Exam Session - Knowledge Check: Design Azure Compute Infrastructure

cloudacademy.com/quiz/exam/3769770/results

#1

HTTP triggers and bindings in Azure Functions allow you to use Azure Functions to respond to which of the following?

✗
dependencies

✗
exceptions

✗
proxies

✓
events

Explanation

With HTTP triggers and bindings in Azure Functions, you can use Azure Functions to build serverless APIs and respond to webhooks. A webhook allows a function to provide real-time data to other applications.

- An HTTP trigger lets you invoke a function with an HTTP request. This can be customized to respond to webhooks.
- An HTTP output binding allows you to respond to the request.

https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-http-webhook
Covered in this lecture
Handling Device-To-Cloud data with Azure Functions
Course:Processing IoT Hub Events and Data

7m

#2

In addition to the high availability offered by multi-region deployment, what benefits does deployment within paired Azure regions offer? (Choose 2 answers)

✓
Added stability during planned updates

✓
Prioritized system recovery from an outage

✗
Reduced multi-region deployment costs

✗
Cross region system intercommunication (CRSI) is enabled

Explanation

Region recovery order – In the event of a broad outage, recovery of one region is prioritized out of every pair. Applications that are deployed across paired regions are guaranteed to have one of the regions recovered with priority. If an application is deployed across regions that are not paired, recovery might be delayed – in the worst case the chosen regions may be the last two to be recovered.

Updates Sequential updates – Planned Azure system updates are rolled out to paired regions sequentially (not at the same time) to minimize downtime, the effect of bugs, and logical failures in the rare event of a bad update.

https://docs.microsoft.com/en-us/azure/best-practices-availability-paired-regions

#3

Which of the following is not an example of a microservice?

✗
Protocol gateway

✓
Virtual machine

✗
Queue

✗

Cache

Explanation

Today's Internet-scale services are built using microservices. Examples of microservices include protocol gateways, user profiles, shopping carts, inventory processing, queues, and caches.

https://azure.microsoft.com/en-gb/documentation/articles/service-fabric-overview/

#4

An application is considered a 'monolith' when _____.

✓ the entire software package is included in one application

✗ it reaches a certain size and complexity

✗ your application is in its early stage of development, or greenfield development

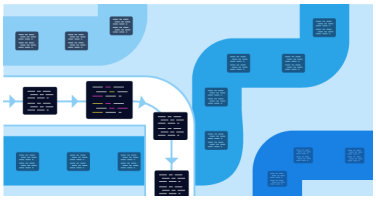
✗ the software includes several separate applications that work together, but each focus on specified tasks

Explanation

Monoliths are when all of the modules that comprise your software are in one application. For context, this is the opposite of the microservices architecture where different services are broken out into different discreet deployable applications.

/course/introduction-to-continuous-delivery/architecting-for-continuous-delivery/

Covered in this lecture
Architecting for Continuous Delivery
Course:Introduction to Continuous Delivery



8m

#5

In Service Fabric, microservices are hosted in _____.

✗
VMs

✓
Containers

✗
Processes

✗
Azure Redis Cache

Explanation

Service Fabric provides comprehensive runtime and lifecycle management capabilities to applications composed of these microservices. It hosts microservices inside containers that are deployed and activated across the Service Fabric cluster.

https://azure.microsoft.com/en-gb/documentation/articles/service-fabric-overview/

Covered in this lecture
Microservices Benefits, Challenges & Best Practices
Course:Mastering Microservices with Python, Flask, and Docker

3m

#6

What is Azure Batch?

✗
A platform for managing microservices in the cloud

✗
A platform for managing large volumes of VMs in the cloud

✓
A platform for running large-scale parallel and HPC applications in the cloud

✗
A platform for managing large-scale parallel messaging infrastructure in the cloud

Explanation

Azure Batch helps you run large-scale parallel and HPC applications efficiently in the cloud. It's a platform service that provides job scheduling and auto-scaling of a managed collection of virtual machines to run the jobs. By using Batch, you can configure workloads to run in Azure on demand or on a schedule and not worry about the complexity of configuring and managing an HPC cluster, VMs or a job scheduler.

https://docs.microsoft.com/en-us/azure/batch/batch-technical-overview

Covered in this lecture

Summary

Course:Developing Long-Running Tasks on Azure

1m

#7

An Azure Batch job manages a collection of _____.

✗ scripts

✗ packages

✓ tasks

✗ pools

Explanation

A job is created to manage a collection of tasks. Each job is associated with a specific pool where that job's tasks will run. Each task runs the application or script uploaded to process the data files it downloads from the Storage account. As each task completes, it can upload its output to Azure Storage.

https://docs.microsoft.com/en-us/azure/batch/batch-api-basics#batch-service-workflow

Covered in this lecture

Long-Running Tasks

Course:Developing Long-Running Tasks on Azure

1m

#8

What are the two types of Azure platform events that can affect the availability of your VMs?

✓ Planned and Unplanned maintenance

✗ Failover and Natural disasters

✗ Upgrades and Viruses

✗ Failover and Restore

Explanation

The two types of Azure platform events that can affect a VMs availability are Planned and Unplanned maintenance events.

https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/sap-high-availability-architecture-scenarios#planned-and-unplanned-maintenance-of-virtual-machines

#9

Your organization's marketing department has an occasional job that puts a message on an event hub queue. In turn, this triggers an Azure Function that will save the contents of the message onto a storage account. The function runs for about 4 minutes on average. Which Azure Function pricing model should you select when creating the application container in which this function will reside?

✗ The Bundle Plan

✗ The Dedicated Plan

✕
The Premium Plan

✓
The Consumption-based plan

Explanation

The Consumption Plan is very useful if your functions will only be running intermittently, and not continuously or very frequently throughout a given month. The Consumption plan is the default and offers the following benefits. One - pay only when your functions are running. Two - scale out automatically, even during periods of high load. On a Consumption plan, a function can run for a maximum of 10 minutes.

https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale
Covered in this lecture
Designing Solutions for Serverless Computing
Course:Designing an Azure Compute Infrastructure

5m

#10

_____ enable developers with the ability to perform A/B testing on Azure App Service apps, and provides you a separate deployment environment along with the default production environment.

✕
App Instances

✕
Isolated Service Plans

✕
Azure DevOps Git Repos

✓
Deployment Slots

Explanation

When you deploy your web app, web app on Linux, mobile back end, and API app to App Service, you can deploy to a separate deployment slot instead of the default production slot when running in the Standard or Premium App Service plan mode. Deployment slots are actually live apps with their own hostnames. App content and configurations elements can be swapped between two deployment slots, including the production slot.

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

#11

A company is looking at using the Azure Media services to deliver their video content. They have users distributed in many geographic locations. They want to deliver the video content so that the users have the least latency when viewing the video content. Which of the below options can help them achieve this purpose?

Create storage accounts in separate locations and store the video content for previewing in the user's location

Create Azure SQL Databases in separate locations and store the video content for previewing in the user's location

Use the Azure CDN service along with the Azure Media Services

Create multiple Azure Media Services in the different geographic locations.

Explanation

Azure Media services can be supported by Azure Content Delivery network, so the encoded videos can be pushed to the various CDN locations. The users will then get the content from the location that is closest to them.

https://docs.microsoft.com/en-us/azure/media-services/media-services-frequently-asked-questions

#12

Which Azure storage offering provides backup-as-a-service for applications and servers, hosted both on-premises as well as within Azure?

Azure Backup

✕
Azure Cloud Storage

✕
Azure Site Recovery

✕
StorSimple

Explanation

Azure Backup is the Azure-based service you can use to back up (or protect) and restore your data in the Microsoft cloud. Azure Backup replaces your existing on-premises or off-site backup solution with a cloud-based solution that is reliable, secure, and cost-competitive. Azure Backup offers multiple components that you download and deploy on the appropriate computer, server, or in the cloud.

https://docs.microsoft.com/en-us/azure/backup/backup-introduction-to-azure-backup
Covered in this lecture
Conclusion
Course:Implementing Azure Backups

3m

#13

Distributing your virtual machines in different _____ will offer more protection in the event an entire data center fails.

✕
update domain

✕
fault domain

✕
availability set

✓

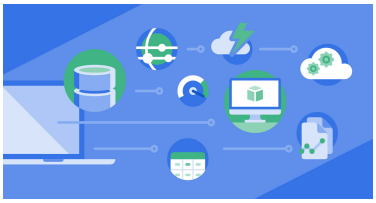
availability zones

Explanation

Availability sets offer protection against different types of failures and maintenance in a single data center, but availability zones offer protection against the failure of an entire data center because you've distributed resources among multiple data centers.

https://docs.microsoft.com/en-us/azure/availability-zones/az-overview

Covered in this lecture
Virtual Machines
Course:Azure Compute Fundamentals



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#14

How is a Batch pool created in Azure Batch?

✗ Manually by the user

✗ Automatically by the Batch service when the job is specified

✓ Manually by the user or automatically by the Batch service when the job is specified

✗ Automatically by Azure based on available resources and the job type

Explanation

A Batch pool can be created manually by the user, or by the Batch service automatically when you specify the work to be done.

https://azure.microsoft.com/en-gb/documentation/articles/batch-api-basics/

#15

Which Microsoft Azure Site Recovery (ASR) component is responsible for the replication during a failback from Azure?

✓ Master target server

✗ Process Server

✗ Configuration Server

✗ Management Server

Explanation

The master target server is installed on-premise and handles replication data during failback from Azure. The management server you created on-premises has a master target server installed by default. However, depending on the volume of failed back traffic you might need to create a separate master target server for failback.

https://azure.microsoft.com/en-us/documentation/articles/site-recovery-components/