Exam Session - Cert Prep: Microsoft Azure Administrator (AZ-104)

cloudacademy.com/quiz/exam/3769812/results

#1

Which of the following can be used to easily remove a resource lock?

✓
ResourceId

✗
ApplicationId

✗
UserId

✗
SystemId

Explanation

An easy way to remove a resource lock is to specify the ResourceId associated with the lock.

https://blogs.msdn.microsoft.com/cloud_solution_architect/2015/06/18/lock-down-your-azure-resources/

#2

The following is a subsection of an ARM template to deploy a Windows VM. In order to create the network interface you need a public IP Address and a Virtual Network. Which of the answers below belong in the dependsOn array to accomplish that objective?... {"apiVersion": "2016-03-30","type": "Microsoft.Network/networkInterfaces","name": "[variables('nicName')]","location": "[resourceGroup().location]","dependsOn": [_____FILL_IN_THE_BLANK_____"[resourceId('Microsoft.Network/virtualNetworks/', variables('virtualNetworkName'))]"],...

✓
"[resourceId('Microsoft.Network/publicIPAddresses/', variables('publicIPAddressName'))]",

✗

"[resourceId('Microsoft.Network/networkInterfaces/', variables('nicName'))]"

✕

"[reference(variables('publicIPAddressName')).dnsSettings.fqdn]"

✕

"[resourceId('Microsoft.Storage/storageAccounts/', variables('storageAccountName'))]",

Explanation

The dependsOn property of a resource will allow you to delay the creation of a resource until another exists.

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

#3

You need to create Azure resource templates to automate the deployment of resources. At the same time, you need to ensure that anyone can differentiate between resources created for development or production. Which of the below template features can help people identify the purpose of deployed resources in this way?

✓

tags

✕

resources

✕

$schema

✕

contentversion

Explanation

Tags can be used in templates to differentiate resources. For example, you can add a tag with a name of “Environment.” You can then assign values of “Production” to production-based instances and “Development” to development-based instances

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

#4

Your company is being audited, and an external accountant needs access to review a blob container in the Blob service within one specific Azure storage account. You currently use Azure Active Directory to control access to the blob storage resources in question. However, you have been told you need to provide the accountant with immediate access to review the blob container in the storage account without any further information. How can you provide necessary access, but also limit it to the container in question?

✓

Provide the accountant with read-only access to the specific Azure Blob container with a service-level shared access signature token to expire at the end of the business day. Specify the HTTPS protocol is required to accept requests.

✗

Assign the accountant a guest role in Azure Active Directory with read-only access to the specific Azure Blob storage service in the Azure Storage account.

✗

Provide the accountant with read-only access to the specific Azure Blob container with a user-delegation shared access signature token to expire at the end of the business day. Allow all read requests but limit write requests to LIST and GET. Specify the HTTPS protocol is required to accept requests.

✗

Provide the accountant with contributor role access to the storage account using Azure AD role-based access control (RBAC).

Explanation

In this case, Azure Storage's Shared Access Signature (SAS) is the best tool to provide limited, authorized access to the necessary blob resources. Remember, SAS allows two levels of access: service-level, which limits access to one type of storage within the Azure storage account, such as Blob, Table, Queue or File storage, and account level, which provides access to all storage types in a single account. The service level also allows you to limit access to specific containers, or even specific blobs, and control the actions that can be performed on the blobs by selecting approved common permission types such as read, write, list, or process.

You cannot provide a user-delegated SAS in this case because you do not know if the accountant has Azure AD credentials, which are required for this type of SAS.

https://docs.microsoft.com/en-us/azure/storage/common/storage-dotnet-shared-access-signature-part-1#shared-access-signature-parameters

#5

You need to select a service plan for a web app that your developers are working on. You need at least 35 GB of drive space, auto scaling and between 5 and 8 instances. The instances need 2 cores and at least 3 GB of RAM.Which plan is the least expensive and matches the criteria?

✗ Basic

✓ Standard

✗ Isolated

✗ App Service Linux

Explanation

The Standard service plan for web apps allows for up to 10 instances, auto scaling and 50 GB of disk space.

https://azure.microsoft.com/en-us/pricing/details/app-service/plans/

#6

You suspect hackers and bots have been attacking your application's network. What Azure Network Watcher network monitoring or analysis tool would best fit your needs?

✗ Connection Monitor

✗ Network Performance Monitor

✗ Security Group View

✓

Traffic Analytics

Explanation

Traffic analytics is a cloud-based solution that provides visibility into user and application activity in cloud networks. Traffic analytics analyzes Network Watcher network security group (NSG) flow logs to provide insights into traffic flow in your Azure cloud.

https://docs.microsoft.com/en-us/azure/network-watcher/traffic-analytics

#7

Your Chief Technology officer wants to manage the Azure Virtual Machine (VM) infrastructure by establishing a baseline, high-level standard of quality for all the resources in your environment. What tool can be used to implement this request?

✗ VM Access extension

✗ Azure VM agent extension

✓ PowerShell DSC

✗ Bitlocker

Explanation

Configuration Management deals with establishing a baseline, high-level standard of quality for all the resources in your environment. In this scenario, you will want to maintain the highest level of quality and serviceability of your virtual machines. There are several Configuration Management options in the Portal. PowerShell Desired State Configuration is one such tool. Different Configuration Management tools have different ways of implementing this desired state file, however, most tools are based on industry standards such as MOF or the Managed Object Format (MOF).

https://msdn.microsoft.com/en-us/powershell/dsc/overview

#8

You need to configure Network Watcher's Network Performance Manager to monitor a hybrid network connection via ExpressRoute. Several steps are listed below. Which choice lists the required configuration steps in the correct order? (Note that all steps listed below are

not necessary to configure an ExpressRoute Monitor.)Configure to use ICMPConfigure to use TCPSelect ExpressRoute Peerings to MonitorRun “EnableRules” PowerShell script on all VMs with installed Log Analytics AgentRun “EnableRules” PowerShell script on NPM Monitoring VMConnect or create an Azure Log Analytics workspaceSelect related ExpressRoute Subscription and Initiate discoveryInstall Azure Log Analytics agent on one or more VMs in each related subnetSelect related networks and nodesAdd Network Performance Monitor rules

6 - 8 - 4 - 2 - 7 - 3

6 - 2 - 7 - 3 - 9 - 10

6 - 8 - 5 - 1 - 7 - 3

6 - 1 - 8 - 4 - 9 - 10

Explanation

The correct order of operations to create an ExpressRoute Monitor is:

1. Connect or create an Azure Log Analytics workspace
2. Install Azure Log Analytics agent on one or more VMs in each related subnet
3. Run “EnableRules” PowerShell script on all VMs with installed Log Analytics Agent
4. Configure to use TCP
5. Select related ExpressRoute Subscription and Initiate discovery
6. Select ExpressRoute Peerings to Monitor

https://docs.microsoft.com/en-us/azure/azure-monitor/insights/network-performance-monitor?toc=%2fazure%2fnetwork-watcher%2ftoc.json#set-up-and-configure
#9

Your application requires a high number of IOPS to satisfy minimum performance thresholds. You have selected Premium disks, and are now reviewing replication options.Which replication options offer the most redundancy, based on your selection of Premium disks? (Choose 2 answers)

LRS

✗
GRS

✗
RA-GRS

✓
ZRS

Explanation

Azure Premium Disk Storage currently supports only locally redundant storage (LRS). Block blob storage accounts support locally redundant storage (LRS) and zone redundant storage (ZRS) in certain regions.

https://learn.microsoft.com/en-us/azure/storage/common/storage-redundancy

#10

You are investigating Azure Storage replication options to discover when you get the read and write access to the remote replica. Which statement regarding read and write access to Azure Storage replicas is correct?

✗
No matter which replication option you've selected for your Azure Storage account, you gain read and write access to the remote replica when you initiate failover.

✗
If you have configured RA-GRS replication for your Azure Storage account, you always have read and write access to the Azure Storage account's replica.

✓
No matter which replication option you've selected, once Azure fails over to the account's remote sites, then you are granted write access to the replicated data.

✗
If you have configured GRS or RA-GRS replication for your Azure Storage account, you always have read and write access to the Azure Storage account's replica.

Explanation

With GRS and other replication options, only Microsoft can declare a disaster and failover the remote sites, then you will get read and write access to data. Until then you don't have access to the remote site's data for the read/write operations. You only have access to the remote copy for read operations when using RA-GRS.

https://docs.microsoft.com/en-us/azure/storage/storage-redundancy

#11

Your organization's expenses have increased as operations have expanded. You need to identify expenses for Azure resources used by the IT and Development departments of your organization.Which Azure service or tool should you use to better understand your organization's resource expenses by department?

✕ Azure Advisor

✕ Azure Budget

✕ Azure Price Calculator

✓ Azure Resource Tags

Explanation

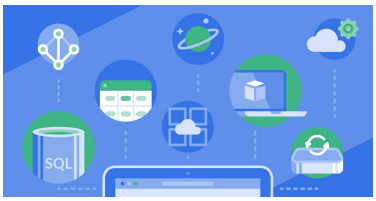
Another way to track Azure costs is by using tags. Tags can be applied to Azure resources as a means of grouping them for things like cost tracking. Tags can be applied based on department, project, environment, or any other purpose.

Each tag is a name/value pair where the name defines the type, or category of the tag, and the value identifies a specific instance of that type. For example, a tag name could be a department, and values could then be IT and Development.

https://docs.microsoft.com/en-us/azure/azure-resource-manager/resource-group-using-tags
Covered in this lecture
Summary
Course:Overview of Azure Services

4m

#12



You have had to troubleshoot several issues related to network interfaces, and spent a great deal of time completing this task. Which service within Azure Network Watcher allows you to review recent activity to check for issues with network interfaces more quickly?

✓ Diagnostic Logs

✗ NSG Flow Logs

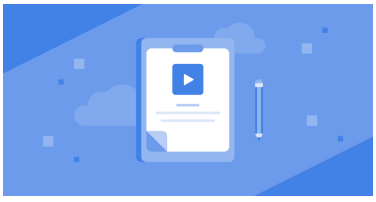
✗ Next Hop

✗ Connection Monitor

Explanation

The *Diagnostic logs* capability provides a single interface to enable and disable network resource diagnostic logs for any existing network resource that generates a diagnostic log. You can view diagnostic logs using tools such as Microsoft Power BI and Azure Log Analytics.

https://docs.microsoft.com/en-us/azure/network-watcher/network-watcher-monitoring-overview#logs
Covered in this lecture
Logs
Course:Managing Connectivity with Azure Network Watcher



5m

#13

An Azure subscription named Subscription 1 contains three resource groups named Development, Test, and Production. Two users, Thomas and Guy, are assigned to an Azure Active Directory group named Group 1.All members of Group 1 can perform all read and write operations on all virtual machines in the Development and Test resource groups. However, they are prevented from performing any operations on virtual machines in the Production resource group through NotActions.Guy is also assigned a second custom

resource role, called ProductionVM_Review. The ProductionVM_Review role allows him to perform all read operations on all virtual machines in the Production resource group.If Guy tries to perform a programmatic read operation on all virtual machines within Subscription 1, which of the following outcomes will occur?

✓
Azure Active Directory will allow the operation on all virtual machines.

✗
Azure Active Directory will allow the operation on virtual machines for the Development and Test resource groups only.

✗
Azure Active Directory will allow the operation on virtual machines for the Production resource group only.

✗
Azure Active Directory will deny the operation on all virtual machines.

Explanation

Guy has two assigned roles that apply to him, where the NotActions of one role contradict the Actions of the other. So which wins?

Actions overrule NotActions, so Guy will be able to perform the read operation on all virtual machines, including those in the Production resource group.

https://docs.microsoft.com/en-us/azure/role-based-access-control/role-definitions#actions
#14

A company needs to connect their on-premise data center to Azure. They want to have a dedicated connection and at the same time want to have a failover connection. They don't mind having a drop in latency when it comes to the failover connection. They also have around 500+ employees who will need to use this connection. Which of the following connection types would you use?

✗
Site-to-Site for the main and failover connection.

✗
Site-to-Site for the main and Point-to-Site for the failover connection.

✓
ExpressRoute for the main connection and Site-to-Site for the failover connection.

✗
Site-to-Site for the main and ExpressRoute for the failover connection.

Explanation

An ExpressRoute connection behaves like a dedicated connection between your on-premise data center and Azure**.** You can establish multiple connections betweenyour on-premise data center and Azure. In the failover connection, since the company does not mind a drop in latency, they can opt for a Site-to-Site VPN connection. This type of model is often used for a primary and failover connection from on-premise data centers and Azure**.**

https://docs.microsoft.com/en-us/azure/expressroute/expressroute-howto-coexist-resource-manager

#15

Which of the following statements is incorrect regarding a resource policy created using Azure Policy?

✗
Azure Policy scans Azure resources for noncompliance with defined resource policies.

✗
It applies to Azure resources, not Azure subscribers or users.

✗
Once a policy is created, it applies to both new and existing resources.

✓
Users can search through Azure policy with custom policy queries.

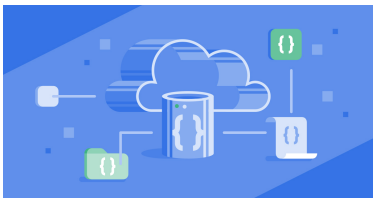
Explanation

Azure Policy creates policies to define Azure resources only. Once a policy is created, it applies to new, updated and existing resources. The service scans hourly to detect noncompliance, but it does not support custom policy queries.

/course/managing-azure-subscriptions-resource-groups/resource-policies/

Covered in this lecture
Resource Policies

Course:Managing Azure Subscriptions and Resource Groups



4m

#16

You have a large amount (100 TB) of archival data that needs to be retained for several years, due to compliance requirements. You determined that Azure Storage is the best data storage solution for this dataset. Your office is connected to the internet over a low bandwidth connection that is heavily utilized. What Azure storage tool could help you move this data to Azure?

✗ Azure Storage Explorer

✗ Azure CLI / Azure PowerShell

✗ AzCopy

✓ Azure Import/Export

Explanation

The Azure Import/Export service allows you to securely transfer large amounts of data to Azure blob storage by shipping hard disk drives to an Azure data center. You can also use this service to transfer data from Azure blob storage to hard disk drives and ship to your on-premises site. This service is suitable in situations where you want to transfer several terabytes (TB) of data to or from Azure, but uploading or downloading over the network is infeasible due to limited bandwidth or high network costs.

https://docs.microsoft.com/en-us/azure/storage/storage-import-export-service

#17

If you sort the following hosting plans from least expensive to most expensive, which is the first plan where is it possible to configure the Auto-Scale feature for Azure App Services?

✗ Free

Basic

Standard

Premium

Explanation

Only the Standard and Premium hosting plans support auto-scale.

https://azure.microsoft.com/en-us/pricing/details/app-service/plans/

Covered in this lecture
Designing Web Applications
Course:Designing an Azure Compute Infrastructure

10m

#18

You would like to implement a Hub-and-Spoke VNet peering connection between two existing VNets in the East US region, (VNet 1 and VNet2), without using a network virtual appliance. You want resources in VNet1 and VNet2 to be able to communicate. You have deployed VNet3 in the East US region that will serve as a hub between the other VNets. VNet1 and VNet2 should be able to communicate with each other through VNet3 using a VPN virtual network gateway.Which VNet peering connections should be configured to allow all forwarded traffic?

All peering connections between the hub and spokes

No peering connections

Only peering connections directed to VNet3 as the hub

Only peering connections directed to VNet1 and VNet2 as the spokes

Explanation

Suppose you have several spokes that need to connect with each other. In that case, you'll run out of possible peering connections quickly, because the number of virtual network peerings per virtual network is limited. (For more information, see Networking limits. In this scenario, consider using user-defined routes (UDRs) to force traffic destined to a spoke to be sent to Azure Firewall or a network virtual appliance acting as a router at the hub. This change will allow the spokes to connect to each other.

You can also configure spokes to use the hub gateway to communicate with remote networks. To allow gateway traffic to flow from spoke to hub and connect to remote networks, you must:

- Configure the peering connection in the hub to allow gateway transit.
- Configure the peering connection in each spoke to use remote gateways.
- Configure all peering connections to allow forwarded traffic.

https://docs.microsoft.com/en-us/azure/architecture/reference-architectures/hybrid-networking/hub-spoke?tabs=cli
#19

Which of the following is not part of the default metrics for Azure Virtual machines when using the Azure Monitor service?

✕
PercentageCPU

✕
Disk Read Bytes

✓
Memory Consumed

✕
Network Out

Explanation

The following are the valid metrics available for the Microsoft.Compute/virtualMachines resource:

1. Percentage CPU - The percentage of allocated compute units that are currently in use by the virtual machine(s)
2. Disk Read Bytes - Total bytes read from disk during monitoring period
3. Network Out - The number of bytes out on all network interfaces by the virtual machine(s) (Outgoing Traffic)

Even though memory consumption is not one of Azure Monitor's default metrics, you can always use the diagnostic extension available for virtual machines to pick up the memory consumption metrics.

https://docs.microsoft.com/en-us/azure/monitoring-and-diagnostics/monitoring-supported-metrics#microsoftcomputevirtualmachines

#20

A company needs to connect their on-premise data centers to Azure. They have huge workloads that need to regularly transfer between on premise data centers and Azure. The company wants to avoid sending data over the public internet for security reasons. Which of the following connections should the company opt for to establish this connection?

✗ Create a Site-to-Site connection

✗ Create a Point-to-Site connection

✓ Create an ExpressRoute connection

✗ Create a VNet-to-VNet connection

Explanation

An ExpressRoute connection behaves like a dedicated connection between your on-premise data center and Azure**.** TheSite-to-Site and Point-to-Site connections have to traverse the internet, and hence are not ideal when you have high workloads that need to be transferred between the on-premise and Azure location.

https://docs.microsoft.com/en-us/azure/expressroute/expressroute-introduction

#21

What should you do to configure gateway traffic to flow from spoke to hub and connect to remote networks?

✗
Allow all peering connections between the hub and spokes

✗
Allow no peering connections

✗
Configure the peering connection in the hub to allow gateway transit, and then configure the peering connection in each spoke to use remote gateways.

✓
Configure the peering connection in the hub to allow gateway transit, the peering connection in each spoke to use remote gateways, and configure all peering connections to allow forwarded traffic.

Explanation

You can configure spokes to use the hub gateway to communicate with remote networks. To allow gateway traffic to flow from spoke to hub and connect to remote networks, you must:

- Configure the peering connection in the hub to allow gateway transit.
- Configure the peering connection in each spoke to use remote gateways.
- Configure all peering connections to allow forwarded traffic.

https://docs.microsoft.com/en-us/azure/architecture/reference-architectures/hybrid-networking/hub-spoke?tabs=cli
#22

You would like to implement a hub-and-spoke VNet peering connection between two of your virtual networks, VNet1 in the East US region and VNet2 in the East US-2 region, using a network virtual appliance (NVA).You have deployed VNet3 to serve as the network hub, and a custom Linux virtual machine in VNet3 to serve as the NVA.How should you configure the peering connections between the VNets with this particular hub-and-spoke architecture?

✓
Configure all peering connections to allow forwarded traffic.

✗
Configure peering connections directed to the hub network (VNet3) to allow gateway transit.

✗

Configure peering connections directed to the spoke networks (VNet1 and VNet2) to use remote gateways.

✗

Configure peering connections directed to the hub network (VNet3) to use remote gateways. Configure all other peering connections to allow gateway transit.

Explanation

If you require connectivity between spokes, consider deploying an Azure Firewall or other network virtual appliance. Then create routes to forward traffic from the spoke to the firewall or network virtual appliance, which can then route to the second spoke. In this scenario, you must configure the peering connections to allow forwarded traffic.

https://docs.microsoft.com/en-us/azure/architecture/reference-architectures/hybrid-networking/hub-spoke?tabs=cli

#23

You want to evaluate Blob storage as a possible storage solution. However, you're not sure if your data needs a hot or cool storage tier. Which tool can analyze your existing storage account, to gather data about your storage consumption and access patterns?

✓

Azure Storage Analytics

✗

Cloud Explorer

✗

Azure Blob Monitoring Agent

✗

This is done automatically and all metrics are located in the $MetricsCapacityBlob table

Explanation

Azure Storage Analytics performs logging and provides metrics data for your existing storage account.

https://azure.microsoft.com/en-us/documentation/articles/storage-blob-storage-tiers/

#24

A company's current on-premise application runs on TCP protocol. The company has decided to move this application to Azure, and to use a cloud-based load balancer of some kind set up in Azure for the application. How would you efficiently set up a load balancer for this application?

✗
Create an Application Gateway. Add the necessary configuration to load balance the application based on the TCP protocol.

✗
Create a NAT Instance. Route the traffic via the NAT instance to a custom load balancer.

✓
Use Azure Load Balancer with the necessary configuration to load balance the application based on the TCP protocol.

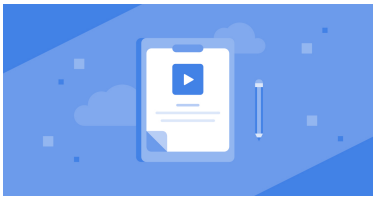
✗
Use Azure Load Balancer, but change the application to use the HTTP protocol since there is no support for TCP in Azure Load Balancers.

Explanation

Since the application works on the TCP protocol, Azure Load Balancer is a logical choice because it works at the TCP level. Application Gateway can also manage load balancing, but is designed for layer 7 or HTTP/HTTPS traffic. Hence that would not be suited for this requirement.

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

Covered in this lecture
AWS API Gateway, VPC Private Links, and NLBs
Course:.Net Microservices - Build Deployment and Hosting - Course Two



23m

#25

Which Azure tool is a cloud-based, command-line service for copying and migrating data between Azure Storage accounts?

✓
AzCopy

✗
Import/Export Service

✗
Azure Data Box

✗
Azure Storage Explorer

Explanation

AzCopy is a Windows command-line utility. There are multiple uses for AzCopy. For example, you can copy data into your Blob storage account from your existing general-purpose storage accounts. Additionally, you can upload data from your on-premises storage devices into your Blob storage account.

https://azure.microsoft.com/en-us/documentation/articles/storage-blob-storage-tiers/#evaluating-and-migrating-to-blob-storage-accounts
#26

Your company has virtual machines hosted in Azure as well as on premise, and needs to share files across the virtual machines. Which storage option would best meet this requirement?

✗
Store the files using Blob storage.

✓
Store the files using File storage.

✗
Store the files using Table storage.

✗
Store the files using Queue storage.

Explanation

Azure File storage is specifically meant for File shares, in contrast to other storage services. The Azure File service exposes file shares using the standard SMB 2.1 protocol. Even files from on-premise locations can be copied to the Azure file storage service and subsequently can be accessed by the virtual machines hosted in Azure.

https://blogs.msdn.microsoft.com/windowsazurestorage/2014/05/12/introducing-microsoft-azure-file-service/
Covered in this lecture
Azure Storage
Course:Azure Data Fundamentals

6m

#27

You are reviewing the specifications for a new solution, and it lists "a managed layer 7 load balancer."Which of the following services will be included in your design?

✓ Azure Application Gateway

✗ Azure Load Balancer

✗ A custom virtual appliance

✗ Azure Traffic Manager

Explanation

The OSI model defines layer 7 as an application layer. That includes protocols such as FTP, HTTP(S), STMP, etc.

Application Gateway is a layer 7 load balancer for HTTP(S) based traffic.

https://docs.microsoft.com/en-us/azure/application-gateway/application-gateway-introduction

#28

What Azure network resource can allow or deny layer-3 traffic based on a series of security rules, and can also be directly applied to virtual machines, subnets, or network interface cards attached to virtual machines?

✓ Network Security Groups

✗
Access Control Lists

✗
Azure Firewalls

✗
Application Gateways

Explanation

A network security group (NSG) contains a list of security rules that allow or deny network traffic to resources connected to Azure Virtual Networks (VNet). NSGs can be associated to subnets, individual VMs (classic), or individual network interfaces (NIC) attached to VMs (Resource Manager). When an NSG is associated to a subnet, the rules apply to all resources connected to the subnet. Traffic can further be restricted by also associating an NSG to a VM or NIC.

https://docs.microsoft.com/en-us/azure/virtual-network/virtual-networks-nsg
Covered in this lecture
Concepts and Best Practices
Course:Getting Started with Azure Virtual Networks

6m

#29

When running multiple environments of a given Azure App Service application, what deployment slot option allows you to test configuration elements and ensure that your application works as expected before being pushed to production?

✓
Swap with Preview

✗
Staging Swap

✗
Check 'Slot Setting' box

✗

Swap App Settings

Explanation

Swap with preview, or multi-phase swap, simplify validation of slot-specific configuration elements, such as connection strings. For mission-critical workloads, you want to validate that the app behaves as expected when the production slot's configuration is applied, and you must perform such validation before the app is swapped into production. Swap with preview is what you need.

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

#30

What does placing your virtual machines into an availability set accomplish regarding failures or outages?


It limits the impact of potential physical hardware failures.


It prevents hardware failures.


It may limit the impact of network outages in the future.


It protects your application from failures, power outages or anything else.

Explanation

Placing two or more VMs in an availability set provides redundancy for them, and limits the impact of potential physical hardware failures.

https://azure.microsoft.com/en-us/documentation/articles/automation-troubleshooting-automation-errors/

#31

You are designing a transactional records management application for a small investment firm. It runs on memory-optimized virtual machines, which receive messages via Service Bus. The virtual machines are grouped into a scale set with the following Scale Out rules: Scale out one VM if CPU utilization is above 60 percent. Scale out two VMs if CPU utilization is above 80 percent. Scale out one VM if disk writes per second reach 65 percent capacity. Scale out two VMs if disk writes per second reach 85 percent capacity. Scale out one VM if message

queue length reaches more than 1500. Scale out two VMs if message queue length reaches more than 2500. The following Scale In rules are also applied: Scale in one VM if CPU utilization drops below 35 percent. Scale in two VMs if CPU utilization drops below 20 percent. Currently, your application is at 65 percent CPU utilization, disk writes per second are at 78 percent capacity, and the message queue length is 3000 messages. Based on these metrics, what scaling action(s) will your application perform?

✓
Scale out two virtual machines.

✗
Scale in one virtual machine.

✗
Scale out one virtual machine.

✗
Scale in two virtual machines.

Explanation

First and foremost, scale-out operations always have priority over scale-in operations. Anytime that multiple scale-out operations conflict with one another, the rule that takes precedence will be the one that initiates the largest increase in the number of instances. When it comes to scale-in conflicts, the rule that initiates the smallest decrease in the number of instances will take precedence.

https://docs.microsoft.com/en-us/azure/virtual-machine-scale-sets/virtual-machine-scale-sets-autoscale-overview#:~:text=An%20Azure%20virtual%20machine%20scale,the%20performance%20of%20your%20application.
#32

You are a cost-sensitive IT administrator, and want to turn off your virtual machines at night to save money. What is a recommended method to do this?

✗
Create an operating system script that will turn off instances at the OS level, resulting in the VM state "Stopped."

✓

Stop VMs from the Azure portal or using Azure Automation, resulting in the VM state "Stopped (Deallocated)"

✕

Shutting down your VMs either through an operating system script or using the Azure Portal will work, as long as the VM state is "Stopped" or "Stopped (Deallocated).

✕

Stop VMs using Azure Command Line Interface, resulting in the VM state "Stopped."

Explanation

If an only if the status of the VM says “stopped (deallocated),” then you are not billed. If it says “stopped allocated,” you’re still being billed for allocated virtual cores.

https://blogs.technet.microsoft.com/gbanin/2015/04/22/difference-between-the-states-of-azure-virtual-machines-stopped-and-stopped-deallocated/
Covered in this lecture
Section Four Introduction
Course:Getting Started with Azure Virtual Machines

1m

#33

You need to back up a VM using Azure Backup immediately, so you need to create a Recovery Service Vault. The general steps are listed below, in no particular order.Assign a backup policy to the VMConfigure replication redundancy level.Manually initiate the first backup.Assign a resource group and location.Configure the backup policy.Which answer numerically lists the steps to back up a virtual machine in the correct order?

✓

4-2-5-1-3

✕

4-5-1-2-3

✕

2-5-1-4-3

✕

5-1-2-4-3

Explanation

The correct order of execution is:

1. Assign a resource group and location.
2. Configure replication redundancy level.
3. Configure the backup policy.
4. Assign a backup policy to the VM.
5. Manually initiate the first backup.

/course/implementing-azure-backup/04-creating-a-recovery-services-vault/
Covered in this lecture
Creating a Recovery Services Vault
Course:Implementing Azure Backups

1m

#34

Several Azure resources that you own were recently deleted from a production environment. Your company's IT staff includes several hundred people, including temporary staff whose roles and authorized permissions quickly change from project to project. As an Azure Resource Owner at a resource group scope, what steps are you authorized to take to best prevent deletion of Azure resources deployed in production environments, and resources deployed in the future?

✗

Automate an Azure AD Connect sync on a weekly basis. Institute conditional access requirements for all authorized devices, and require MFA based on role.

✓

Assign a resource lock to each deployed resource you own and include resource locks for your resources in production environment ARM templates.

✗

Update the Azure resource policy to each resource you own and include the policy for your resources in production environment ARM templates.

✗

Update the Azure resource policies for all resources that directly handle ARM templates to prevent accidental resource deletion.

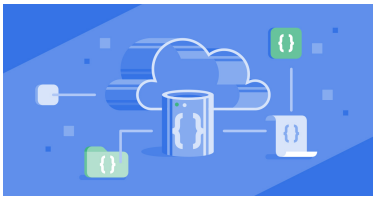
Explanation

To correctly answer this question, you should have a basic understanding of common roles in Microsoft Azure, the scope of actions those roles can perform, and what each service or mechanism involved in the question can accomplish.

As a Resource Owner, you would not necessarily be able to change policy or implement locks at the subscription level. You are also not likely to be able to institute more stringent requirements in Azure AD to require conditional access and MFA.

You can assign resource policies to your current resources, and include them in templates, but this will not actually prevent resource deletion. Resource locks are the only tool at your disposal to address the problem directly with your level of authority.

/course/managing-azure-subscriptions-resource-groups/resource-locks/
Covered in this lecture
Resource Locks
Course:Managing Azure Subscriptions and Resource Groups



3m

#35

A company is planning to deploy a set of web servers and database servers. They want to ensure high availability through availability sets. Which of the following is the recommended design practice to use?

✕
Place the web servers and database servers in the same availability set.

✕
Place half of the web servers and half of the database servers in one availability set, and the other half in another availability set.

✓
Place all the web servers in one availability set and the database servers in another availability set.

✕

Have an availability set for each web server and database server.

Explanation

The best design practice when it comes to availability sets is to place the servers which serve the same purpose in one availability set. So application servers and web servers should be placed in their own availability sets. This ensures that each tier in your application will have at least one Virtual machine running at any point in time.

https://docs.microsoft.com/en-us/azure/virtual-machines/windows/infrastructure-availability-sets-guidelines?toc=%2fazure%2fvirtual-machines%2fwindows%2ftoc.json
#36

You have specified auto scaling rules for an image processing application hosted on virtual machines. The application receives messages from Azure storage queues when images need to be processed.The virtual machines are grouped into a scale set with the following Scale Out rules:Scale out one VM if CPU utilization is above 60 percent.Scale out two VMs if CPU utilization is above 80 percent.Scale out one VM if disk writes per second reach 65 percent capacity.Scale out two VMs if disk writes per second reach 85 percent capacity.Scale out one VM if the message queue length reaches more than 700.Scale out two VMs if the message queue reaches more than 1000.The following Scale In rules are also applied:Scale in one VM if CPU utilization drops below 35 percent.Scale in two VMs if CPU utilization drops below 20 percent.Scale in one VM if your message queue has fewer than 100 messages.The app's CPU utilization is currently at 30 percent, and the message queue contains 735 messages.Based on these metrics, what auto scaling action(s) will your application perform?

✓
It will scale out one virtual machine.

✗
It will scale up one virtual machine.

✗
It will scale in one virtual machine.

✗
It will scale down one virtual machine.

Explanation

First and foremost, scale-out operations always have priority over scale-in operations. Anytime that multiple scale-out operations conflict with one another, the rule that takes precedence will be the one that initiates the largest increase in the number of instances. When it comes to scale-in conflicts, the rule that initiates the smallest decrease in the number of instances will take precedence. So, it will scale out one virtual machine due to the number of messages in the message queue.

/course/advanced-vm-management-in-azure-1020/virtual-machines-scale-sets/

#37

A company is planning to implement agile methodologies for one of their projects. The project will have the development environment as an app service hosted in Azure. Which of the following implementations would align with their agile practices?

For the app service in Azure, configure the deployment source to any source code repository. Also ensure the deployment credentials are set. Ensure the right source code URL is set.

Set up Traffic Manager to route the different requests of the development environments from the different development teams.

Setup separate subscriptions for each development team and let each team connect their source code repository to the separate subscriptions

Setup a separate virtual machine for each developer and ensure they make their code changes to each virtual machine separately.

Explanation

For Agile practices, continuous integration is the key. Hence developers would want to ensure that all merged changes to the main trunk of their source code repository gets pushed to the development environment accordingly. This can be done by configuring the deployment source of the app service to the desired source code repository. Also ensure the deployment credentials are set. Ensure the right source code URL is set.

https://docs.microsoft.com/en-us/azure/app-service-web/app-service-deploy-local-git

#38

You are building a group of 10 virtual machines and putting them into an availability set to ensure high availability. You configure the maximum number of fault domains available in your desired region, which is three. How many of your virtual machines will end up in the first fault domain?

✓
4

✗
3

✗
5

✗
10

Explanation

The maximum number of fault domains available are 3, but depends on the region. When the number of virtual machines exceeds the number of fault domains, and their number is for example 3, the 4th VM will be placed into the first fault domain, while the 5th VM will be placed into the second domain, etc. Hence the 10th VM will end up in the first fault domain.

https://docs.microsoft.com/en-us/azure/virtual-machines/windows/manage-availability
#39

What is not a requirement to deploy Azure AD Join?

✗
An Azure AD subscription

✗
An Azure AD Premium subscription

✗
Mobile device management

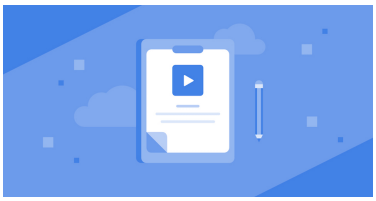
✓
A deployment of Azure AD Connect

Explanation

To deploy Azure AD Join for any set of users you need the following:

- An Azure AD subscription.
- An Azure AD Premium subscription, such as mobile device management auto-enrollment, if you require more capabilities.
- Mobile device management--for example, a Microsoft Intune subscription, mobile device management for Office 365, or any of the partner mobile device management vendors that integrate with Azure AD.

https://azure.microsoft.com/en-us/documentation/articles/active-directory-azureadjoin-windows10-devices/
Covered in this lecture
Course Summary
Course:Introduction to Azure Resource Manager



4m

#40

Your organization's system administrator has deployed two standalone Azure virtual machines (VMs) for a new web service. You now want to add these virtual machines to fault domains in an availability set. When you attempt to do this in the portal, you receive an error message preventing you from completing the task. What is the reason for this?

✗
You did not check the required "Standalone" parameter in Azure Portal

✓
You may not add running standalone VMs to availability sets

✗
The VMs operating system is not compatible with fault domains.

✗
The availability set has to be paused or stopped before standalone VMs can be added.

Explanation

Creating an Availability Set is a pretty simple, straightforward process. However, the caveat is getting your VMs to be part of an availability set. If you have existing VMs that are not part of an availability set, we refer to these as Standalone VMs. You may not simply take standalone VMs and move them into availability sets because this has to be done at the time of VM creation.

https://docs.microsoft.com/en-us/azure/virtual-machines/windows/change-availability-set
Covered in this lecture
DEMO: Deploying and Connecting to a Windows Virtual Machine via the Azure Portal
Course:Getting Started with Azure Virtual Machines

26m

#41

Which feature in Azure AD allows you to restrict access to devices and applications based on predefined rules?

✗ Role-Based Access and Control (RBAC)

✗ Multi-Factor Authentication (MFA)

✓ Conditional Access

✗ Azure AD Connect

Explanation

Conditional Access allows you to restrict access to devices and applications based on predefined rules. RBAC only controls user access to resources. MFA deals with authenticating user sign-in, and Azure AD Connect is a tool for Synchronizing On-premises Identity with Azure AD and monitoring.

/azure/azure-active-directory-security-course/manage-access-to-azure-ad.html

#42

Which of the following is a tool suited to visually analyzing Azure Search logs and metrics data?

✓
Power BI

✗
Power Data

✗
Azure Explorer

✗
PowerShell

Explanation

As a starting point for analysing Azure Search logs and metrics, we recommend using Power BI to explore and visualize your data. You can easily connect to your Azure Storage Account and quickly start analysing your data.

https://azure.microsoft.com/en-gb/documentation/articles/search-traffic-analytics/

Covered in this lecture
Conclusion
Course:Designing an Azure Data Implementation

6m

#43

Which of the following statements about Azure VPN Gateways and subnets is false?

✗
When creating on-premises to virtual network (VNet) connections, there cannot be overlapping subnet address ranges

✗
VPN Gateways require a specific gateway subnet that must be named GatewaySubnet

✗
Virtual machines cannot be deployed on a gateway subnet

✓

When creating VNet-to-VNet connections there can be overlapping subnet address ranges

Explanation

There cannot be overlapping subnet address ranges in either on-premises to VNet connections or VNet-to-VNet connections. VPN Gateways require a specific gateway subnet that must be named GatewaySubnet and virtual machines cannot be deployed on the gateway subnet.

https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-plan-design

#44

Which Azure Storage service is designed for large-scale, offline data migration intended to help businesses migrate their data onto the Azure cloud?

✗

AzCopy

✓

Azure Data Box

✗

Azure Storage Explorer

✗

StorSimple

Explanation

The Microsoft Azure Data Box cloud solution lets you send terabytes of data into Azure in a quick, inexpensive, and reliable way. The secure data transfer is accelerated by shipping you a proprietary Data Box storage device. Each storage device has a maximum usable storage capacity of 80 TB and is transported to your data center through a regional carrier. The device has a rugged casing to protect and secure data during the transit.

https://docs.microsoft.com/en-us/azure/databox/data-box-overview

Covered in this lecture
Running a Test Migration
Course:Migrating Servers To Azure

5m

#45

You have begun migrating your existing applications from on-premise servers to resources on an Azure Virtual Network. The on-premise network and Azure are currently connected via ExpressRoute. You need to ensure the ExpressRoute connection is healthy at all times. What Network Watcher service can you utilize to monitor the connection?

✓ Connection Monitor (formerly Network Performance Monitor)

✗ Traffic Analytics

✗ VPN Troubleshoot

✗ Connection Monitor (Classic)

Explanation

The new Connection Monitor (formerly the Network Performance Monitor service) is a cloud-based hybrid network monitoring solution that helps you monitor network performance between various points in your network infrastructure. It also helps you monitor network connectivity to service and application endpoints and monitor the performance of Azure ExpressRoute.

Please note that Azure also has a legacy service that is also named Connection Monitor, but this has been changed to Connection Monitor Classic.

https://docs.microsoft.com/en-us/azure/azure-monitor/insights/network-performance-monitor?toc=%2fazure%2fnetwork-watcher%2ftoc.json