Answer Sheet

Q1)

You have to implement an Azure logic app to perform the following task.

“Notify an administrator when the settings of a virtual machine in a resource group are changed.”

Which of the following components would you create in the Logic Apps Designer? Choose three answers from the options given below.

✅ A condition control

Explanation:-

First, you have to create an Event Grid trigger. This will listen to the events from the resource group.

You then create a condition control to fire an action if a condition is met.

Finally, you create the action to alert the administrator.

For more information on an example on implementing Azure Logic Apps to listen to events for Azure.

virtual machines, please refer to the below link-

https://docs.microsoft.com/en-us/azure/event-grid/monitor-virtual-machine-changes-event-grid-logic-app

✅ An action

Explanation:-First, you have to create an Event Grid trigger. This will listen to the events from the resource group.
You then create a condition control to fire an action if a condition is met.
Finally, you create the action to alert the administrator.
For more information on an example on implementing Azure Logic Apps to listen to events for Azure.
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⚪ A variable

✅ An Azure Event Grid trigger

Explanation:-First, you have to create an Event Grid trigger. This will listen to the events from the resource group.
You then create a condition control to fire an action if a condition is met.
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For more information on an example on implementing Azure Logic Apps to listen to events for Azure.
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⚪ An Azure Service Bus trigger

Q2)

Your company currently has the following virtual network in place.

You have to peer this network with another network named udemytaging that has an address space of 10.2.0.0/16.

Which of the following needs to be done first to configure the peering connection?

⚪ Configure a service endpoint for udemytaging

⚪ Add a gateway subnet for udemynetwork

⚪ Create a subnet for udemynetwork

✅ Modify the address space of udemynetwork

Explanation:-

Here the main issue is the conflicting address space for both udemytaging and the udemynetwork virtual network. Because of this conflicting address space, you will not be able to peer the virtual networks.

If there are no connected devices, you can change the address space of the virtual network.

For more information on virtual network peering, one can visit the following URL

https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-peering-overview

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Q3)

Your company has two Azure virtual machines deployed in different regions. Each of the virtual machine has a public IP address assigned to its network interface. An application is installed on the virtual machines. You need to implement Azure Front Door-based load balancing across the virtual machines. You have to ensure the application on the virtual machines only accept traffic that is routed from Azure Front Door.

Which of the following can be implemented for this requirement?

⚪ Azure Private Link

⚪ Service Endpoints

✅ Network Security Groups with service tags

Explanation:-

In the network security group for the Azure virtual machines, you can create rules specifically to accept traffic from the Azure Front Door service

For more information on the Azure Front Door service , one can visit the following URL

https://docs.microsoft.com/en-us/azure/frontdoor/front-door-overview

⚪ Network Security Groups with application security groups

Q4)

Your company has set up an Azure subscription and an Azure AD tenant. The company wants to develop several applications that would make use of Azure-based services. Each application has a different messaging requirement. Below are the key requirements for each application

Which of the following would you use as a messaging service for udemy-app1?

⚪ Azure Event Hubs

✅ Azure Service Bus

Explanation:-You can use Azure Service Bus queues for this requirement
The Microsoft documentation mentions the following
For more information on Azure Service Bus , you can visit the below link
https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-messaging-overview

⚪ Azure Event Grid

⚪ Azure Notification Hubs

Q5)

A company plans to deploy web applications to Azure and has the following requirements:

load-balance traffic at Layer 7
protect the web application from SQL injection attacks
cookie-based session affinity

Which of the following service would you advise the company to use?

- Azure Load Balancer
- Azure Traffic Manager
- ✔ Azure Application Gateway

Explanation:-
Azure Application Gateway is a web traffic load balancer. Open System Interconnection model includes seven layers: Layer 1 - Physical, Layer 2 - Data Link, Layer 3 - Network, Layer 4 - Transport, Layer 5 - Session, Layer 6 - Presentation, and Layer 7 - Application. Azure Application Gateway is an application layer (OSI Layer 7) load balancer. It routes and balances traffic to web applications. Application Gateway can route traffic based on the attributes in HTTP requests, like the URI path. Application Gateway has several features, like autoscaling, Transport Level Security TLS (previously known as Secure Sockets Layer (SSL)) termination, web application firewall, Multi-site hosting, etc.

One of the AG features is cookie-based session affinity. The session affinity helps to keep the user session on the same server using web cookies. Application Gateway will direct traffic for processing from the user to the same server until the cookie exists.

For more information about OSI layers and Azure Application gateway, please visit the below URLs:

https://docs.microsoft.com/en-us/azure/application-gateway/overview
https://docs.microsoft.com/en-us/azure/application-gateway/features#session-affinity
https://www.networkworld.com/article/3239677/the-osi-model-explained-and-how-to-easily-remember-its-7-layers.html?jwsource=cl
https://docs.microsoft.com/en-us/azure/traffic-manager/traffic-manager-faqs#does-traffic-manager-support-sticky-sessions

- Azure Network Watcher

Q6)

A company has deployed an API management instance. They need a solution to protect the API from a DDoS (Distributed denial of service) attack.

Which of the following could be recommended for this requirement?

- Network Security Groups
- ✔ Rate Limiting

Explanation:-
You can protect the number of calls to the API by using rate limiting. Below is what is mentioned in the Microsoft documentation
For more information on transforming and protecting an API, please visit the below URL

https://docs.microsoft.com/en-us/azure/api-management/transform-api

- Quotas
- OAuth2

Q7)

A company is planning on deploying a set of applications onto a set of Azure Kubernetes clusters. The clusters would be distributed across various Azure regions. You have to recommend a storage solution for the application container images. The update container images need to be automatically replicated across all AKS clusters.

Which of the following would you implement for this requirement?

- Geo-redundant storage account

Explanation:-
For this requirement, you can Azure Container Registry – Premium SKU. It provides the feature of automatic distribution of images across regions.
The Microsoft documentation mentions the following
For more information on Azure Container registry SKUs , you can visit the below link

https://docs.microsoft.com/en-us/azure/container-registry/container-registry-skus

- Azure Cache for Redis
- Azure Content Delivery Network
- ✔ Azure Container Registry – Premium SKU

Q8)

A company has three Hyper-V failover clusters as shown below

You have to plan to assess and migrate the virtual machines by using the Azure Migrate service.

What is the minimum number of Azure Site Recovery agents you need to recommend?

- 1
- 3
- ✔ 18
- 60

Q9)

A company is going to be deploying an Azure SQL Database instance to the Central US region. They have the following requirements when it comes to the security for the database instance

Only select workstations with static Public IP addresses should be allowed to connect and perform administration on the database

An Application hosted in a Virtual Network on a Virtual machine would need to interact with the Azure SQL database

A function is implemented which hides the Social Security Numbers column in the Person table in the database

Which of the following would be best suited to fulfil the requirement?

“Only select workstations with static Public IP addresses should be allowed to connect and perform administration on the database”

- Azure Network Watcher

Explanation:-
You can use as shown in the Microsoft documentation below

For more information on configuring the firewall for Azure SQL database, please visit the below URL
https://docs.microsoft.com/en-us/azure/sql-database/sql-database-firewall-configure

- ✔ Server Level IP Firewall rules
- Network Security Groups
- Application Security Groups

Q10)

Your company has an on-premises Hyper-V cluster that contains 20 virtual machines. Some of the virtual machines are based on Windows and some in Linux. You have to migrate the virtual machines onto Azure.

You have to recommend a solution that would be used to replicate the disks of the virtual machines to Azure. The solution needs to

ensure that the virtual machines remain available when the migration of the disks is in progress.

You decide to create an Azure storage account that has the file service and blob service and then use the Data Migration Assistant

Would this fulfil the requirement?

- Correct
- ✅ Incorrect

Explanation:-
For this requirement, you should either use the Azure Migrate or Azure Site Recovery service
For more information on Azure Site Recovery and Azure Migrate, you can visit the below link
https://docs.microsoft.com/en-us/azure/site-recovery/site-recovery-overview

https://docs.microsoft.com/en-us/azure/migrate/migrate-services-overview

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Q11)

A company has an on-premise network with an IP address space of 186.16.0.0/16. The company is planning to deploy 20 Virtual machines to Azure and place them in a VNet subnet. The requirement is to ensure the on-premise servers can communicate with the virtual machines hosted in Azure via a site-to-site VPN connection. You have to design the subnet for the virtual network in Azure to host the virtual machines.

Which of the following address space would you assign for the subnet in the Virtual Network?

- 186.16.0.0/16
- 186.16.1.0/28
- ✅ 192.168.0.0/24

Explanation:-
A site-to-site VPN includes three network subnets: on-premise, Azure Vnet, and VPN gateway. You already have the on-premise subnet defined as 186.16.0.0/16. To create a site-to-site VPN, you need to assign the address space for the Azure Virtual Network that should not overlap with the address space for the on-premise network.

If on-premise network space is 186.16.0.0/16, the address space options 186.16.0.0/16 and 186.16.0.0/28 for the VNet subnet will conflict with on-premise space. So, you should select 192.168.0.0/24 address space out of two other options because 192.168.0.0/28 is too small for the subnet. The 192.168.0.0/28 address space provides only 16 nominal or 11 usable IP addresses because Azure reserves 5 IP addresses within each subnet. The 11 IP addresses are not enough to accommodate 20 VMs.

For more information about site-to-site VPN, please visit the below URL:
https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-howto-site-to-site-resource-manager-portal

- 192.168.1.0/28

Q12)

A company currently has the following systems running on their on-premise environment
An ASP.Net application running on Internet Information Services
A MongoDB database

The company wants to migrate the systems onto Azure. They want to ensure to use of managed services to reduce the administrative overhead. They want to minimize the time for migration as well and also reduce costs wherever possible.

Which of the following Azure service would you use for the MongoDB database?

- ✅ CosmosDB

Explanation:-
You can use the MongoDB API which is available as part of CosmosDB

The Microsoft documentation mentions the following

For more information on CosmosDB and the MongoDB API, please go ahead and visit the below URL
https://docs.microsoft.com/en-us/azure/cosmos-db/mongodb-introduction

- Azure SQL Database
- Virtual Machines
- Azure SQL Data warehouse

Q13)

A testing team needs to create resources in an Azure subscription to test the set of applications. The applications use shared and application-specific resources.

You have to create a deployment solution that meets the following requirements

Minimize the administrative effort for the team to create the application environment

Ensure that the application environment can be consistently created multiple times

After the application testing is complete, all resources, except for the shared resources, should be deleted

Which of the following should you use to implement this requirement?

- ✅ Use JSON templates to create the resources. Place the shared resources in one resource group and the application-specific resources in a separate resource group

Explanation:-
For resource deployment, Microsoft recommends using Resource Manager templates (ARM templates). An ARM template is a JSON file that defines the infrastructure and configuration of your Azure solution. You can reuse and redeploy the template without limitations, and RM will consistently provision the same environment.

The resource group is a container for your resources. Therefore, you can separate the resources for the solution by resource groups: one group with shared resources and another group (or groups) with application-specific resources. So, after the application test completion, you can delete the application-specific resource group and leave the shared resources group intact.

For more information about Resources Manager, templates, and groups, please visit the below URLs:
https://docs.microsoft.com/en-us/azure/azure-resource-manager/resource-group-overview
https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/overview

- Use JSON templates to create the resources. Place the shared resources and application-specific resources in one resource group
- Use Azure Powershell scripts to create the resources. Place the shared resources in one resource group and the application-specific resources in a separate resource group
- Use Azure Powershell scripts to create the resources. Place the shared resources and application-specific resources in one resource group

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Q14)

You have to design a container solution for your company on Azure. Here the solution would consist of two containers. The first container would host a web API and would be available to users on the Internet. The other container would perform health monitoring of the container hosting the web API.

The health monitoring container would remain private. Both containers would need to be deployed as a group.

You have to recommend the right compute service for hosting the containers. The solution needs to minimize costs and maintenance overheads.

Which of the following would you recommend for this requirement?

- Azure Service Fabric
- ✅ Azure Container Instances

Explanation:-
With Azure Container Instances, you can deploy the containers as a group. You can also save on costs because this is a simple solution and service available for the deployment of containers.

For more information on Azure container instances, one can go to the following URL
https://docs.microsoft.com/en-us/azure/container-instances/container-instances-overview

- Azure Kubernetes service
- Azure Container registry

Q15)

A company has to deploy an application to Azure. The application consists of a web front end and an application tier. You have to implement a load balancing solution that has to comply with the following requirements.

From the Internet to Web Front End
Provides support for URL-based routing
Provides support for connection draining
Provides support for preventing SQL injection attacks
From the Web Front End to the application tier
Provides support for port forwarding
Provides support for HTTPS health probes
Provides support for having an availability set as the backend pool

Which of the following is a Load Balancing solution you would recommend for the Internet to Web Front End?

- ✅ An Azure Application Gateway that has Web Application Firewall enabled

Explanation:-
Here we can use an Azure Application Gateway. It has all of the features mentioned in the requirements.

The Microsoft documentation mentions the following.

URL-based routing

URL Path Based Routing allows you to route traffic to back-end server pools based on URL Paths of the request. One of the scenarios is to route requests for different content types to different pool.

For example, requests for `http://contoso.com/video/*` are routed to VideoServerPool, and `http://contoso.com/images/*` are routed to ImageServerPool. DefaultServerPool is selected if none of the path patterns match.

Connection draining

Connection draining helps you achieve graceful removal of backend pool members during planned service updates. This setting is enabled via the backend http setting and can be applied to all members of a backend pool during rule creation. Once enabled, Application Gateway ensures all deregistering instances of a backend pool don't receive any new request while allowing existing requests to complete within a configured time limit. This applies to both backend instances that are explicitly removed from the backend pool by a user configuration change, and backend instances that are reported as unhealthy as determined by the health probes. The only exception to this are requests bound for deregistering instances, which have been deregistered explicitly, because of gateway-managed session affinity and continues to be proxied to the deregistering instances.

Web Application Firewall

Web Application Firewall (WAF) is a service that provides centralized protection of your web applications from common exploits and vulnerabilities. WAF is based on rules from the OWASP (Open Web Application Security Project) core rule sets 3.1 (WAF_v2 only), 3.0, and 2.2.9.

Web applications are increasingly targets of malicious attacks that exploit common known vulnerabilities. Common among these exploits are SQL injection attacks, cross site scripting attacks to name a few. Preventing such attacks in application code can be challenging and may require rigorous maintenance, patching and monitoring at many layers of the application topology. A centralized web application firewall helps make security management much simpler and gives better assurance to application administrators against threats or intrusions. A WAF solution can also react to a security threat faster by patching a known vulnerability at a central location versus securing each of individual web applications. Existing application gateways can be converted to a Web Application Firewall enabled application gateway easily.

For more information on the features of Azure Application Gateway, please visit the below URL-

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

- An Internal Azure Standard Load Balancer
- An Internal Azure Basic Load Balancer
- A public Azure Standard Load Balancer

Q16)

A company plans to host a web application using the Azure Web App service. The service must provide an auto-scale option for the web application based on demand with minimal costs.

You decide to allocate the Azure Web App to a Shared App Service Plan.

Would this solution fulfil the requirement?

○ Correct
✓ Incorrect
Explanation:-The Shared App Service Plan does not support Autoscaling, as mentioned in the Microsoft documentation given below.
For more information on Azure App Service Plans, please visit the below URL-
https://azure.microsoft.com/en-us/pricing/details/app-service/plans/

Q17)

Your company has deployed the following Virtual Machines in their Azure subscription.

A recovery service vault has been created in the East US region to protect the virtual machines udemy-vm1 and udemy-vm2.

You also need to ensure that the virtual machines udemy-vm3 and udemy-vm4 are protected by Azure Recovery services. Which of the following would you need to do to achieve this?

○ Create a new recovery services policy.
○ Create a new backup policy.
○ Create a new subscription.
✓ Create a new Recovery Services vault.
Explanation:-
Creating a Recovery Services vault is based on a particular region.

Azure documentation stated that "the vault must be in the same region as the virtual machines." Since the virtual machines, udemy-vm3 and udemy-vm4 are in a different region, you need to create a new recovery services vault for that region.
For more information on the Recovery Services vault, please visit the below URLs-

https://docs.microsoft.com/en-us/azure/backup/backup-azure-recovery-services-vault-overview
https://docs.microsoft.com/en-us/azure/backup/backup-create-rs-vault

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Q18)

You have the following storage accounts defined as part of your subscription.

Can you convert udemytore3 to a GRS account?

✓ Correct
Explanation:-
Azure Storage service provides several redundancy options for data availability and durability. These options include:
Locally-redundant storage (LRS) — stores three synchronous data copies within the same data center.

Zone-redundant storage (ZRS) — stores three synchronous copies within the Availability zones in the primary region. There are three availability zones per region. One copy of data is stored in one availability zone data center.

Geo-redundant storage (GRS/RA-GRS) stores six synchronous copies between primary and secondary regions. Each region has three synchronous copies stored in the same data center using LRS. First, data is stored in a primary region in three copies. Then it is asynchronously copied to the secondary region data center and stored in three synchronous copies using LRS.

Geo-zone-redundant storage (GZRS/RA-GZRS) stores four copies of the data: three synchronous copies within the Availability zones in the primary region (the same as ZRS), and one copy is replicated to the secondary region.

If you have Locally-redundant storage (LRS) account, you can change the replication type from the main storage account panel under the Settings section by selecting the Configuration item (Number 1). And then select the new replication type from the Replication dropdown (Number 2).

You can also use PowerShell or CLI to change the replication settings.

For more information on changing the storage account replication, please go to the following URL-
https://docs.microsoft.com/en-us/azure/storage/common/redundancy-migration?tabs=portal

○ Incorrect

Q19)

A company has set up a storage account in Azure. They have the following storage requirements.

Ensure that administrators can recover any BLOB data if it has been accidentally deleted.

Have the ability to recover data over a period of 14 days after the deletion has occurred.

Which of the following feature of Azure storage could be used for this requirement?

○ CORS
○ Static web site
○ Azure CDN
✓ Soft Delete
Explanation:-You have to use the feature of Soft Delete. The Microsoft documentation mentions the following.
Since this is clearly mentioned in the documentation, all other options are incorrect.
For more information on Azure BLOB soft delete, please visit the below URL-
https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-soft-delete

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Q20)

A company has container-based workloads and asks you to advise how to protect the multi-region AKS deployments from regional outages.

What two services would you recommend for the company to implement?

○ Azure Backup
○ Azure VM Scale sets
✓ Azure Traffic Manager
Explanation:-Azure provides several disaster recovery tools for container-based workloads. To protect the multi-region Azure Kubernetes Service deployments from the regional outages, you need to implement Azure Traffic Manager. Azure Traffic Manager is a global load balancing service based on DNS.
It provides high availability and disaster recovery for container-based workloads. If one region fails, Azure Traffic Manager will direct the traffic to the secondary region. Traffic Manager routes any protocol (not only HTTP/HTTPS as Azure Front Door or Azure Application Gateway does) to the service endpoint's public IP address based on the routing method. Using geographic routing, it will direct the traffic to the closest AKS cluster and application instance. Then, the Load Balancer will take care of data delivery to the AKS.

For more information about the recovery solutions for the containers, please visit the below URLs:
https://docs.microsoft.com/en-us/azure/aks/operator-best-practices-multi-region#use-azure-traffic-manager-to-route-traffic
https://docs.microsoft.com/en-us/azure/traffic-manager/traffic-manager-configure-geographic-routing-method
https://docs.microsoft.com/en-us/azure/traffic-manager/traffic-manager-configure-geographic-routing-method
○ Azure App Service
✓ Azure Load Balancer
Explanation:-Azure provides several disaster recovery tools for container-based workloads. To protect the multi-region Azure Kubernetes Service deployments from the regional outages, you need to implement Azure Traffic Manager. Azure Traffic Manager is a global load balancing service based on DNS.

It provides high availability and disaster recovery for container-based workloads. If one region fails, Azure Traffic Manager will direct the traffic to the secondary region. Traffic Manager routes any protocol (not only HTTP/HTTPS as Azure Front Door or Azure Application Gateway does) to the service endpoint's public IP address based on the routing method. Using geographic routing, it will direct the traffic to the closest AKS cluster and application instance. Then, the Load Balancer will take care of data delivery to the AKS.

For more information about the recovery solutions for the containers, please visit the below URLs:
https://docs.microsoft.com/en-us/azure/aks/operator-best-practices-multi-region#use-azure-traffic-manager-to-route-traffic
https://docs.microsoft.com/en-us/azure/traffic-manager/traffic-manager-configure-geographic-routing-method
https://docs.microsoft.com/en-us/azure/traffic-manager/traffic-manager-configure-geographic-routing-method

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Q21)

A company has an on-premises file server cbflserver that runs Windows Server 2019. Windows Admin Center manages this server. The company owns an Azure subscription. You need to provide an Azure solution to prevent data loss if the file server fails.

You decide to register Windows Admin Center in Azure and then configure Azure Backup.

Would this meet the requirement?

✅ Correct

Explanation:-

To bring the files to Azure, you can use Windows Admin Center with Azure Backup service. The Center is a locally deployed browser-based solution (Number 1). It manages on-premises Windows servers, clusters, etc. Windows Admin Center consists of two main components: the Gateway that manages the servers using PowerShell or WMI over WinRM and the Web server that listens to the HTTP requests and servers the UI to the browser. Azure integration is the built-in functionality of the Center (Number 2).

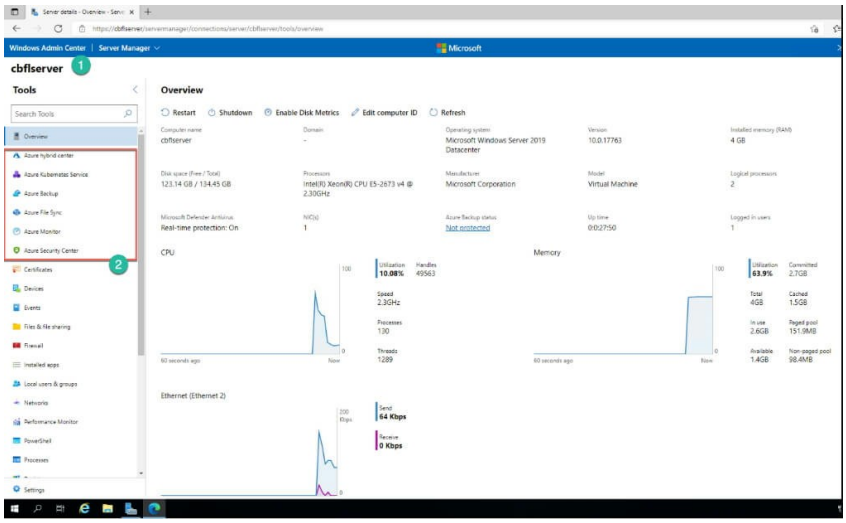
Before using Azure services, you need to connect and register the Center with Azure using a gateway.

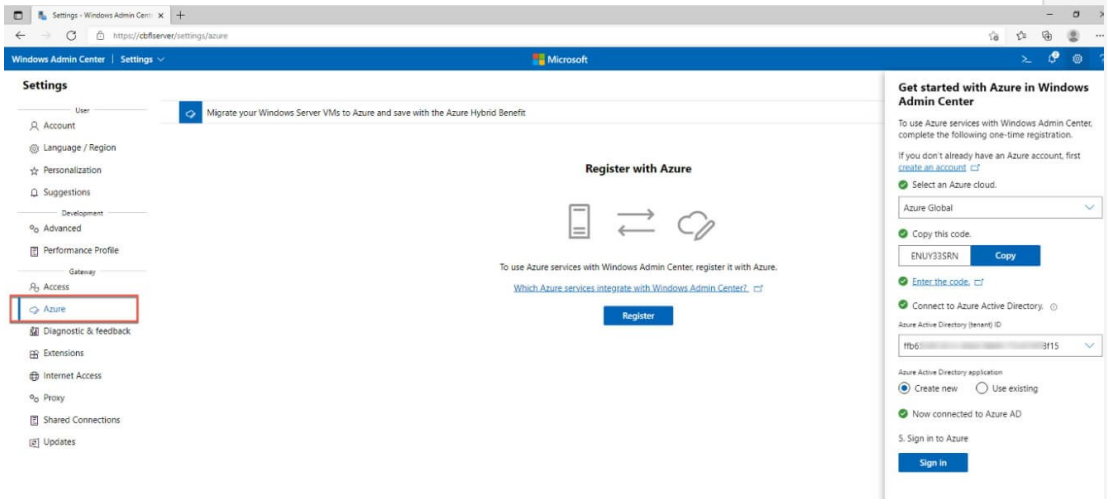
Then you can set up and configure Azure Backup Service. You select the existent Recovery Services vault or create a new one during the setup, the vault region, and the Azure resource group. After you can add cbflserver files and directories to backup and create a backup schedule. And finally, enter an encryption phrase to encrypt backups. Once this is in place, the Center will launch the server files backup to Azure Recovery Services Vault.

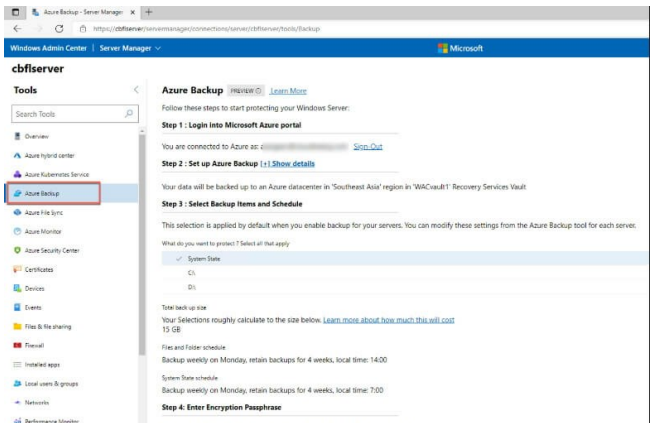
For more information about Azure Backup services for on-premises files, please visit the following URLs:
https://docs.microsoft.com/en-us/windows-server/manage/windows-admin-center/azure/azure-backup

https://docs.microsoft.com/en-us/azure/backup/backup-architecture#architecture-direct-backup-of-on-premises-windows-server-machines-or-azure-vm-files-or-folders

https://docs.microsoft.com/en-us/azure/backup/backup-windows-with-mars-agent







Incorrect

Q22)

Your company has an Azure Web App that runs via the Premium App Service Plan. A development team will be using the Azure Web App. You have to configure the Azure Web app so that it can fulfil the below requirements.

Provide the ability to switch the web app from the current version to a newer version

Provide developers with the ability to test newer versions of the application before the switch to the newer version occurs
Ensure that the application version can be rolled bac
Minimize downtime

Which of the following can be used for this requirement?

Create a new App Service Plan

Make use of deployment slots

Explanation:-
With deployment slots, you can easily deploy newer versions of the applications onto the deployment slot.

Developers can test the newer version of the application in the deployment slot.

When the version needs to be promoted, the production slot can be switched with the deployment. Rollbacks can also occur at any point in time.

For more information on deployment slots, one can visit the following URL

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

Map a custom domain

Backup the Azure Web App

Q23)

A company needs a datastore created in Azure for an application. Below are the key requirements for the data store.

Ability to store JSON based items
Ability to use SQL like queries on the datastore
Ability to provide low latency access to data items

Which of the following would you consider as the data store?

Azure BLOB storage

Azure CosmosDB

Explanation:-
You can use CosmosDB to provide low latency access to data. You can use the SQL API to store JSON based objects. The Microsoft documentation mentions the following.

For more information on how to use SQL queries, please visit the below URL-
https://docs.microsoft.com/en-us/azure/cosmos-db/how-to-sql-query

Azure HDInsight

Azure Redis

Q24)

Your organization has multiple Azure Cosmos DB accounts. You need to recommend what API to use for applications functionality.

Which of the following two APIs would you use to host a JSON document?

SQL

Explanation:-Azure Cosmos DB is a multi-model globally distributed NoSQL database. Cosmos DB stores data in atom-record-sequence (ARS) format. It unites under one roof several data management systems and exposes them in the form of APIs. You can select between the Core (SQL) API and MongoDB API (document model), Cassandra API (column-oriented model), Gremlin API (graph model), and Table API (key-value model). You should select the default Cosmos DB API: Core (SQL) for the new projects. If you have an existent database in formats that Cosmos DB API supports and do not want to deal with application migration, the best way is to bring the data to Cosmos DB and use provided APIs for your application. For example, suppose you have a MongoDB database with the purchase orders in different formats that are suitable for your customers. In that case, you can bring data to Cosmos DB with native MongoDB tools, like mongodump and mongorestore. And use all MongoDB queries in your apps for the data access now in Cosmos DB. But if the business logic of your application will get better data representation, for example, in a graph, you should use Gremlin API in your applications instead of the Core.

Cosmos DB Core (SQL) API and MongoDB API use the document data model and store data in JSON format. Core API provides support for SQL queries. With SQL API, you can use stored procedures, triggers, and user-defined functions. MongoDB API uses wire protocol for MongoDB. Using MongoDB API, you can use applications written in .Net, Node, Python, Java, or Rubi and access the MongoDB document structures in Cosmos DB.

For more information on Cosmos DB – SQL and MongoDB APIs, please visit the below URLs-
https://docs.microsoft.com/en-us/azure/cosmos-db/choose-api
https://docs.microsoft.com/en-us/learn/modules/choose-api-for-cosmos-db/3-analyze-the-decision-criteria
https://docs.microsoft.com/en-us/azure/cosmos-db/mongodb/mongodb-introduction
https://docs.microsoft.com/en-us/azure/cosmos-db/sql/modeling-data

Table

Gremlin

Cassandra

MongoDB

Explanation:-Azure Cosmos DB is a multi-model globally distributed NoSQL database. Cosmos DB stores data in atom-record-sequence (ARS) format. It unites under one roof several data management systems and exposes them in the form of APIs. You can select between the Core (SQL) API and MongoDB API (document model), Cassandra API (column-oriented model), Gremlin API (graph model), and Table API (key-value model). You should select the default Cosmos DB API: Core (SQL) for the new projects. If you have an existent database in formats that Cosmos DB API supports and do not want to deal with application migration, the best way is to bring the data to Cosmos DB and use provided APIs for your application. For example, suppose you have a MongoDB database with the purchase orders in different formats that are suitable for your customers. In that case, you can bring data to Cosmos DB with native MongoDB tools, like mongodump and mongorestore. And use all MongoDB queries in your apps for the data access now in Cosmos DB. But if the business logic of your application will get better data representation, for example, in a graph, you should use Gremlin API in your applications instead of the Core.

Cosmos DB Core (SQL) API and MongoDB API use the document data model and store data in JSON format. Core API provides support for SQL queries. With SQL API, you can use stored procedures, triggers, and user-defined functions. MongoDB API uses wire protocol for MongoDB. Using MongoDB API, you can use applications written in .Net, Node, Python, Java, or Rubi and access the MongoDB document structures in Cosmos DB.

For more information on Cosmos DB – SQL and MongoDB APIs, please visit the below URLs-
https://docs.microsoft.com/en-us/azure/cosmos-db/choose-api
https://docs.microsoft.com/en-us/learn/modules/choose-api-for-cosmos-db/3-analyze-the-decision-criteria
https://docs.microsoft.com/en-us/azure/cosmos-db/mongodb/mongodb-introduction

https://docs.microsoft.com/en-us/azure/cosmos-db/sql/modeling-data

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Q25)

Your company has an Azure subscription and an Azure key vault named udemyvault5000.
They have the following Azure virtual machines in place.

Name	Operating system disk type	Use managed disks
udemyvm1	Premium SSD	Yes
udemyvm2	Standard HDD	Yes
udemyvm3	Standard SSD	No

You go ahead and enable Azure Disk Encryption for all virtual machines and use the –VolumeType All parameter when enabling the encryption.

You then add the following data disk to the virtual machines.

Name	Virtual Machine	Storage Account type
udemy-disk1	udemyvm1	Premium SSD
udemy-disk2	udemyvm2	Standard HDD
udemy-disk3	udemyvm3	Standard HDD

Would udemy-disk1 be encrypted automatically via Azure Disk Encryption?

✅ Correct
Explanation:-If you specify the VolumeType as All when enabling encryption, this is applicable for all new disks as well.
This works for both Managed and un-managed disk. It also works for all disk types.
The following is given in the Microsoft documentation.
For more information on Azure Disk Encryption for Windows, please refer to the below link-
https://docs.microsoft.com/en-us/azure/virtual-machines/windows/disk-encryption-windows
⚪ Incorrect

Q26)

A company uses Azure SQL Managed Instance for the application data.

What two parameters would you set up to ensure that the instance will scale to meet the workload demands?

✅ Define the maximum of CPU cores
Explanation:-
Azure provides dynamic scalability for the Azure SQL Databases and Azure Managed Instances.
Azure SQL Database service offers two purchasing models: DTU-based and vCore-based. Azure Managed instance service is based only on the vCore purchasing model. This model allows you to select two scalability parameters for managed instance: the maximum CPU cores and the maximum allocated storage.

(Number 1): When you create a SQL Managed instance or change the resources for an existing instance, you use the Compute + storage panel.
(Number 2): Because Azure SQL Managed Instance uses only the vCore model, you need to select one of the model's Service tier options, General Purpose and Business Critical. These tiers define the storage latency: fast or super fast.

Then, using sliders, you set or change the instance resources: the number of vCores (Number 3) and the storage size (Number 4).

The default values are 8 CPU cores and 256 GB of storage. Azure SQL Managed Instance service will dynamically scale within these parameters to meet the workload demands. All databases in the Azure SQL Managed instance will share the assigned resources.

For more information about solutions for database scalability, please visit the below URLs:
https://docs.microsoft.com/en-us/azure/azure-sql/database/scale-resources
https://docs.microsoft.com/en-us/azure/azure-sql/managed-instance/sql-managed-instance-paas-overview
https://docs.microsoft.com/en-us/azure/azure-sql/managed-instance/service-tiers-managed-instance-vcore?tabs=azure-portal

✅ Define the maximum of the allocated storage
Explanation:-
Azure provides dynamic scalability for the Azure SQL Databases and Azure Managed Instances.
Azure SQL Database service offers two purchasing models: DTU-based and vCore-based. Azure Managed instance service is based only on the vCore purchasing model. This model allows you to select two scalability parameters for managed instance: the maximum CPU cores and the maximum allocated storage.

(Number 1): When you create a SQL Managed instance or change the resources for an existing instance, you use the Compute + storage panel.
(Number 2): Because Azure SQL Managed Instance uses only the vCore model, you need to select one of the model's Service tier options, General Purpose and Business Critical. These tiers define the storage latency: fast or super fast.

Then, using sliders, you set or change the instance resources: the number of vCores (Number 3) and the storage size (Number 4).

The default values are 8 CPU cores and 256 GB of storage. Azure SQL Managed Instance service will dynamically scale within these parameters to meet the workload demands. All databases in the Azure SQL Managed instance will share the assigned resources.

For more information about solutions for database scalability, please visit the below URLs:

https://docs.microsoft.com/en-us/azure/azure-sql/database/scale-resources
https://docs.microsoft.com/en-us/azure/azure-sql/managed-instance/sql-managed-instance-paas-overview
https://docs.microsoft.com/en-us/azure/azure-sql/managed-instance/service-tiers-managed-instance-vcore?tabs=azure-portal

⚪ Define the maximum of the resources per database
⚪ Define the maximum resource limit per group of databases

Q27)

You have to deploy an Azure SQL database named udemydb for your company. The databases must meet the following security requirements.

When IT help desk supervisors query a database table named customers, they must be able to see the full number of each credit card

When IT help desk operators query a database table named customers, they must only see the last four digits of each credit card number

A column named Credit Card rating in the customers table must never appear in plain text in the database system. Only client applications must be able to decrypt the information that is stored in this column.

Which of the following can be implemented for the Credit Card rating column security requirement?

⚪ Always Encrypted
Explanation:-
⚪ Azure Advanced Threat Protection
⚪ Transparent Data Encryption
✅ Dynamic Data Masking

Q28)

A company stores web access logs for an application in Azure Blob storage. At the end of each month, the log data must be automatically sent to an Azure SQL database for report generation.

Which of the following would you implement for this requirement?

✅ Azure Data Factory

Explanation:-

Azure Data Factory is managed cloud service for extract-transform-load (ETL), extract-load-transform (ELT), and data integration operations. With Azure Data Factory, you can create a data pipeline. A data pipeline is a logical group of activities (steps) that perform a unit of work. Each activity consists of tasks. You can implement the data pipeline to transfer data from Azure Blob storage to an Azure SQL database. It can also run based on a schedule.

For more information about Azure Data Factory, please visit the following URL:

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

- Data Migration Assistant
- Microsoft SQL Server Migration Assistant (SSMA)
- AzCopy

Q29)

You have to design a Data Engineering solution for your company. The company currently has an Azure subscription. They also have application data hosted in a database on a Microsoft SQL Server hosted in their on-premises data center server. They want to implement the following requirements

Transfer transactional data from the on-premises SQL server onto a data warehouse in Azure.
Data needs to be transferred every day in the night as a scheduled job

A managed Spark cluster needs to be in place for data engineers to perform analysis on the data stored in the SQL data warehouse. Here the data engineers should have the ability to develop notebooks in Scale, R and Python.

They also need to have a data lake store in place for the ingestion of data from multiple data sources

Which of the following would the use for hosting the data warehouse in Azure?

- Azure Data Factory
- Azure Databricks
- Azure Data Lake Gen2 Storage accounts
✅ Azure Synapse Analytics

Explanation:-Here we can host a data warehouse in Azure with the help of the Azure Synapse Analytics service.
For more information on Azure Synapse, one can go to the following URL
https://docs.microsoft.com/en-us/azure/synapse-analytics/

Q30)

Your company currently has an application that is hosted on their on-premises environment. The application currently connects to two databases in the on-premises environment. The databases are named udemydb1 and udemydb2.

You have to move the databases onto Azure. The databases have to support server-side transactions across both of the databases.

You decide to deploy the databases to an Azure SQL database-managed instance.

Would this fulfil the requirement?

✅ Correct

Explanation:-

When it comes to distributed transactions, this is supported for the Azure SQL Managed Instance. If there are multiple instances, you need to create a Server Trust Group and the instances need to be added to the Server Trust group.

For more information on distributed transactions in the cloud, one can visit the following URL
https://docs.microsoft.com/en-us/azure/azure-sql/database/elastic-transactions-overview

- Incorrect

Q31)

Your company has an Azure subscription. The subscription contains a blob container. The company users from the finance department needs to have access to the blobs during the month of March only.

Which of the following is the right security access solution for this requirement?

✅ Shared Access Signatures

Explanation:-Here you can ensure that access is limited to the month via the use of Shared Access Signatures.
For more information on Shared Access Signatures, one can go to the following URL
https://docs.microsoft.com/en-us/azure/storage/common/storage-sas-overview

- Conditional Access Policies
- Certificates
- Access Keys

Q32)

Your company currently has an application that is hosted on their on-premises environment. The application currently connects to two databases on the on-premises environment. The databases are named udemydb1 and udemydb2.

You have to move the databases onto Azure. The databases have to support server-side transactions across both of the databases.

You decide to deploy the databases to as Azure SQL databases to the same Azure SQL database server.

Would this fulfil the requirement?

✅ Correct

Explanation:-

The Azure SQL database service supports Elastic database transactions. This allows database transactions across multiple databases.

For more information on distributed transactions in the cloud, one can visit the following URL
https://docs.microsoft.com/en-us/azure/azure-sql/database/elastic-transactions-overview

- Incorrect

Q33)

A company has an on-premises network that includes a file server. The server contains 500 GB of data. You need to advise the company on using the Azure Data Factory service to copy the data from the server onto Azure Storage.

Which of the following would you recommend from the Data Factory side?

- Create an import job
- Create an export job
- Use the Azure-SQL Server Integration Services Integration runtime
✅ Create a pipeline

Explanation:-

Azure Data Factory is managed cloud service for extract-transform-load (ETL), extract-load-transform (ELT), and data integration operations. With Azure Data Factory, you can create a data pipeline. A data pipeline is a logical group of activities (steps) that perform a unit of work. Each activity consists of

tasks. You can implement the data pipeline to transfer data from an on-premises file server to Azure Storage. It can also run based on a schedule.

All other options are incorrect because they are not part of the Azure Data Factory service.

For more information about Azure Data Factory, please visit the following URL:
https://docs.microsoft.com/en-us/azure/data-factory/introduction

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Q34)

A company has the following resources as part of its Azure subscription

You need to ensure the following security requirements are met

All data in the Azure SQL database is encrypted at rest and in transit

All data in the storage account is encrypted at rest

All data on the operating and data disks for the virtual machine are encrypted at rest

Which of the following would you implement for the following requirement?

“All data in the storage account is encrypted at rest”

✅ Azure Storage Encryption

Explanation:-
Azure provides Storage Encryption for all data by default. You cannot disable the Storage encryption, and you do not need to modify any code or applications to benefit from this storage account feature. The Storage Account Encryption uses the 256-bit AES method, which is similar to BitLocker encryption for Windows.

For more information about Azure Storage Encryption, please visit the following URL:
https://docs.microsoft.com/en-us/azure/storage/common/storage-service-encryption

- Azure Disk Encryption
- Always Encrypted
- Transparent Data Encryption

Q35) A team has created a storage account in Azure. They also have the following object available in the storage account
In order to access the Sample.txt file, which of the following must be done first?

- Generate a snapshot
✅ Modify the access tier

Explanation:-
In order to access the BLOB, since it is in the archive access tier, you need to first change the access tier for the blob object. The Microsoft documentation mentions the following

Since this is clearly mentioned in the documentation, all other options are incorrect

For more information on the storage tiers, please visit the below URL
https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-storage-tiers

- Generate a shared access signature
- Modify the type of blob

Q36)

A company needs to create a storage account that must meet the following requirements.

Ensure that the documents and tables can be stored in the storage account

The documents must be made accessible using via drive mappings from Azure virtual machines that run Windows Server 2019

Provide the highest possible redundancy for the documents

Which of the following would you recommend for the Storage account performance?

✅ Standard

Explanation:-
The company's storage account should include Azure File shares that you can map as drives from Windows-based Azure VMs. Both Standard and Premium performance tiers support Azure Files service. Also, your storage account needs to support Azure Tables. Only the Standard performance tier can support mixed storage services. You can store File shares, Azure Tables, and/or blob containers under the same storage account. However, Microsoft does not recommend that due to possible difficulties with performance troubleshooting of the mixed purpose accounts. On the contrary, the Premium tier account can store File shares only. You cannot deploy any other types of storage resources to the premium FileStorage account.

For more information about Azure storage accounts, please visit the below URL:
https://docs.microsoft.com/en-us/azure/storage/common/storage-account-overview
https://docs.microsoft.com/en-us/azure/storage/files/storage-files-planning#management-concepts

- Premium
- General Purpose
- BLOB

Q37)

An insurance company, HABInsurance, operates in three states and provides home, auto, and boat insurance. Besides the head office, HABInsurance has three regional offices.

Current environment

General

An insurance company, HABInsurance, operates in three states and provides home, auto, and boat insurance. Besides the head office, HABInsurance has three regional offices.

Technology assessment
The company has two Active Directory forests: main.habinsurance.com and region.habinsurance.com.
HABInsurance's primary internal system is Insurance Processing System (IPS). It is an ASP.Net/C# application running on IIS/Windows Servers hosted in a data center. IPS has three tiers: web, business logic API, and a datastore on a back end. The company uses Microsoft SQL Server and MongoDB for the backend. The system has two parts: Customer data and Insurance forms and documents. Customer data is stored in Microsoft SQL Server and Insurance forms and documents — in MongoDB.

The company also has 10 TB of Human Resources (HR) data stored on NAS at the head office location.
Requirements
General

HABInsurance plans to migrate its workloads to Azure. They purchased an Azure subscription.
Changes

During a transition period, HABInsurance wants to create a hybrid identity model along with a Microsoft Office 365 deployment. The company intends to sync its AD forests to Azure AD and benefit from Azure AD administrative units functionality.
HABInsurance needs to migrate the current IPSCustomers SQL database to a new fully managed SQL database in Azure that would be budget-oriented, balanced with scalable compute and storage options. The management team expects the Azure database service to scale the database resources dynamically with minimal downtime. The technical team proposes implementing a DTU-based purchasing model for the new database.
HABInsurance wants to migrate Insurance forms and documents to Azure database service.
HABInsurance plans to move IPS first two tiers to Azure without any modifications. The technology team discusses the possibility of running IPS tiers on a set of virtual machines instances. The number of instances should be adjusted automatically based on the CPU

utilization. An SLA of 99.95% must be guaranteed for the compute infrastructure.
The company needs to move HR data to Azure File shares.
In their new Azure ecosystem, HABInsurance plans to use internal and third-party applications. The company considers adding user consent for data access to the registered applications.

Later, the technology team contemplates adding a customer self-service portal to IPS and deploying a new IPS to multi-region ASK. But the management team is worried about the performance and availability of the multi-region AKS deployments during regional outages.

What purchasing model and service tier would you recommend for the IPSCustomers database?

- [x] vCore-based model

Explanation:-
Azure SQL Database service offers two purchasing models: DTU-based and vCore-based. Azure Managed instance service is based only on the vCore purchasing model. There are two deployment options for Azure SQL Database: Single database and Elastic pool — a collection of the single databases with shared resources. Microsoft recommends for the new projects to use the Virtual Core (v-Core)-based purchasing model. The vCore-based model gives users the flexibility to choose between provisioned compute resources, when you define the exact amount of the resources, and serverless compute resources, when you specify the autoscaling of the resources within a predefined range.

The vCore-based model has three service tiers: General purpose, Hyperscale, and Business Critical.

You should recommend provisioning an IPSCustomers database as an Azure SQL Database service using the vCore-based model and General purpose service tier. This tier is budget-oriented, balanced with scalable compute and storage options.

For more information about Azure SQL Database purchasing models and service tiers, please visit the below URLs:
https://docs.microsoft.com/en-us/azure/azure-sql/database/purchasing-models
https://docs.microsoft.com/en-us/azure/azure-sql/database/service-tiers-sql-database-vcore
https://docs.microsoft.com/en-us/azure/azure-sql/database/single-database-overview

- [ ] DTU-based model
- [ ] Standard tier
- [x] General Purpose tier

Explanation:-
Azure SQL Database service offers two purchasing models: DTU-based and vCore-based. Azure Managed instance service is based only on the vCore purchasing model. There are two deployment options for Azure SQL Database: Single database and Elastic pool — a collection of the single databases with shared resources. Microsoft recommends for the new projects to use the Virtual Core (v-Core)-based purchasing model. The vCore-based model gives users the flexibility to choose between provisioned compute resources, when you define the exact amount of the resources, and serverless compute resources, when you specify the autoscaling of the resources within a predefined range.

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For more information about Azure SQL Database purchasing models and service tiers, please visit the below URLs:
https://docs.microsoft.com/en-us/azure/azure-sql/database/purchasing-models
https://docs.microsoft.com/en-us/azure/azure-sql/database/service-tiers-sql-database-vcore
https://docs.microsoft.com/en-us/azure/azure-sql/database/single-database-overview

- [ ] Premium tier

Q38)

An insurance company, HABInsurance, operates in three states and provides home, auto, and boat insurance. Besides the head office, HABInsurance has three regional offices.
Current environment
General
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The company has two Active Directory forests: main.habinsurance.com and region.habinsurance.com.
HABInsurance's primary internal system is Insurance Processing System (IPS). It is an ASP.Net/C# application running on IIS/Windows Servers hosted in a data center. IPS has three tiers: web, business logic API, and a datastore on a back end. The company uses Microsoft SQL Server and MongoDB for the backend. The system has two parts: Customer data and Insurance forms and documents. Customer data is stored in Microsoft SQL Server and Insurance forms and documents — in MongoDB.
The company also has 10 TB of Human Resources (HR) data stored on NAS at the head office location.
Requirements
General
HABInsurance plans to migrate its workloads to Azure. They purchased an Azure subscription.
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HABInsurance plans to move IPS first two tiers to Azure without any modifications. The technology team discusses the possibility of running IPS tiers on a set of virtual machines instances. The number of instances should be adjusted automatically based on the CPU utilization. An SLA of 99.95% must be guaranteed for the compute infrastructure.
The company needs to move HR data to Azure File shares.
In their new Azure ecosystem, HABInsurance plans to use internal and third-party applications. The company considers adding user consent for data access to the registered applications.

Later, the technology team contemplates adding a customer self-service portal to IPS and deploying a new IPS to multi-region ASK. But the management team is worried about performance and availability of the multi-region AKS deployments during regional outages.

What two parameters would you recommend set up to ensure that the new IPSCustomers database will scale to meet the workload demands?

- [ ] Define the maximum of CPU cores
- [ ] Define the maximum resource limit per group of databases
- [x] Define the maximum of Database Transaction Units

Explanation:-
From the requirements statement:
"The management team expects the Azure database service to scale the database resources dynamically with minimal downtime. The technical team proposes implementing a DTU-based purchasing model for the new database."

Azure provides dynamic scalability for the Azure SQL Databases and Azure Managed Instances. Azure Managed instance service is based only on the vCore purchasing model. Azure SQL Database service offers two purchasing models: DTU-based and vCore-based. There are two deployment options for Azure SQL Database: Single database and Elastic pool — a collection of the single databases with shared resources.

The DTU-based model allows you to select two scalability parameters for a single Azure SQL Database: the maximum of Database Transaction Units (DTU) and the maximum database size. You can dynamically change these two parameters.

The DTU-based Azure SQL Database has three service tiers: Basic, Standard, and Premium.

You can select vCore and DTU tiers from the Service tier dropdown (Number 2) on the SQL Database Configuration screen (Number 1). Then, using sliders, you set or change the SQL database resources: the number of DTUs (Number 3) and the database size (Number 4). The default values for an initial Standard (S0) tier are 10 DTUs and 2 GB for the database size.

For more information about Azure SQL Database scalability, please visit the below URLs:
https://docs.microsoft.com/en-us/azure/azure-sql/database/scale-resources
https://docs.microsoft.com/en-us/azure/azure-sql/database/sql-database-paas-overview

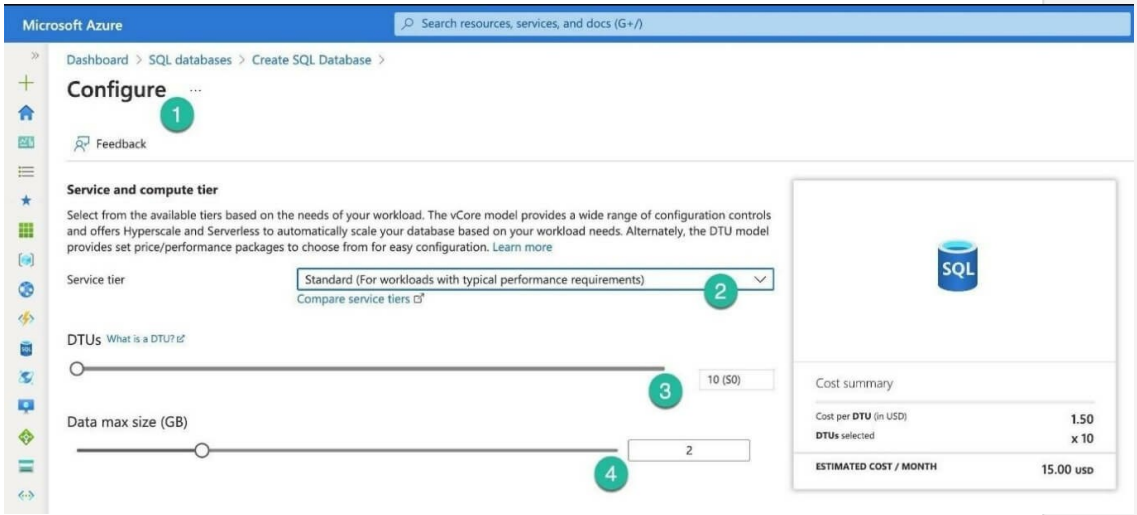
https://docs.microsoft.com/en-us/azure/azure-sql/database/single-database-overview

DTU-based purchasing model

Basic (For less demanding workloads)

Standard (For workloads with typical performance requirements)

Premium (For IO-intensive workloads)



- Define the maximum of the allocated storage
- ✅ Define the maximum size for a database

Explanation:-
From the requirements statement:
"The management team expects the Azure database service to scale the database resources dynamically with minimal downtime. The technical team proposes implementing a DTU-based purchasing model for the new database."

Azure provides dynamic scalability for the Azure SQL Databases and Azure Managed Instances. Azure Managed instance service is based only on the vCore purchasing model. Azure SQL Database service offers two purchasing models: DTU-based and vCore-based. There are two deployment options for Azure SQL Database: Single database and Elastic pool — a collection of the single databases with shared resources.

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For more information about Azure SQL Database scalability, please visit the below URLs:
https://docs.microsoft.com/en-us/azure/azure-sql/database/scale-resources
https://docs.microsoft.com/en-us/azure/azure-sql/database/sql-database-paas-overview
https://docs.microsoft.com/en-us/azure/azure-sql/database/single-database-overview

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Q39)

A company is planning on deploying an application onto Azure. The application will be based on the .Net core programming language. The application would be hosted using Azure Web apps. Below is part of the various requirements for the application.

Gives the ability for the testing team to view the different components of an application and see the calls being made between the different application components.

Helps business analyse how many users actually return to the application
Ensuring IT administrators get alerts based on critical conditions being met in the application

Which of the following service would be best suited for fulfilling the requirement of "Ensuring IT administrators get alerts based on critical conditions being met in the application".

- Application Insights
- ✅ Azure Monitor

Explanation:-
This is a feature of Azure Monitor wherein you can use the Alerts feature. This is also mentioned in the Microsoft documentation

For more information on Azure Monitor, please visit the below URL
https://docs.microsoft.com/en-us/azure/azure-monitor/overview

- Azure Advisor
- Azure Policies

Q40)

A company has set up an Azure subscription and an Azure tenant. They have purchased Premium P2 licenses. There are different departments that have different requirements for managing identities.

Which of the following would you suggest for the Procurement department?

- Managed Service Identity
- Identity Protection
- ✅ Privileged Identity Management

Explanation:-
This is clearly given in the Microsoft documentation wherein the Privileged Identity Management feature would fulfil these requirements

For more information on privileged identity management, please visit the below URL

https://docs.microsoft.com/en-us/azure/active-directory/privileged-identity-management/pim-configure

- Azure AD Connect

Q41)

A company is planning on deploying an application onto Azure. The application will be based on the .Net core programming language. The application would be hosted using Azure Web apps. Below is part of the various requirements for the application

Give the ability to correlate Azure resource usage and the performance data with the actual application configuration and performance data

Give the ability to visualize the relationships between application components

Give the ability to track requests and exceptions to specific lines of code from within the application

Give the ability to actually analyse how uses return to an application and see how often they only select a particular drop-down value

Which of the following service would be best suited for fulfilling the requirement of "Give the ability to correlate Azure resource usage and the performance data with the actual application configuration and performance data"

- Azure Application Insights
- Azure Service Map
- ✅ Azure Log Analytics

Explanation:-
You can send data about the application and resource usage to Azure Log Analytics. You can then build queries on the stored data.

For more information on Azure Log Analytics, please go ahead and visit the below URL

https://docs.microsoft.com/en-us/azure/azure-monitor/learn/tutorial-viewdata

- Azure Activity Log

Q42)

You have an Azure Web App that interacts with an Azure Key Vault. The Key Vault is located in the East US location. You are going to back up the keys in the key vault.

To which of the following would you be able to restore the backup?

- To the key vault only
- To a key vault located in the same region only
- ✅ To a key vault located in the same geography only

Explanation:-
When you backup any object in the key vault, you can restore the object to any vault which is located in the same Azure subscription and geography.

For more information on the backup operation on the Key vault, one can go to the following URL
https://docs.microsoft.com/en-us/azure/key-vault/general/backup

- To a key vault located in any region

Q43)

Your company needs to deploy Azure resources for several departments. Each department has different security requirements.

Which of the following would you use to fulfill the requirement for DepartmentB?

- Azure AD Privileged Identity Management
- ✅ Azure AD Managed Identities

Explanation:-
Azure AD Managed Identities service eliminates the necessity of credential management for the application developers. The service provides applications with seamless access to the Azure resources that support Azure AD authentication. For example, using managed identities, applications can retrieve credentials or secrets by accessing Azure Key Vault or get Azure AD tokens to retrieve certificates.

For more information about Azure Managed Service Identities, please visit the below URLs:
https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/overview
https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/how-managed-identities-work-vm

- Azure Key Vault
- Azure Security Center

Q44)

A company has a set of 10 Virtual Machines created in their Azure subscription.

There is a requirement to ensure that an IT administrator gets an email whenever the following operations are performed on the Virtual Machine.

Restart of the machine
Whenever the machine is deallocated
Whenever the machine is powered off

You need to decide on the minimum number of rules and actions groups required in Azure Monitor for this requirement. Choose two answers from the options given below.

- ✅ Three rules

Explanation:-
To monitor the three events in Azure Monitor, you need to create 3 separate rules for each requirement. When you open from Azure Monitor blade the Alerts screen and select the "New Alert Rule" link, the Azure portal opens the "Create alert rule" screen (Number 1). You need to fill the sections on this panel. First, you select a scope for the monitoring (Number 2): your VM, subscription, and resource group. Then, you choose the Activity Log event (signal) to trigger the alert (Number 3) under the Condition section. You can create only one alert per event (Number 4). Next, you add an Action group that will send a notification email (Number 5), provide a rule name, and create it.

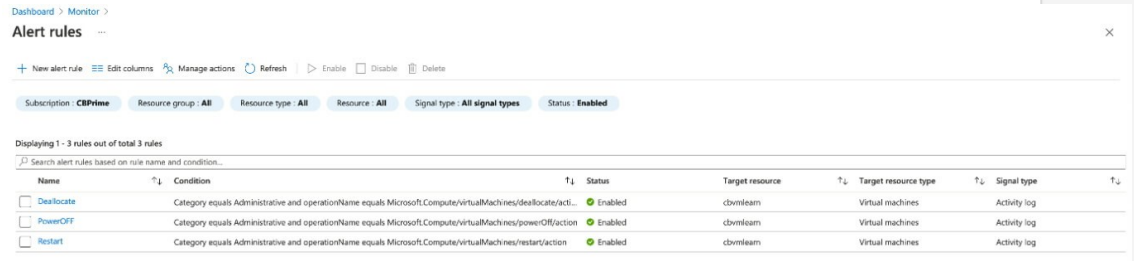
After creating three alert rules, you can review them on the "Alert rules" screen.

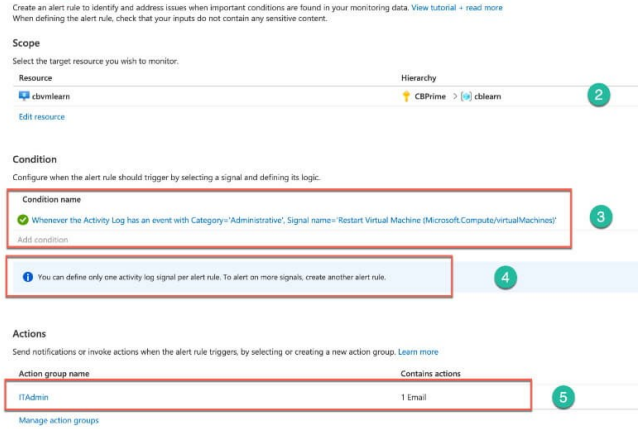
And you can review the Action group on the "Manage actions" screen as well.

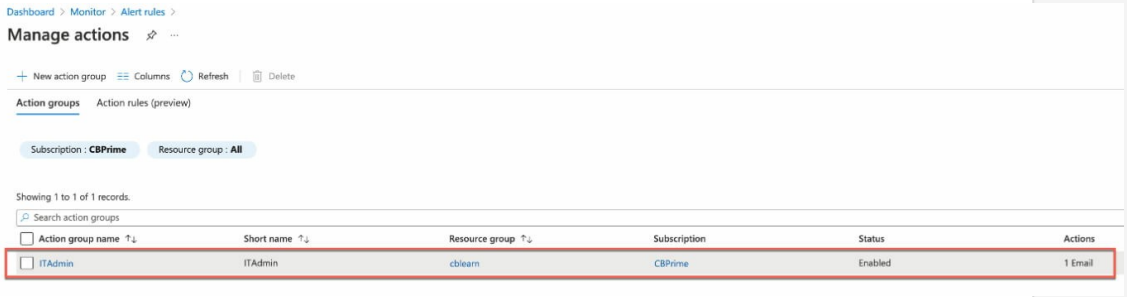
In the end, you have three rules and one action group.

For more information on alerts in Azure Monitor, please go ahead and visit the below URL-

https://docs.microsoft.com/en-us/azure/azure-monitor/platform/alerts-overview







- One rule
- ✅ One action group

Explanation:-
To monitor the three events in Azure Monitor, you need to create 3 separate rules for each requirement. When you open from Azure Monitor blade the Alerts screen and select the “New Alert Rule” link, the Azure portal opens the “Create alert rule” screen (Number 1). You need to fill the sections on this panel. First, you select a scope for the monitoring (Number 2): your VM, subscription, and resource group. Then, you choose the Activity Log event (signal) to trigger the alert (Number 3) under the Condition section. You can create only one alert per event (Number 4). Next, you add an Action group that will send a notification email (Number 5), provide a rule name, and create it.

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In the end, you have three rules and one action group.

For more information on alerts in Azure Monitor, please go ahead and visit the below URL-
https://docs.microsoft.com/en-us/azure/azure-monitor/platform/alerts-overview

- Three action groups

Q45) Your company needs to generate a monthly report on all resources that were deployed to the Azure subscription. Which of the following would help achieve this requirement?

- Azure Log Analytics
- ✅ Azure Activity Log

Explanation:-
You can actually go to the
1) Activity Logs section in Azure Monitor
2) Choose the timespan for the time period required
3) Download the report as CSV

For more information on Activity logs, please go ahead and visit the below URL

https://docs.microsoft.com/en-us/azure/azure-monitor/platform/activity-logs-overview

- Azure Monitor action groups
- Azure Advisor

Q46)

A company wants to reduce the risk of malicious applications attempting to trick users into granting them access to its data.

What would you recommend for the company to set up?

- Azure AD Admin consent for all apps
- ✅ Azure AD User consent for apps from verified publishers

Explanation:-
Microsoft identity platform enables the third-party applications to use the resources on behalf of the users. Users must grant their rights to the resources by providing consent to the app. The app should be registered with Azure AD, and tenant admins should define the organization Consent and Permissions for the Enterprise Applications.

To do that, from the Azure AD main panel, you select the Enterprise Applications under the Manage section. Then, on the Enterprise Application screen (Number 1), select the Consent and permissions item under the Security section (Number 2).

On the new Consent and permissions screen (Number 1) under the first tab — User consent settings (Number 2), you can select one of the three user consent options:

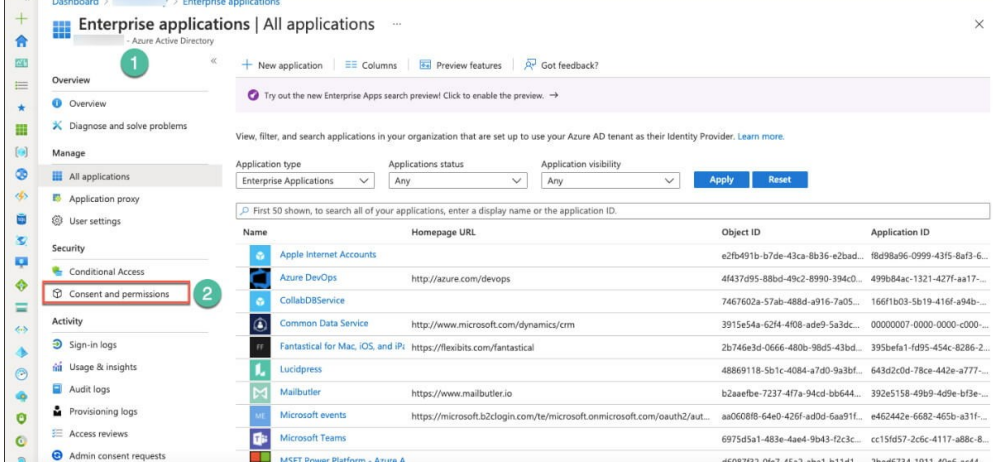
Do not allow user consent (Number 3) — admin's consent would be required for all the registered apps.

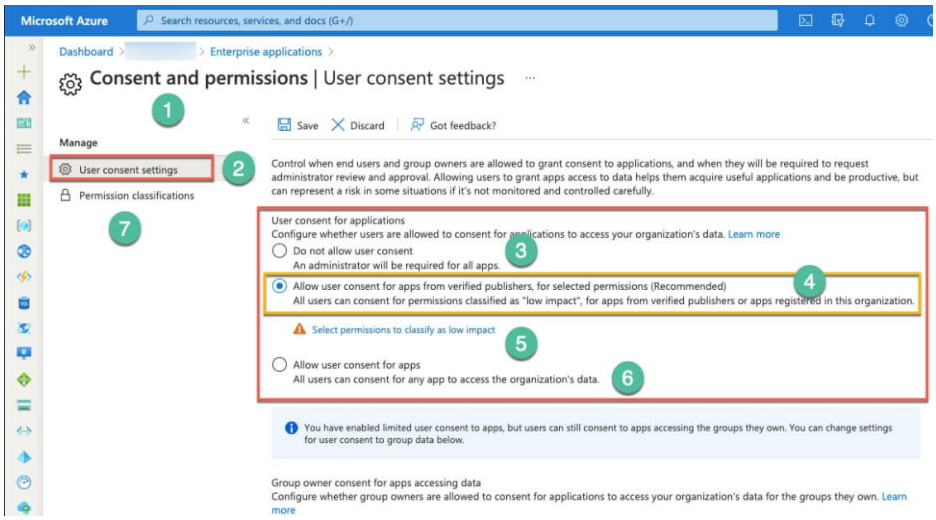
Allow user consent for apps from verified publishers, for selected permissions (Number 4) — admin should define the "low impact" permissions that user can consent to for the apps from the verified publisher or your organization. To define the "low impact" permissions, you click on the "Select permissions to classify as low impact" link (Number 5) or select the second tab — "Permissions classifications" (Number 7).

Allow user consent for apps (Number 6) — all users can consent for the app’s access to the organization’s data.

Following the Microsoft recommendations, you need to advise the company to set up the "Allow user consent for apps from verified publishers…" option as the tool against malicious their-party applications.

For more information about Azure AD User Consent, please visit the below URLs:
https://docs.microsoft.com/en-us/azure/active-directory/develop/application-consent-experience
https://docs.microsoft.com/en-us/azure/active-directory/manage-apps/configure-user-consent?tabs=azure-portal
https://docs.microsoft.com/en-us/azure/active-directory/develop/consent-framework





- Azure AD No user consent
- Azure Policy
- Azure AD Custom user consent