variances and request/response timeouts.

Cache misses can only measure timeout issues resulting from low network bandwidth availability.

Explanation

Cache misses are not necessarily a bad thing. Not all data can be in the cache at once. When using the cache-aside programming pattern, an application looks first in the cache for an item. If the item is not there (cache miss), the item is retrieved from the database and added to the cache for next time. Cache misses are normal behavior for the cache-aside programming pattern. Higher than expected cache misses may be caused by application logic that populates and reads from the cache. However, if items are being evicted from the cache due to memory pressure then there may be some cache misses, but a better metric to monitor for memory pressure would be Used Memory or Evicted Keys.

https://docs.microsoft.com/en-us/azure/redis-cache/cache-how-to-monitor#available-metrics-and-reporting-intervals

#15

Before you deploy a new application to its production environment, you need to integrate a monitoring solution that sends messages to the development team's mobile devices. The key requirements for this messaging solution are: It can be deployed with minimal customization or administration required.It can deliver messages to mobile devices running Android and iOS operating systems.Which Azure solution is optimal for this scenario?

✗ Azure Service Bus

✗ Azure Event Hub

✓ Azure Notification Hub

✗ Azure Event Grid

Explanation

This is where Azure Notification Hubs and IoT Edge come in. The former is a ready-made smart device notification solution. Need to send push notifications to iPhones, Android phones, or tablets? Notification Hubs is your answer. The great thing about it is that it takes away a lot of the pain involved in supporting a variety of mobile devices. If you have

experience as a mobile developer, then you'll know what I am talking about. Unlike other forms of messaging, push notifications often have tricky platform-dependent logic. Scaling, managing tokens, and routing messages to different segments of users on different hardware and different versions of Android is non-trivial work for even an experienced tech team.

Notification Hub takes away most of that pain. It lets you broadcast to all platforms with a single interface. It can work both in the cloud or on-premises and includes security features like SAS, shared access secrets, and federated authentication. See the "How To" guide link for more details.

https://docs.microsoft.com/en-us/azure/notification-hubs/notification-hubs-push-notification-overview
#16

What Azure Active Directory (Azure AD) role is required to add users to applications?

✕
Azure Automation Manager

✕
Azure Owner

✕
Device Manager

✓
Azure AD administrator

Explanation

Azure AD can support password-based single sign on for any cloud-based app that has an HTML-based sign-in page. Administrators can create and manage application credentials, and assign those credentials to users or groups who need access to the application. Alternatively, administrators can assign applications to end users or groups, and allow the end users to enter their own credentials directly upon accessing the application for the first time in their access panel.

https://docs.microsoft.com/en-us/azure/active-directory/active-directory-appssoaccess-whatis#how-does-single-sign-on-with-azure-active-directory-work
Covered in this lecture

Configuring Authentication
Course:Configuring Azure VM and Container Security

4m

#17

Which Azure domain service is based in Azure rather than on-premise, and is designed to help migrate on-premise applications which need Active Directory Domain Service authentication to the cloud?

✗ Do-It-Yourself Active Directory Domain Services

✗ Azure AD Standalone

✗ Azure Active Directory Hybrid ID Solution

✓ Azure Active Directory Domain Services Solution

Explanation

Azure AD Domain Services solution is a cloud-based, lightweight option to meet on-premises identity requirements for network application development and testing. It isn't meant to replace your on-premises identity solution but rather act as a mechanism to help migrate on-premises applications that require AD DS authentication methods to the cloud.

/course/azure-active-directory-security/identity-management-1/

#18

You are managing an Azure Cosmos DB environment that is logging time-series data. Which example of a partition key would be a good choice for this architecture?

✗ A user ID

✓ A process ID

✗
A device ID

✗
A tenant ID

Explanation

In Cosmos DB, different scenarios require a different type of partition key for optimized performance. If you're using Cosmos DB for logging time-series data, then the hostname or process ID is a good choice for the partition key. A process ID is a system-generated unique identifier of the process that is referenced by a running instance of an application.

https://docs.microsoft.com/en-us/azure/cosmos-db/partition-data#design-for-scale
Covered in this lecture
Table Storage
Course:DP-201 Exam Prep - Additional Topics


3m

#19

You have a web app that is always running low on memory and is currently running on the S1 tier. You have already monitored performance metrics, and decided a new tier is the next step since memory is always above 80% utilization. What is the next tier you should try?

✓
Scale up to the S2 tier.

✗
Scale up to the P2 tier.

✗
Scale up to the P3 tier

✗
Scale up to the B2 tier.

Explanation

Scaling up to the S2 tier from the S1 tier will solve this issue because the S2 tier offers more hardware resources than S1.

https://azure.microsoft.com/en-us/documentation/articles/web-sites-scale/

#20

Which feature within SQL Database would allow a user to group multiple databases with variable usage demands together while limiting the cost to the customer?

✗ Shards

✗ Elastic Clusters

✗ Containers

✓ Elastic Pools

Explanation

SQL Database elastic pools are a simple, cost-effective solution for managing and scaling multiple databases that have varying and unpredictable usage demands. The databases in an elastic pool are on a single Azure SQL Database server and share a set number of resources (elastic Database Transaction Units (eDTUs)) at a set price. Elastic pools in Azure SQL Database enable SaaS developers to optimize the price performance for a group of databases within a prescribed budget while delivering performance elasticity for each database.

https://docs.microsoft.com/en-us/azure/sql-database/sql-database-elastic-pool

Covered in this lecture
Relational Database Storage
Course:Designing an Azure Data Implementation

11m


#21

You need to investigate unexpected errors caused by requests initiated by web applications hosted on Azure. You suspect errors were caused by several types of resources, including compute, storage, notifications, and key management. The best course of action is to compile all the data and then create queries to analyze the data manually. What type of log data should you review first, and what service should you use to review the data?

✓ Review diagnostic logs with Log Analytics

✗ Review activity logs with Azure Event Hub

✗ Review application logs with Azure Queue Storage

✗ Review boot diagnostic logs with Azure Table Storage

Explanation

To determine the right type of data to analyze, the key factor is that the errors were likely within requests from Azure services, which are actions tracked by diagnostic logs. It would also not be application logs, in this case, because the errors involve multiple types of resources, not just compute resources.

To determine the best service, the ability to create queries of log data is offered specifically by Log Analytics.

https://docs.microsoft.com/en-us/azure/monitoring-and-diagnostics/monitoring-overview-of-diagnostic-logs?toc=/azure/azure-monitor/toc.json

#22

You need to update the properties for a blob within an Azure Blob Storage account using Azure PowerShell. The process to update the properties includes the following steps, but not in the numbered order listed below. Which answer places the following numbered steps in the proper order to complete the task? Review the object properties Retrieve the desired blob Set the storage context to the correct storage account and provide access key Set properties using the set properties method

✓ 3-2-1-4

✗ 4-2-1-3

✗ 3-1-2-4

✕

2-3-1-4

Explanation

The correct order is:

(3) Set the storage context to the correct storage account and provide access key

(2) Retrieve the desired blob

- (1) Review the object properties
- (4) Set properties using the set properties method

🔗/course/managing-azure-blob-storage/setting-and-retrieving-blob-properties-and-metadata/
#23

Your company includes over 300 office employees and several employees who work remotely. All employees are registered within the company's Azure Active Directory tenant. You want to enable MFA for all employees, but allow them to skip MFA when logging in under normal circumstances.Normal circumstances are as follows:Office employees log in through Azure Active Directory over the company intranet.Remote employees log in through point-to-site VPNs through devices registered with Azure AD Join.You completed the following configurations: With ADFS configured, Azure AD will recognize all users logging in from the office as federated users allowed to skip MFA. A conditional access policy to allow remote users logging in from Azure AD joined devices to skip MFA.Will this allow on-premise and remote employees to bypass MFA under normal circumstances?

✓

Yes, it will allow on-premise and remote employees to bypass MFA.

✕

No, remote employees will still need to complete MFA.

✕

No, office employees will still need to complete MFA.

✕

No, both office and remote employees will still need to complete MFA.

Explanation

Federated Trusted IPs would allow office workers to bypass MFA, and the conditional access policy will allow remote workers to log in via devices joined to Azure AD.

https://docs.microsoft.com/en-us/azure/active-directory/conditional-access/controls

#24

You're designing a messaging solution and it has the following requirements:Messages must have a time-to-live of at least 10 daysYour application message size does not exceed 150 KBYour queue size will not grow larger than 50 GBYour application requires at-most-once deliveryWhich of the following services will be included in your design?

✓

Service Bus Queues

✗

Service Bus Topics

✗

Service Bus Relay

✗

Event Hubs

Explanation

Asa solution architect/developer, you should consider using Storage queues when:

> Your application must store over 80 GB of messages in a queue, where the messages have a lifetime shorter than 7 days.

As a solution architect/developer, you should consider using Service Bus queues when:

- The time-to-live (TTL) characteristic of the application-specific workload can exceed the 7-day period.
- Your application handles messages that can exceed 64 KB but will not likely approach the 256 KB limit.
- Your messaging solution must be able to support the "At-Most-Once" delivery guarantee without the need for you to build the additional infrastructure components.

https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted

#25

Your team develops multiple mobile finance APIs for an online banking service. You need to mitigate potential abuse for a single online product, a business travel expense submission service. Using Azure API Management, you need to set policies within Azure API Management to control the character types within data strings submitted to the backend via all the product APIs.Which stage and level would you need to set for this API policy in Azure API Management?

✓
Inbound stage and Product scope

✗
Backend stage and Specific API scope

✗
Frontend stage at Individual Operation score

✗
Inbound stage and Global scope

Explanation

This policy would control inbound stages APIs at the product scope because it modifies or controls request contents before they reach the backend for all of a product's APIs.

/course/configuring-azure-api-management/api-policies/
Covered in this lecture
API Policies
Course:Configuring Azure API Management

2m

#26

Your team is spending too much time recovering from unplanned events, specifically when small resource updates occur that disrupt service operations, or noncompliant resources are created. You want to automate a process to review log data related to resource updates, to detect anomalies within the updates. You would like to utilize live dashboards to evaluate the log data quickly. What type of logs would you analyze, and with what Azure service?

✓
Process activity logs with Azure Event Hub.

✗
Process diagnostic logs with Log Analytics.

✗
Process application logs with tables in Azure Storage.

✗
Process diagnostic logs with Power BI.

Explanation

Azure offers activity logs to help you track subscription level operations on resources, such as creating or updates resources. Azure Event Hubs allows you to receive thousands of log events per second and detect anomalies, and it also provides live dashboards as well.

https://docs.microsoft.com/en-us/azure/monitoring-and-diagnostics/monitoring-overview-activity-logs
#27

Stuart is a contractor who needs to read and write access to resources within two resource groups, Resource Group 1 and Resource Group 2. He will assist with updates to live applications within both resource groups. The role assignment has the following requirements: For security reasons, credentials assigned to contractors must last no longer than five business days. This release will take 30 business days to properly plan, test, and execute.  If Stuart does not have access to resources at all times, the project will be compromised. How can these requirements and project goals be met?

✓
Assign Stuart an active role that expires after five business days. Assign a resource administrator to extend his role before it expires.

✗
Assign Stuart an eligible role that expires after five business days. Assign a designated approver to extend his role before it expires.

✗
Assign Stuart an active role that expires after 30 business days. Assign a Privileged Role Administrator to review his activity and all actions performed on the resources for 30 business days.

✗

Assign Stuart an eligible role that expires after 30 business days. Require MFA for each login, and re-approval for role activation every 5 days.

Explanation

Here are the key facts related to this question:

- Roles with expiration can be extended or renewed. Extensions are better in this case to avoid potential loss of access during role renewal.
- Only resource administrators (Owners, User Access Administrators, and Global Admins) can renew or extend roles in Azure PIM.

https://docs.microsoft.com/en-us/azure/active-directory/privileged-identity-management/pim-resource-roles-configure-role-settings#require-multi-factor-authentication

#28

You are configuring how your application responds to transient failures. Which set of statements regarding transient failure is correct?

✓

An exponential backoff retry strategy is ideal for background operations. A regular interval retry strategy is ideal for customer-facing operations. Store retry strategy files and code centrally.

✗

An immediate retry strategy is ideal for background operations. Use a finite number of retries instead of an endless number of retries. Fewer retries should be attempted for critical processes.

✗

Implement duplicated layers of retries in your code. Minimize randomization in your retry strategy. Use a continuous number of retries instead of a finite number.

✗

Log transient failures as errors. Hard code retry strategy into each layer of your application. Use a passive approach to retrying critical processes.

Explanation

The correct choice is exponential backoff strategy for backend process, a regular interval strategy is ideal for client-facing operations, and files and code for retries should be stored centrally.

/course/developing-autoscaling-azure/transient-faults-general-guidelines-for-dealing-with-them/
Covered in this lecture
Transient Faults: General guidelines for dealing with them
Course:Developing for Autoscaling on Azure

1m

#29

Which Azure CLI command will provision an Azure Container Registry?

✓ az acr create

✗ az acr import

✗ az acr config

✗ az acr run

Explanation

The CLI command 'az acr create' will provision a new registry in ACR. The import command imports an image from one registry into another. The config command configures policy for the registry. The run command queues a quick run for a registry.

https://docs.microsoft.com/en-us/cli/azure/acr?view=azure-cli-latest#az-acr-create
Covered in this lecture
Azure Container Registry
Course:Introduction to AKS

4m

#30

The junior database administrator at your organization is experimenting with an Azure Stream Analytics parallel job. The query is designed to be embarrassingly parallel. The job input is from an Event Hub with eight partitions. Which of the following would be feasible for the job output?

✗
An Event Hub with 0 partitions

✗
An Event Hub with 16 partitions

✓
A Blob Output

✗
A Blob Output with 8 partitions

Explanation

The number of input partitions must equal the number of output partitions so the idea is to avoid a mismatched partition count issue. Blob output does not currently support partitions. However, it will inherit the partitioning scheme of the upstream query. If Event Hubs are used, there must be eight partitions.

https://docs.microsoft.com/en-au/azure/stream-analytics/stream-analytics-scale-jobs#example-scenarios-that-are-not-embarrassingly-parallel
#31

You are designing a networking events mobile application with the Mobile Apps platform in Azure App Service. What type of notification would you send to clients by integrating their SDKs with the registration capabilities of Azure Notification Hubs?

✓
push

✗
pull

✗
post

✗
get

Explanation

When developing a mobile application in Azure App Service, Azure Notification Hubs provides a multiplatform, scaled-out infrastructure that enables you to send mobile push notifications from any backend (in the cloud or on-premises) to any mobile platform. With a single API call, you can target individual users or entire audience segments containing millions of users, across all their devices.

https://docs.microsoft.com/en-us/azure/notification-hubs/notification-hubs-push-notification-overview

#32

You are binding a certificate with IP SSL for your Azure App Service web app. What additional step is required to successfully bind a certificate with IP SSL that is unnecessary for binding other types of SSL certificates with an App Service web app?

✓
Re-map your A record to the new custom domain IP address

✗
Enforce HTTPS

✗
Ensure your app deployed on the basic level tier or higher

✗
Provide the certificate password

Explanation

Only one IP SSL binding may be added. This option allows only one SSL certificate to secure a dedicated public IP address. The other steps, enforcing HTTPS and providing the certificate password, are required for all SSL certificate types. The other potential answer is required for other SSL certificates - at least a basic level tier for your app service. For IP SSL, you actually are required to use either the production or isolated tier.

https://docs.microsoft.com/en-us/azure/app-service/configure-ssl-bindings#remap-a-record-for-ip-ssl

#33

Which PowerShell command will create a new deployment slot for a web app?

✓

New-AzWebAppSlot -ResourceGroupName [resource group name] -Name [web app name] -Slot [deployment slot name] -AppServicePlan [app service plan name]

✗

New-AzDeploymentSlot -ResourceGroupName [resource group name] -Name [web app name] -Slot [deployment slot name] -AppServicePlan [app service plan name]

✗

New-AzWebAppSlot -Name [web app name] -Slot [deployment slot name] -AppServicePlan [app service plan name]

✗

New-AzWebAppDeploymentSlot -ResourceGroupName [resource group name] -Name [web app name] -Slot [deployment slot name] -AppServicePlan [app service plan name]

Explanation

The correct answer is:

**New-AzWebAppSlot -ResourceGroupName [resource group name] -Name [web app name] -Slot [deployment slot name] -AppServicePlan [app service plan name].**

All of the other answers contain errors.

https://azure.microsoft.com/en-us/documentation/articles/sql-database-elastic-pool-create-powershell/
#34

Which of the following validation methods can be implemented through the use of Visual Studio Enterprise?

✗

custom telemetry tests

✗

URL ping tests

✓

playback of recorded web requests

✕

custom attack surface reviews

Explanation

Using Visual Studio, you can playback a recorded series of web requests against your website. These multi-step tests are created in Visual Studio Enterprise.

/course/configuring-azure-application-and-data-security/implementing-security-validations-for-application-development/
Covered in this lecture
Implementing Security Validations for Application Development
Course:Configuring Azure Application and Data Security

1m

#35

You have just launched an update for your multi-language translation mobile app, hosted on App Service. You receive multiple complaints that customer submissions of text translations are not being processed, and did not receive HTTP 4xx or 5xx error code responses. You want to know which App service components may have caused the issue. What log type should you enable?

✓

Failed Request Tracing

✕

Web Server Logging

✕

Detailed Error Messaging

✕

Application Logging

Explanation

Detailed information on failed requests, including a trace of the IIS components used to process the request and the time taken in each component. It's useful if you want to improve site performance or isolate a specific HTTP error.

https://docs.microsoft.com/en-us/azure/app-service/troubleshoot-diagnostic-logs

#36

When using a mobile app with the Azure Notification Hub services, what are the required steps to ensure that push notifications are received on mobile devices?

✓

Configure the Notification Hub. Retrieve the PNS handle from the provider. Register the PNS handle with the app back end. The Notification Hub sends the message to the platform notification service.

✗

Retrieve the PNS handle from the provider. Register the PNS handle with the app back end. The Notification Hub sends the message to the platform notification service.

✗

Configure the Notification Hub. Retrieve the PNS handle from the provider. The Notification Hub sends the message to the platform notification service.

✗

Configure the Notification Hub. Register the PNS handle with the app back end. The Notification Hub sends the message to the platform notification service.

Explanation

At the high level , this is how the push notification works

1. The client app decides it wants to receive pushes, and contacts the corresponding PNS to retrieve its unique and temporary push handle. The handle type depends on the system.

2. The client app stores this handle in the app back-end or provider.

3. To send a push notification, the app back-end contacts the PNS using the handle to target a specific client app.

4. The PNS forwards the notification to the device specified by the handle.

https://docs.microsoft.com/en-us/azure/notification-hubs/notification-hubs-push-notification-overview

#37

Your team is spending too much time recovering from unplanned events, specifically when small resource updates occur that disrupt service operations, or noncompliant resources are created. You want to automate a process to review log data related to resource updates. You also need to design specific queries and potentially alerts related to these kinds of noncompliant resource updates. What type of logs would you analyze, and with what Azure service?

✓ Analyze activity logs with Log Analytics

✗ Analyze diagnostic logs with Event Grid

✗ Analyze application logs with Stream Analytics

✗ Analyze diagnostic logs with Event Hub

Explanation

There are three types of logs we need to be aware of: activity logs, diagnostic logs, and application logs, or guest OS logs. Let's take a look at where these logs exist within an Azure subscription in relation to the resources they are monitoring. Here we have a Non-Compute Resource, which is tightly integrated and delivered through Azure providers, for example a network security group. Next to this, we have a Compute Resource.

This is a virtual machine with a guest OS, like Windows or Linux, and it has an application installed like IIS or Apache. Activity logs provide a record of operations from a subscription level, executed against the resource. For example, when administrative tasks are performed on the resource, like creating a resource or updating the properties of an existing resource, this will generate an event in the activity log. Diagnostic logs are collected within a subscription at an Azure resource level for services like VPN gateways or network security groups. Not all Azure services have an option for diagnostic logging, and the level of detail you can capture varies. You can view a full list of resources that support diagnostic logging from the Microsoft Azure website. Application logs are logs generated by applications or services within a guest OS. These logs are collected from within the operating system through an agent. Application logs can be collected from core services, like Windows Event logs, or from applications like IIS. Diagnostic logging can be enabled in a couple of ways: using the Azure portal, PowerShell, Azure CLI or the REST API via Azure Resource Manager.

/course/designing-for-azure-operations/designing-for-azure-operations-section1-3-log-analytics/
Covered in this lecture
Log Analytics
Course:Designing for Azure Operations

3m

#38

With a web application deployed to Azure Web Apps, a company wants to start deploying rolling updates, but at the same time, they want to test the updates on the Azure environment before promoting the app to production. Which of the approaches below would help fulfill their requirements?

✗
Create a virtual machine and re-create the web application there. Deploy the updates, test the application and then deploy it to production.

✗
Create an on-premise virtual machine and re-create the web application there. Deploy the updates, test the application and then deploy it to production.

✓
Create a deployment slot and configure the app on this slot. Test the app, then swap the slots.

✗
Create a separate web app, then deploy and test it. Then deploy the web app with the updates to the production site using Visual Studio.

Explanation

The Web Apps service in Azure App Service allows you to create deployment (staging) slots to have a separate staging environment for testing updates before they get rolled out to production. The deployment slot creates a new environment which can then be swapped with the production environment after all testing is complete.

https://docs.microsoft.com/en-us/azure/app-service-web/web-sites-staged-publishing

#39

If you don't know how long to retain data when setting a retention period for immutable blob storage, what kind of policy can you put in place?

✗
Elastic

✗
LTR

✓
Legal

✗
Fluid

Explanation

Immutable storage supports the following features:

Time-based retention policy support: Users can set policies to store data for a specified interval. When a time-based retention policy is set, blobs can be created and read, but not modified or deleted. After the retention period has expired, blobs can be deleted but not overwritten.

Legal hold policy support: If the retention interval is not known, users can set legal holds to store immutable data until the legal hold is cleared. When a legal hold policy is set, blobs can be created and read, but not modified or deleted. Each legal hold is associated with a user-defined alphanumeric tag (such as a case ID, event name, etc.) that is used as an identifier string.

https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-immutable-storage
Covered in this lecture
Blob Storage Retention
Course:Configuring Azure Application and Data Security

1m

#40

You need to implement a secure method for your development team to quickly configure Azure service security to allow Azure resources to communicate via authenticated requests, without storing credentials within the service code or storage.Your requirements are:The method must work within Azure Active DirectoryThe method must be independent of any

specific Azure resources because your team quickly creates and deletes resources in multiple environments.The method must work within multiple Azure Services, and not be specific to one service type such as storage or compute.Which security method should you implement?

✓ User-Assigned Managed Identities

✗ System-Assigned Managed Identities

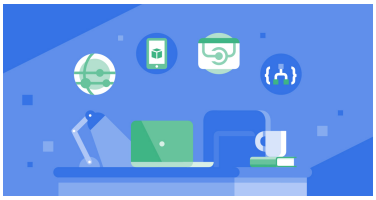
✗ Shared Access Signatures

✗ Privileged Identity Management services

Explanation

A user-assigned managed ID is a managed identity type that is a standalone resource that can be used with multiple resources, and is independent of any resource lifecycle.

/course/designing-azure-identity-management/overview-of-managed-identities-for-azure-resources/
Covered in this lecture
Overview of Managed Identities for Azure Resources
Course:Designing for Azure Identity Management



3m

#41

When using the Azure Monitoring service for Web Apps in Azure, which of the below logging facilities is not an available option?

✗ Application Logging (File System)

✗ Application Logging (Table Storage)

✗

Application Logging (Blob Storage)

Application Logging (Queue Storage)

Explanation

By default, the following Application Diagnostics are disabled for a Web App service , but can be enabled whenever required:

1. Application Logging (File System): The logs are collected by the file system of the web app.
2. Application Logging (Table Storage): The logs are collected in the Table storage that is specified under Manage Table Storage.
3. Application Logging (Blob Storage): The logs are collected in the Blob container that is specified under Manage Blob Storage.

https://docs.microsoft.com/en-us/azure/app-service-web/web-sites-enable-diagnostic-log

#42

Which of the following PowerShell cmdlets will initiate a planned failover for an Azure SQL Database?

Set-AzSqlDatabaseSecondary -Failover

Set-AzSqlDatabaseSecondary -Failover -AllowDataLoss

Set-AzSqlDatabasePrimary -Failover

Set-AzSqlDatabasePrimary -Failover -AllowDataLoss

Explanation

**Set-AzSqlDatabaseSecondary** with the -Failover parameter used to promote a secondary DB to primary DB, demoting the existing primary to secondary.

https://azure.microsoft.com/en-us/documentation/articles/sql-database-geo-replication-failover-powershell/

#43

You have an ARM template, and you need to test and deploy it with PowerShell. Which of the following shows the correct series of commands to run?

✓

1. Add-AzureAccount
2. New-AzResourceGroup
3. Test-AzResourceGroupDeployment
4. New-AzResourceGroupDeployment

✗

1. Login-AzureAccount
2. New-AzureResourceGroup
3. Test-AzureResourceGroupDeployment
4. New-AzureResourceGroupDeployment

✗

1. Add-AzureAccount
2. Test-AzureResourceGroupDeployment
3. New-AzureResourceGroup
4. New-AzureResourceGroupDeployment

✗

1. Login-AzureAccount
2. Test-AzureResourceGroupDeployment
3. New-AzureResourceGroup
4. New-AzureResourceGroupDeployment

Explanation

This is a difficult question if you don't use PowerShell regularly.

However the order should be to first to login

```
Add-AzureAccount
```

Next you can create the resource group

```
New-AzResourceGroup -Name ExampleResourceGroup -Location "West US"
```

Then you can test the deployment

```
Test-AzResourceGroupDeployment -ResourceGroupName ExampleResourceGroup -TemplateFile
<PathToTemplate>
```

Then you can actually deploy the resource group

```
New-AzResourceGroupDeployment -Name ExampleDeployment -ResourceGroupName
ExampleResourceGroup -TemplateFile <PathToTemplate> -TemplateParameterFile
<PathToTemplateParams>
```

https://docs.microsoft.com/en-us/azure/azure-resource-manager/resource-group-template-deploy

#44

Your manager has asked for advice on how best to fire off a console app that will nightly pick up some files that are uploaded to a Web App hosted on App Service and add them to Blob Storage. Cost and management effort are a concern. Given what you know, which service would work best?

✓ WebJobs

✗ Azure Logic Apps

✗ Azure Functions

✗ Azure Automation

Explanation

While there are multiple answers that would work, the answer that would be considered the "best" is the use of WebJobs.

WebJobs will have access to the files on the servers without any additional configuration. That will keep management and cost down.

https://docs.microsoft.com/en-us/azure/app-service-web/web-sites-create-web-jobs

#45

Which PowerShell cmdlet can you use to create a new elastic database in a pool?

✓

New-AzSqlDatabase

Add-AzureSqlDatabase

New-AzPoolSqlDatabase

Add-AzurePoolSqlDatabase

Explanation

To create a new elastic database in a pool use the following command: **New-AzSqlDatabase -ResourceGroupName "resourcegroup" -ServerName "server" -DatabaseName "database" -ElasticPoolName "elasticpool"**

https://azure.microsoft.com/en-us/documentation/articles/sql-database-elastic-pool-create-powershell/