

Q1)

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

Would udemytore2 have six copies of data?

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.

The udemytore2 storage account has Geo-redundant storage replication. Therefore, the data stored within udemytore2 account will have six copies.

For more information on storage account redundancy, please go to the following URL-
<https://docs.microsoft.com/en-us/azure/storage/common/storage-redundancy>

Incorrect

Q2)

You are running Azure SQL server databases on virtual machines.

Please select a service that helps you to keep your databases highly available.

- Long term backup retention
- Active geo-replication
- Always On availability groups

Explanation:-

Azure SQL provides several services for high availability and business continuity. Such services are long-term backup retention, active geo-replication, Always On availability groups, auto-failover groups, etc.

Always On availability groups is the high-availability mechanism for SQL Servers running on Azure virtual machines. It is based on Windows Server Failover Clustering Service (WSFC) and works similarly to Always On availability groups on-premises. Always On availability groups have primary and secondary replicas. The primary replica holds the primary database. The secondary replica holds the synchronized copy of the primary database. In the case of failure, the secondary replica is the failover destination for the primary database. You can make the secondary replica readable for the clients that can balance the data demand between replicas. WSFC service unifies and organizes the work of the virtual machine clusters. Always On Availability Groups are using these clusters for replica hosting. The groups can be configured in Azure by creating two availability sets: one for the WSFC nodes and another for domain controllers. The machine cluster should include at least three virtual machines: the primary replica, the secondary, and the last for the file share witness server. You can use Azure Files as a witness as well.

For more information about the high availability of the SQL Servers on Azure VMs, please visit the below URLs:

<https://docs.microsoft.com/en-us/learn/modules/design-your-site-recovery-solution-in-azure/5-build-resilient-data-services>

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

<https://docs.microsoft.com/en-us/azure/azure-sql/virtual-machines/windows/hadr-windows-server-failover-cluster-overview>

Auto-failover groups

Q3)

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 create an Azure Recovery Services vault. You then decide to install the Azure Backup agent and then schedule the backup.

Would this meet the requirement?

Correct

Explanation:-

Azure Recovery Services Vault is storage for backup data. The data can come from various Azure services, like VMs, Azure SQL database, Azure Backup Services, etc. To bring the files to Azure, you need to install the Microsoft Azure Recovery Service (MARS) or Azure Backup agent on a Windows file server machine. Then you create backup policies, schedule a backup, and define the backup files retention. Once this is in place, the backup agent transfers the files from cbflserver 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/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>

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

Incorrect

Q4)

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 create a Recovery Services vault and then configure a backup by using Windows Server Backup.

Would this meet the requirement?

Correct

Incorrect

Explanation:-

If you use Windows Server 2019, you can install the server component Windows Server Backup.

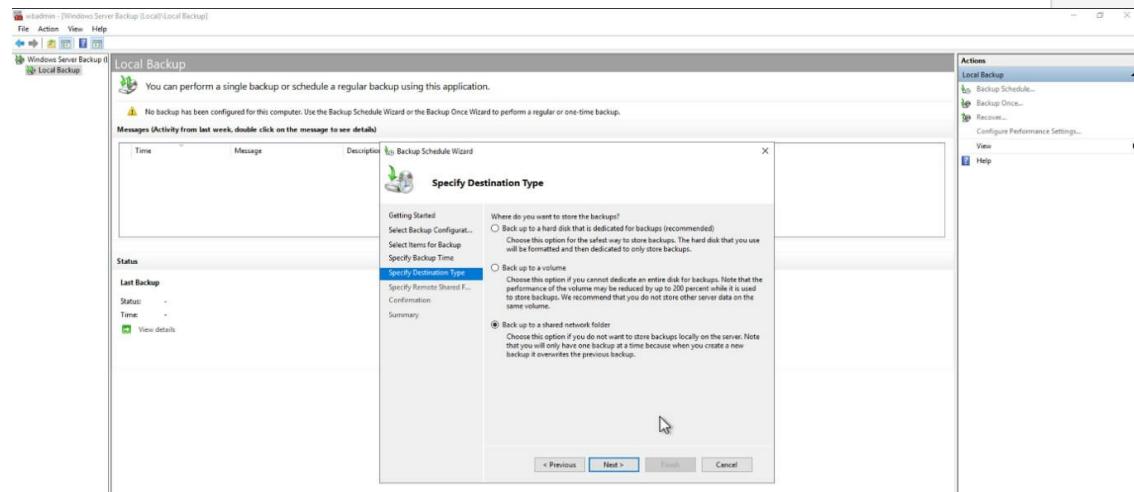
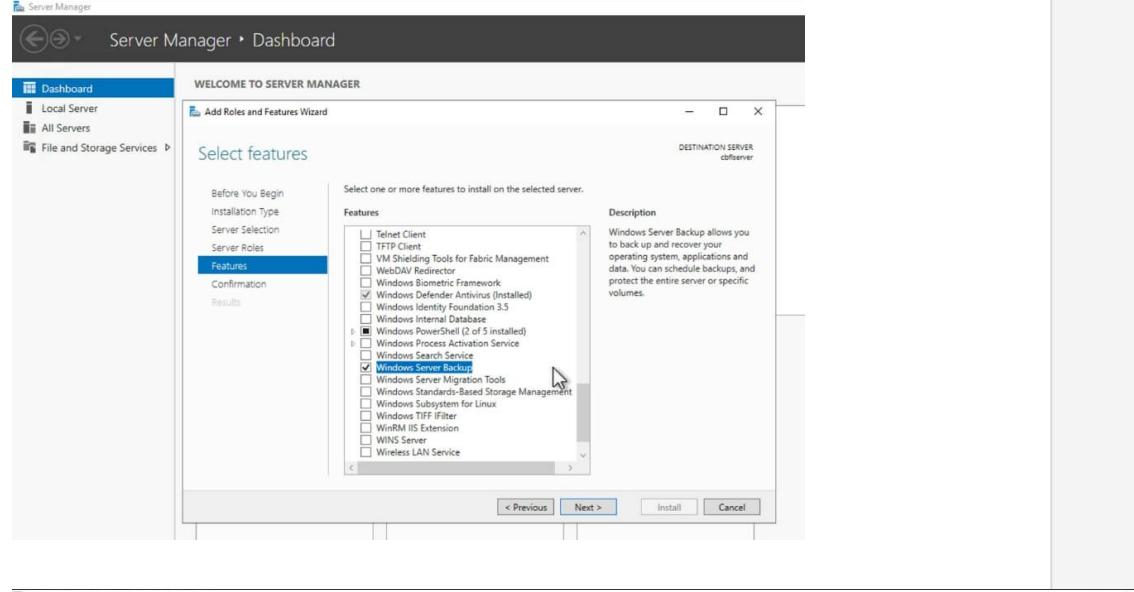
The Windows Server backup helps you create local backups and store them locally, on the volume or the shared network folder. You can use this application to backup and restore Microsoft Exchange Server data.

But Windows Server Backup does not connect with Azure to store the backup of the cbflserver files there.

For more information about Windows Server Backup, please visit the following URLs:

<https://www.verbu.com/blog/windows-server-backup-installation-features-limitations/>

<https://docs.microsoft.com/en-us/exchange/high-availability/disaster-recovery/windows-server-backup?view=exchserver-2019>



Q5)

A company is preparing its Azure environment for the backup of Azure Virtual Machines. They need to ensure the following when it comes to the backup of Virtual Machines.

The Virtual machines need to be backed up daily at 03:00 UTC.

The backups should be retained for a period of 90 days.

Which of the following should you configure in the Azure Recovery Services vault?

- Backup Policy

Explanation:-

To specify the backup schedule, you first need to go to the Azure Site Recovery Services vault. Then go to Backup policies and then click on Add. Choose Azure Virtual Machine in the next screen.

You can then define the backup schedule and the retention of the daily backup via a policy.

For more information on Azure backup, please visit the below URL-
<https://docs.microsoft.com/en-us/azure/backup/backup-introduction-to-azure-backup>

- Backup Schedule
- Backup Logs
- Backup Infrastructure

Q6)

Your company is hosting a SQL Server on an Azure virtual machine. You have to automate the backup of the database hosted on the SQL server by using Automated Backup v2 for virtual machines. The backups need to meet the following requirements

Be able to meet a recovery point objective of 15 minutes

**Retain backups for 30 days
Encrypt the backups at rest**

Which of the following would you use as the backup solution?

- Elastic Database jobs
- Azure Key vault
- Azure Storage account

Explanation:-

When it comes to using the Automated Backup v2 for virtual machines feature , you have to use an Azure storage account. This is what is recommended by Microsoft.

Since this is a recommendation from Microsoft, all other options are incorrect

For more information on the Automated Backup feature, one can visit the following URL
<https://docs.microsoft.com/en-us/azure/sql/virtual-machines/windows/automated-backup>

- Recovery Services vault

Q7)

A company needs to host a set of applications on Azure virtual machines. There are different requirements for each of the applications

Maintain reliable performance on a set of virtual machines

Ensure application is running in the event of a data center failure

Which of the following services can you recommend for the “Maintain reliable performance on a set of virtual machines” requirement?

- Azure Availability Zones
- Azure Application Gateway
- Azure Scale Sets

Explanation:-

To ensure the reliable performance of the applications running on the set of virtual machines, you need to use Azure Scale Sets. Azure Virtual Machine Scale Sets service helps create and manage a group of VMs behind a load balancer. The configuration of these machines must be the same, and they should run on the same base OS image. The VM scale sets can automatically increase or decrease VM instances depending on the scaling rules and resource demand. Scale sets provide high availability for your applications. You can use scale sets for large-scale services, like compute, big data, and containers.

For more information about Azure Virtual Machine Scale Sets, please visit the following URL:
<https://docs.microsoft.com/en-us/azure/virtual-machine-scale-sets/overview>

- Azure Traffic Manager

Q8)

A company wants to migrate its relation data to Azure CosmosDB. The management is worried about CosmosDB high availability.

What are two primary ways how Azure CosmosDB provides high availability?

- Replicates data across regions

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 as 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).

Azure CosmosDB provides high availability in two primary ways: replication data across regions and storing four copies of the data in a region. By default, Azure CosmosDB is distributed in all Azure regions. You can change the number of regions in your CosmosDB account. Suppose you associate five Azure regions with your data, and every region will have four copies of the data. There will be twenty copies of your data available to use.

For more information about Azure CosmosDB high availability, please visit the below URLs:
<https://docs.microsoft.com/en-us/azure/cosmos-db/high-availability>

- Uses Azure scale sets
- Uses Azure Traffic Manager
- Replicates data four times in a region

Explanation:-

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For more information about Azure CosmosDB high availability, please visit the below URLs:
<https://docs.microsoft.com/en-us/azure/cosmos-db/high-availability>

- Replicates data six times in a region

Q9)

The management team is worried about performance and availability of the multi-region AKS deployments during regional outages.

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

- Azure Backup
- Azure Kubernetes Service image pull from the regional registry

Explanation:-

You can improve the performance, availability, and protection of the multi-region AKS deployments from regional outages by implementing geo-replication of the Container Registry. Geo-replication automatically replicates the images to the regional Container Registries around the world. If a regional outage happens, each AKS cluster can pull images from the local, regional registry. Such configuration improves performance and provides high availability to your multi-region AKS deployments.

For more information about the availability and protection of the multi-region AKS deployments, please visit the below URLs:
<https://docs.microsoft.com/en-us/azure/aks/operator-best-practices-multi-region#enable-geo-replication-for-container-images>
<https://docs.microsoft.com/en-us/azure/container-registry/container-registry-geo-replication>

- Azure VM Scale sets
- Azure Container Registry geo-replication

Explanation:-

You can improve the performance, availability, and protection of the multi-region AKS deployments from regional outages by implementing geo-replication of the Container Registry. Geo-replication automatically replicates the images to the regional Container Registries around the world. If a regional outage happens, each AKS cluster can pull images from the local, regional registry. Such configuration improves performance and provides high availability to your multi-region AKS deployments.

For more information about the availability and protection of the multi-region AKS deployments, please visit the below URLs:
<https://docs.microsoft.com/en-us/azure/aks/operator-best-practices-multi-region#enable-geo-replication-for-container-images>
<https://docs.microsoft.com/en-us/azure/container-registry/container-registry-geo-replication>

- Azure App Service

Q10)

Your application uses several SQL Databases. These databases are running on the primary server. You plan to create a failover group.

Please select the correct statements about the failover group.

- The secondary server should not be in the same region as a primary server

Explanation:-

Azure SQL provides several services for high availability and business continuity. Such services are long-term backup retention, active geo-replication, Always On availability groups, auto-failover groups, etc.

You need to be ready to deal with accidental deletion of the data or malicious attack, or physical disaster that disables the data center. One of the services to handle these cases is failover groups.

A failover group is a group of servers that, in case of database failure in the prime region, will fail over into the databases in the secondary region. Azure creates the database replicas in the secondary region when you provision the failover group and include the databases. The primary and secondary servers must be in different regions but in the same resource group. A failover group is configured as auto-failover by default. You can manually trigger a failover as well. Active geo-replication supports the data synchronization between primary and secondary servers. The failover groups provide the group semantics on top of geo-replication. You can enable the secondary server for the clients' read access. It helps to manage the data demand between primary and secondary locations.

Depending on the level of the disaster, you can lose some data due to the failover procedures. The potential data loss or Recovery point objective (RPO) for auto-failover groups is 5 seconds. For comparison, the RPO for geo-restoration from geo-replicated backups is 1 h. The time required for the application

to be fully recovered or the Recovery time objective (RTO) for the auto-failover groups is also 1 h.

For more information on failover groups Azure SQL deployments, please visit the below URLs:
<https://docs.microsoft.com/en-us/azure/azure-sql/database/business-continuity-high-availability-disaster-recover-hadr-overview>
<https://docs.microsoft.com/en-us/azure/azure-sql/database/failover-group-add-single-database-tutorial?tabs=azure-portal>
<https://docs.microsoft.com/en-us/azure/azure-sql/database/auto-failover-group-configure?tabs=azure-portal>
<https://docs.microsoft.com/en-us/azure/azure-sql/database/active-geo-replication-overview>

- The primary server can also serve as a secondary server for the failover group
- The primary and secondary servers must be in the same resource group

Explanation:-

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<https://docs.microsoft.com/en-us/azure/azure-sql/database/failover-group-add-single-database-tutorial?tabs=azure-portal>
<https://docs.microsoft.com/en-us/azure/azure-sql/database/auto-failover-group-configure?tabs=azure-portal>
<https://docs.microsoft.com/en-us/azure/azure-sql/database/active-geo-replication-overview>

- You can use the secondary server for the read and write data
- Auto failover groups can have a potential data loss of 5 seconds

Explanation:-

Azure SQL provides several services for high availability and business continuity. Such services are long-term backup retention, active geo-replication, Always On availability groups, auto-failover groups, etc.

You need to be ready to deal with accidental deletion of the data or malicious attack, or physical disaster that disables the data center. One of the services to handle these cases is failover groups.

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<https://docs.microsoft.com/en-us/azure/azure-sql/database/business-continuity-high-availability-disaster-recover-hadr-overview>
<https://docs.microsoft.com/en-us/azure/azure-sql/database/failover-group-add-single-database-tutorial?tabs=azure-portal>
<https://docs.microsoft.com/en-us/azure/azure-sql/database/auto-failover-group-configure?tabs=azure-portal>
<https://docs.microsoft.com/en-us/azure/azure-sql/database/active-geo-replication-overview>

Q11)

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 IPS Customers 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 performance and availability of the multi-region AKS deployments during regional outages.

What two services would you recommend for HR data migration to Azure file share?

- AzCopy
- RoboCopy

Explanation:-

Azure provides tools for migrating unstructured data (files and objects) from on-premises to the cloud. You can migrate directly to the cloud or use the instructed data in a hybrid mode when data on-premises is in-sync with the cloud data. For several Azure Storage target services, like Azure Blob Storage, Data Lake Storage, Azure Files, etc., you need to select the best Azure migration or synchronization tools to match the storage target with the source.

To move files from on-premises Network Access Storage to Azure Files, you can use two tools: RoboCopy and DataBox.

RoboCopy is a Windows-based seasoned tool that copies files in full fidelity. You can create an Azure Storage account and Azure File shares. Then mount a share as a local drive on an on-premises Windows server and use RoboCopy to copy files from NAS to the local share.

DataBox is an offline appliance that Microsoft sends to you. After copying the files to the DataBox from on-premises NAS using RoboCopy, you send it back

to Microsoft. Microsoft loads the files to your Azure File Share. Depending on the total size of your files, you can select from three DataBox options: DataBox Disks — up to 5 SSDs with a total storage of 40 TiB.

DataBox appliance — similar to NAS ruggedized device with a typical storage capacity of 80 TiB.
DataBox Heavy — similar to NAS ruggedized appliance on wheels with a total storage of 1 PiB.

For more information about file migration from on-premises NAS to Azure File shares, please visit the below URLs:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-migration-overview>
<https://docs.microsoft.com/en-us/azure/storage/files/storage-files-migration-overview>
<https://docs.microsoft.com/en-us/azure/storage/files/storage-files-migration-robocopy>
<https://docs.microsoft.com/en-us/azure/storage/files/storage-files-migration-nas-cloud-databox>

Azure Data Factory

DataBox

Explanation:-

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For more information about file migration from on-premises NAS to Azure File shares, please visit the below URLs:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-migration-overview>
<https://docs.microsoft.com/en-us/azure/storage/files/storage-files-migration-overview>
<https://docs.microsoft.com/en-us/azure/storage/files/storage-files-migration-robocopy>
<https://docs.microsoft.com/en-us/azure/storage/files/storage-files-migration-nas-cloud-databox>

Q12) What Azure database service would you recommend for Insurance forms and documents migration?

Azure SQL Database

Azure SQL Managed Instance

Azure Database for PostgreSQL

Azure Cosmos DB

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). For the new projects, Microsoft recommends selecting the default Core (SQL) API. Cosmos DB Core (SQL) API and MongoDB API use the document data model and store data in JSON format. MongoDB API uses wire protocol for MongoDB.

If you have an existing 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, you can bring data to Cosmos DB with native MongoDB tools, like mongodump and mongorestore. And then your applications, which are written in .Net, Node, Python, Java, or Rubi, will access MongoDB document structures in Cosmos DB using MongoDB API the same way as they accessed the native MongoDB.

For more information about migration MongoDB to Azure Cosmos DB, please visit the below URLs:

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

Azure Database for MySQL

Q13)

You need to recommend how to setup the data store for hosting the SQL database in Azure.

Which of the following would you recommend?

- An Azure SQL database elastic pool
- A Virtual machine running a SQL server
- A fixed size DTU based Azure SQL database
- A vCore-based Azure SQL Database
- None of the listed options

Explanation:- The recommendation for setting up the data store for hosting the SQL database in Azure would depend on several factors such as workload, performance, cost, scalability, and manageability requirements. Here is a brief explanation of the options: 1. An Azure SQL database elastic pool: This is a cost-effective solution for managing multiple databases with unpredictable or varying workloads. The elastic pool allows you to share resources across multiple databases, and it automatically scales resources up or down based on demand. 2. A Virtual machine running a SQL server: This is a more traditional approach where you have full control over the SQL server and the underlying operating system. You can customize the server configuration, install third-party tools, and manage backups and security yourself. However, this option requires more management and maintenance efforts. 3. A fixed size DTU based Azure SQL database: This option is suitable for predictable workloads with a fixed amount of resources. You can choose the number of DTUs (Database Transaction Units) based on the expected workload and pay a fixed price for the allocated resources. However, this option may not be suitable for workloads that fluctuate frequently. 4. A vCore-based Azure SQL Database: This option provides more control over the performance and resources of the database. You can choose the number of vCores and the amount of memory and storage based on your workload and pay for the allocated resources. This option is suitable for workloads that require more flexibility and scalability. Therefore, the recommendation would depend on the specific requirements of the workload and the trade-offs between cost, performance, and manageability.

Q14)

A company needs to migrate an on-premises Microsoft SQL Server instance to Azure via Azure ExpressRoute. The migrated instance in Azure must follow the below requirements

- Provide automatic patching and version updates to SQL Server**
- Provide automatic backup services**
- Provide high availability**
- Encrypt all data in transit**
- Provide a native virtual network with private IP addressing**

Be a single-tenant environment with dedicated underlying infrastructure

Which of the following would you implement for this requirement?

- A SQL Server hosted on an Azure virtual machine
- Azure SQL Database with elastic pools
- A SQL Server hosted on Azure Kubernetes
- Azure SQL Database Managed Instance

Explanation:-

All of these requirements will be met with the use of Azure SQL Managed Instance

The Microsoft documentation mentions the following

Q15)

A company has an Azure Subscription that contains Virtual Network named “udemy-net” and the following users defined in Azure AD.

Which of the following users can assign a user the reader role to the udemy-net?

- udemy-admin1 only

Explanation:-

The Owner role has full access to manage all resources, including assigning roles in Azure RBAC. The udemy-admin1 user with this role can assign a user the reader role to the udemy-net.

For more information about Azure RBAC in-build roles, please visit the below URL:
<https://docs.microsoft.com/en-us/azure/role-based-access-control/built-in-roles>

- udemy-admin2 only

- udemy-admin3 only

- udemy-admin1 and udemy-admin2 only

- udemy-admin1 and udemy-admin3 only

- udemy-admin2 and udemy-admin3 only
-

Q16)

Your company has a set of Azure Web Apps. Currently the web apps are using access keys to access databases. You need to migrate the access keys to Azure Key vault. You need to ensure that the application authenticates by using Azure Active Directory to gain access to the access keys.

Which of the following must you create in Azure to ensure that the application can access the access keys?

- Managed Identities

Explanation:-

Here you can make use of managed identities

Once the managed identity is enabled for the Azure Web App, then you can assign permissions for the Web app to the Azure Key vault.

In the key vault, go to Access policies and then Add an access policy.

And then assign the principal of the Azure Web App.

For more information on Managed identity for Azure Web Apps , one can visit the following URL
<https://docs.microsoft.com/en-us/azure/app-service/overview-managed-identity?tabs=dotnet>

- Managed applications

- Azure policies

- App Service Plan
-

Q17)

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 analyze 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

“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”

- Application Insights

Explanation:-

This feature is part of the Application Insights tool. An example of this is given in the Microsoft documentation

For more information on Application map, please visit the below URL
<https://docs.microsoft.com/en-us/azure/azure-monitor/app/app-map>

- Azure Service Health

- Azure Advisor

- Azure Policies
-

Q18)

A company currently has an on-premise infrastructure that consists of

An Active directory domain named udemy.com

Active Directory Federation services

Application Proxy servers for external connection

The company has recently setup an Azure AD tenant. They have also setup Azure AD Connect for the synchronization of users from the on-premise AD to Azure AD. They have the following additional requirements

Ability to monitor the solutions that integrate with Azure AD

Identify any potential issues in AD FS

Identify any directory synchronization issues

You need to identify the right monitoring solution for each type of server

Which of the following would you use to monitor the AD Connect Servers?

- Azure Security Center

- Azure AD Connect Health

Explanation:-

Azure AD Connect Health has the ability to monitor all AD Connect Servers and check for any synchronization issues. If you see the Microsoft documentation, you can clearly see the option present.

For more information on Azure AD Connect, please go ahead and visit the below URL

<https://docs.microsoft.com/en-us/azure/active-directory/hybrid/whatis-azure-ad-connect>

- Active Directory Health Check solution in Azure Log Analytics

- Active Directory Federation Services Health Check solution in Azure Log Analytics
-

Q19)

Your company currently has an Azure tenant and subscription in place. They have over 10,000 licensed users and 50 mission-critical applications. They want to provide advanced endpoint threat detection and remediation.

Which of the following could be recommended for this requirement?

- Azure AD authentication
- Azure Active Directory Connect
- Azure Active Directory Federation Services
- Azure Active Directory Identity Protection

Explanation:-

Azure Active Directory Protection provides all the security features for your Azure Active Directory entities

The Microsoft documentation mentions the following

For more information on Azure Active Directory Identity Protection , you can visit the below link
<https://docs.microsoft.com/en-us/azure/active-directory/identity-protection/overview-identity-protection>

Q20)

A team is planning on deploying Azure resources by using Resource Manager templates. The templates need to reference secrets that are stored in Azure Key Vault. You need to ensure deployments can be made accordingly.

Which of the following would you need to enable in the Azure key vault to ensure the templates can reference the secrets stored in the vault?

- Access policies for the Key vault

Explanation:-

This is clearly given in the documentation. In order for Resource Manager templates to access Azure Key vault , you need to work with Access Policy to Key Vault.

<https://docs.microsoft.com/en-us/azure/key-vault/general/secure-your-key-vault#example>
<https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/template-tutorial-use-key-vault>

- An Azure policy
- Role-Based access
- Advanced access policy for the Key vault

Q21)

A team is planning on deploying Azure resources by using Resource Manager templates. The templates need to reference secrets that are stored in the Azure Key Vault. You need to ensure deployments can be made accordingly.

Which of the following would you use to restrict access to the secrets in the key vault?

- Access policies for the Key vault
- An Azure policy
- Role-Based access

Explanation:-

The Microsoft documentation clearly gives the steps for this. One of them is to ensure the identity deploying the template has the right permissions.

This can be done with the help of Role based access.

Since this is clearly given in the documentation, all other options are invalid

For more information on accessing secrets from Resource Manager templates, please visit the below URL
<https://docs.microsoft.com/en-us/azure/azure-resource-manager/resource-manager-keyvault-parameter>

- Advanced access policy for the Key vault

Q22)

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

- Azure Application Insights

Explanation:-

This feature is part of the Application Insights tool. An example of this is given in the Microsoft documentation

You can use the CodeLens feature in Application Insights to get a deep dive look into exceptions at the code level. An example from the Microsoft documentation is given below

For more information on the CodeLens feature, please visit the below URL
<https://docs.microsoft.com/en-us/azure/azure-monitor/app/visual-studio-codelens>

- Azure Service Map
- Azure Log Analytics
- Azure Activity Log

Q23)

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

Which of the following API would you use to host graph-based data?

- SQL
- Table
- Gremlin

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.

The graph model presents the data as vertex (an individual database item) and edge (a connection between items). To query the data, Gremlin API uses Apache Tinkerpop's Gremlin language. The data model is useful for e-commerce or fraud detection when you need to track the relation between different types of information like customers, billings, delivery addresses, payments, order history, etc.

- Cassandra
- MongoDB

Q24)

Your company is planning on deploying an Azure web application. The authentication to the web application would be done via Azure Active Directory.

The application would be accessed by company users from the Internet. The users would have computers based on Windows 10 that would be joined to Azure AD.

You have to ensure that the users can access the application without being prompted for authentication. And they should only be able to access the application from company-owned computers.

Which of the following should be used to ensure users are not prompted for authentication?

- An Azure AD Application registration

Explanation:-You can register an application in Azure AD. You can then grant access to the devices which are Azure AD joined to the application.

For more information on application management in Azure, one can go to the following URL

<https://docs.microsoft.com/en-us/azure/active-directory/manage-apps/what-is-application-management>

- An Azure AD Managed Identity
- An Azure AD Application proxy
- An Azure Policy

Q25)

Your company has an Azure subscription that contains multiple resource groups. You have to design a resource governance solution that would meet the following requirements

Ensure that all ExpressRoute resources are created in a resource group named udemy-rg

Ensure that creation of ExpressRoute resources is delegated to an Azure AD resource group named udemy-admin

Use the principle of least privilege

Which of the following needs to be included in the solution to meet the following requirement?

"Ensure that all ExpressRoute resources are created in a resource group named udemy-rg"

- A custom RBAC role assignment at the level of the resource group - udemy-rg
- A custom RBAC role assignment at the subscription level
- An Azure Policy at the subscription level that has an exclusion

Explanation:-Here we can add a policy at the subscription level which does not allow the deployment of Azure ExpressRoute resources. But we can exclude the udemy-rg so that the ExpressRoute resources can be deployed to these resource groups.

For more information on Azure policies, one can go to the following URL

<https://docs.microsoft.com/en-us/azure/governance/policy/overview>

- Multiple Azure Policy assignments at the resource group level except for udemy-rg

Q26)

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 IPS Customers 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 performance and availability of the multi-region AKS deployments during regional outages.

How many Azure AD tenants would you recommend for the HABInsurance hybrid model?

- Zero
- 1

Explanation:-

One of the typical hybrid identity topologies is a sync between multiple on-premises AD forests and Azure AD with a single tenant.

HABInsurance has two domains: main.habinsurance.com and region.habinsurance.com. The company wants to benefit from Azure AD administrative units. To do that, HABInsurance needs to implement a single Azure AD Connect sync server that would consolidate Active Directory forest users into a single Azure AD tenant. The user must be represented only once in Azure AD.

Azure AD administrative unit is a container for other Azure AD resources, like users and groups. If a company has several offices, Azure AD administrative units help group the users into the office units and assign roles applicable within this unit.

By implementing Azure AD administrative units, you can separate offices within the same Azure AD tenant. If you assign a User Administrator role to a user, the user will manage all Azure AD users.

By implementing Azure AD administrative units, you will limit such assignments only to the users in the unit. You need to have an Azure AD P1 license to create administrative units.

For more information about Azure AD administrative units, please visit the below URL:

<https://docs.microsoft.com/en-us/azure/active-directory/hybrid/plan-connect-topologies#multiple-forests-single-azure-ad-tenant>

<https://docs.microsoft.com/en-us/azure/active-directory/roles/administrative-units>

- 2
- 3

Q27)

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.

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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.

The company wants to add user consent for data access to registered applications. You recommend enabling user consent for apps from the verified publishers only.

What type of permissions will users allow to consent?

- High impact
- Risk impact
- Low impact

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.

There are three options that admin can select from:

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

Allow user consent for apps from verified publishers, for selected permissions — admin should define the "low impact" permissions that user can consent to for the apps from the verified publisher or your organization.

Allow user consent for apps — all users can consent for the app's access to the organization's data.

When user consent for apps from verified publishers is enabled, the admin will allow users to only consent to "low impact" permissions, like viewing the user's basic profile or email address.

For more information about Azure AD User Consent, please visit the below URLs:

<https://docs.microsoft.com/en-us/azure/active-directory/manage-apps/configure-permission-classifications>
<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>

- Admin impact

Q28)

Your company wants to deploy a new Azure web application. The web application will use Azure blob storage for the storage of static content. The Web application uses a large number of JavaScript files along with cascading style sheets. The users of the web application are located across the world. You have to ensure the time to load individual pages is minimized.

Which of the following would you recommend for this requirement?

- Make use of Azure Redis Cache
- Make use of Azure Content Delivery Network

Explanation:-

To distribute traffic to users across the world, you should use the Azure CDN service.

The Microsoft documentation mentions the following

For more information on Azure CDN , you can visit the below link

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

- Make use of the Azure Load Balancer
- Make use of the Azure Application Gateway

Q29) You have to run an image rendering solution in Azure. The solution needs to make use of parallel computing processes. Which of the following is the best service to use for this requirement?

- An Azure virtual machine scale set
- Azure Function App
- Azure Batch

Explanation:-The Azure Batch service is designed to run large-scale parallel and high-performance computing batch processing jobs in Azure.

For more information on Azure Batch, one can go to the following URL

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

- Azure Kubernetes Service

Q30)

A company wants to migrate workloads from on-premises to the cloud.

- Release workloads

Explanation:-

Migration efforts based on Azure Cloud Adoption Framework include the incremental approaches to the workloads. Each migration iteration is a batch of migration waves — the smallest workload that produces tangible results. Usually, the iteration consists of the three phases:

Assess workloads — these workloads help to evaluate costs, architecture, and deployment tools.

Deploy workloads — these workloads replicate the current functionality in a cloud using lift and shift, lift, and optimize approaches.

Release workloads — these workloads provide test, optimization, documentation, and release of the cloud migration efforts.

For more information about Cloud Adoption Framework and Migration effort, please visit the below URLs:

<https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/migrate/>

<https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/migrate/#migration-effort>

- Load workloads

- Deploy workloads

Explanation:-

Migration efforts based on Azure Cloud Adoption Framework include the incremental approaches to the workloads. Each migration iteration is a batch of migration waves — the smallest workload that produces tangible results. Usually, the iteration consists of the three phases:

Assess workloads — these workloads help to evaluate costs, architecture, and deployment tools.

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- Assess workloads

Explanation:-

Migration efforts based on Azure Cloud Adoption Framework include the incremental approaches to the workloads. Each migration iteration is a batch of migration waves — the smallest workload that produces tangible results. Usually, the iteration consists of the three phases:

Assess workloads — these workloads help to evaluate costs, architecture, and deployment tools.

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<https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/migrate/#migration-effort>

- Test workloads
-

Q31)

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 fulfill 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/>

Q32)

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 Standard App Service Plan.

Would this solution fulfill the requirement?

- Correct

Explanation:-

Yes, the Standard App service plan does support Autoscaling and would be the most cost-effective App service plan for this purpose.

For more information on Azure App Service Plans, please visit the below URL-

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

- Incorrect
-

Q33)

Your company currently has two virtual networks as defined below.

You need to ensure that virtual machines hosted in these virtual networks can communicate by using their private IP addresses. Which of the following will you use to fulfil this requirement?

- Virtual Network Peering

Explanation:-

Azure provides a virtual network peering service to connect virtual networks. Virtual network peering uses the Microsoft backbone for the connections.

There are two types of peering:

Regional peering — connecting virtual networks in the same Azure region.

Global peering — connecting virtual networks across Azure regions.

Virtual network peering is the fastest way to connect virtual networks.

For more information about Azure VNet peering, please visit the below URLs:

<https://docs.microsoft.com/en-us/azure/virtual-network/tutorial-connect-virtual-networks-portal>

<https://docs.microsoft.com/en-us/azure/virtual-network/tutorial-connect-virtual-networks-portal#communicate-between-vms>

- VPN gateway

- Local gateway

- ExpressRoute
-

Q34)

A company has created a Logic App and named it udemy-logicapp. The application is configured to provide a response when HTTP POST or HTTP GET request is received. The application should have the capability to receive up to 200,000 requests in a 5-minute period during peak loads.

Which of the following should you configure to ensure that the application can handle the expected load?

- Workflow settings

Explanation:-

As shown below, for the Azure Logic App, you have to go to the Workflow settings and enable High Throughput.

Since this is clearly evident in the implementation, all other options are incorrect.

For more information on logic apps limits and configuration, please visit the below URL-

<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-limits-and-config>

- API connections
- Access control (IAM)
- Access keys

Q35)

You have created an Azure Kubernetes clusters based on the following settings

The screenshot shows the Azure portal interface for creating an Azure Kubernetes Cluster. The top navigation bar includes 'Basics', 'Node pools' (which is selected), 'Authentication', 'Networking', 'Integrations', 'Tags', and 'Review + create'. The 'Node pools' section displays a table with one row for 'agentpool'. The 'Enable virtual nodes' checkbox is checked. The 'Review + create' tab is selected at the bottom. Below the main form, there are sections for 'Basics', 'Node pools', 'Authentication', 'Networking', 'Integrations', and 'Tags'.

Name	Mode	OS type	Node count	Node size
agentpool	System	Linux	1	Standard_DS2_v2

Basics

Subscription	Staging
Resource group	whizlab-rg1
Region	Central US
Kubernetes cluster name	whizlabcluster
Kubernetes version	1.18.14

Node pools

Node pools	1
Enable virtual nodes	Disabled
Enable virtual machine scale sets	Enabled

Authentication

Authentication method	Service principal
Role-based access control (RBAC)	Enabled
AKS-managed Azure Active Directory	Disabled
Encryption type	(Default) Encryption at-rest with a platform-managed key

Networking

Network configuration	Kubenet
DNS name prefix	whizlabcluster-dns
Load balancer	Standard
Private cluster	Disabled
Authorized IP ranges	Disabled
Network policy	None
HTTP application routing	No

Integrations

Container registry	None
Container monitoring	Enabled
Log Analytics workspace	(new) DefaultWorkspace-baaa99b3-1d19-4c5e-90e1-39d55de5fc6e-CUS
Azure Policy	Disabled

Tags

(none)

A containerized application named udemyapp1 has been deployed to the agent pool node pool. You have to deploy another containerized application named udemyapp2 that would run on four nodes of size DS3 v2. Which of the following must be done first for this requirement?

- Modify the autoscale settings for the Kubernetes cluster
- Upgrade the cluster
- Enable virtual nodes for the cluster
- Create a new node pool

Explanation:-

You can create a new node pool which can have a different compute configuration. You can then deploy the containerized application onto the user defined node pool.

For more information on using multiple node pools, one can visit the following URL
<https://docs.microsoft.com/en-us/azure/aks/use-multiple-node-pools>

Q36)

Your company has an Azure Kubernetes Service and an Azure Container Registry. You have to perform continuous deployments of a containerized application to the cluster. The deployments need to be made as soon as image updates are made to the registry.

Which of the following needs to be implemented for this requirement?

- Use an Azure Automation Runbook
- Use an Azure Pipeline release pipeline

Explanation:-

In Azure Pipelines, you can define build and release pipelines. You can use the pipelines to build images in the Azure Container Registry. The images can then be deployed as containers in the Azure Kubernetes service

For more information on deploying to Azure Kubernetes, one can visit the following URL

<https://docs.microsoft.com/en-us/azure/devops/pipelines/ecosystems/kubernetes/aks-template?view=azure-devops>

- Use an Azure Resource Manager templates
- Use a CRON job

Q37)

Your company has setup 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-app2?

- Azure Event Hubs

Explanation:-

You can use Azure Event Hubs for this requirement

The Microsoft documentation mentions the following

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

For more information on Azure Event Hubs , you can visit the below link

<https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-about>

- Azure Service Bus
- Azure Event Grid
- Azure Notification Hubs

Q38)

Your company has setup 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-app3?

- Azure Event Hubs
- Azure Service Bus
- Azure Event Grid

Explanation:-

You can use Azure Event Grid for this requirement

The Microsoft documentation mentions the following

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

For more information on Azure Event Grid , you can visit the below link

<https://docs.microsoft.com/en-us/azure/event-grid/overview>

- Azure Notification Hubs

Q39)

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 feature would you advise the company to use?

- URL routing
- Packet Analysis
- Endpoint monitoring
- Web Application Firewall

Explanation:-

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, cookie-based session affinity, Multi-site hosting, etc.

One of the AG features is the Web Application Firewall. Web Application Firewall (WAF) makes Application Gateway and web applications more secure by providing defense against common vulnerabilities, like SQL injection attacks. It monitors and checks each request based on the Open Web Application Security Project rule set. WAF has two modes: detection and prevention. A detection mode monitors and logs all threat alerts. A prevention mode operates based on the rules to detect and block intrusions and attacks.

For more information on the Web Application Firewall, please visit the below URLs:

<https://docs.microsoft.com/en-us/azure/application-gateway/waf-overview>

<https://docs.microsoft.com/en-us/azure/application-gateway/overview>

Q40)

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 Migrate appliances you need to recommend?

- 1
- 3

Explanation:-

To assess the migration of the three Hyper-V clusters, you need three appliances — one Migrate Appliance for each cluster. Since one Migrate Appliance can support up to 5,000 Hyper-V VMs, the appliance's capacity will be sufficient to perform the task.

The Microsoft documentation mentions the following

For more information on assessing Hyper-V using Azure Migrate, please visit the below URLs:

<https://docs.microsoft.com/en-us/azure/migrate/tutorial-assess-hyper-v>

- 18
- 60

Q41)

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 and then run AzCopy

Would this fulfill 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>

Q42)

A company needs to solution for the deployment of software for testing and production. The solution needs to adhere to the following requirements

Applications should be able to be deployed to several different environments and must run without the need of installation of dependencies

Application developers must have the flexibility when architecting their code

Which of the following would you recommend for the hosting of applications?

- Azure worker role
- Azure Kubernetes service

Explanation:-

Here the requirements are tending towards hosting Microservice based applications. And this is best accomplished by building container-based applications that can be deployed onto an Azure Kubernetes cluster

The other options are services that don't provide options for ensuring application dependencies don't need to be installed. With container-based applications, you can ensure that container images already have the dependencies pre-installed.

For more information on Azure Kubernetes , you can visit the below link
<https://docs.microsoft.com/en-us/azure/aks/intro-kubernetes>

- Azure Functions
- Azure Batch

Q43)

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 gateway subnet in the Virtual Network?

- 186.16.0.0/16
- 186.16.1.0/28
- 192.168.0.0/24
- 192.168.1.0/28
- None of the listed options

Explanation:- The gateway subnet is used by Azure to host the VPN gateway, which provides connectivity between the on-premises network and the Azure Virtual Network. It should be a separate subnet within the Virtual Network and should not overlap with the address space of the Virtual Network. The recommended size for the gateway subnet is /27. Therefore, in this scenario, we should assign the address space of 186.16.2.0/27 to the gateway subnet in the Virtual Network. This will ensure that it does not overlap with the address space of the Virtual Network and provides enough IP addresses for the gateway subnet. So, the answer is not one of the options provided.

Q44)

A company has an API service that currently returns XML data to its internal users. The API is going to be migrated onto Azure. It will sit behind an API Management instance. Below are the requirements for the API when it is moved to Azure

The API must send data in JSON format to its internal users

When external consultants access the API, the header information must be stripped before the data is received

What is the minimum number of products to publish in Azure API management?

- 1
- 2

Explanation:-

We need to have one product for each of the given requirements, and hence 2. The Microsoft documentation mentions the following on products for API management.

For more information on the key concepts for API Management, please visit the below URL

<https://docs.microsoft.com/en-us/azure/api-management/api-management-key-concepts>

- 3
- 4

Q45)

A company has the following on-premise data stores

A Microsoft SQL Server 2012 database

A Microsoft SQL Server 2008 database

The data needs to be migrated to Azure.

Requirement 1 - The data in the Microsoft SQL Server 2012 database needs to be migrated to an Azure SQL database

Requirement 2 - The data in a table in the Microsoft SQL Server 2008 database needs to be migrated to an Azure CosmosDB account that uses the SQL API

Which of the following should be used to accomplish Requirement1?

- AzCopy
- Azure CosmosDB Data Migration tool
- Data Management Gateway
- Data Migration Assistant

Explanation:-

The Data Migration assistant can be used to migrate the data. It has support for various versions of Microsoft SQL Server as shown below

For more information on the data migration assistant, please visit the below URL

<https://docs.microsoft.com/en-us/sql/dma/dma-overview?view=sql-server-2017>

Q46)

A company has the following on-premise data stores

A Microsoft SQL Server 2012 database

A Microsoft SQL Server 2008 database

The data needs to be migrated to Azure.

Requirement 1 - The data in the Microsoft SQL Server 2012 database needs to be migrated to an Azure SQL database

Requirement 2 - The data in a table in the Microsoft SQL Server 2008 database needs to be migrated to an Azure CosmosDB account that uses the SQL API

Which of the following should be used to accomplish Requirement2?

- AzCopy
- Azure CosmosDB Data Migration tool

Explanation:-This tool can be used for migrating data onto CosmosDB. The Microsoft documentation mentions the following

For more information on importing data into CosmosDB, please visit the below URL

<https://docs.microsoft.com/en-us/azure/cosmos-db/import-data>

- Data Management Gateway
- Data Migration Assistant

Q47)

Your company currently has 50 Azure virtual machines in place. Each virtual machine has two network adapters. The virtual machines are based on the Standard_D4s_v3 instance size. You have to increase the network performance of the workloads that are running on these virtual machines. It needs to follow the below requirements

Ensure that the CPU-to-Memory ratio must remain the same

The solution needs to minimize costs

Which of the following can be implemented for this requirement?

- Enable Accelerated Networking

Explanation:-

Here you can enable Accelerated networking for the network interface for the virtual machine. This can be done during the creation of the virtual machine or even after the virtual machine is created.

Since this option is clearly available for virtual machines for enabling low latency and high throughput, all other options are incorrect

For more information on the accelerated networking feature, one can go to the following URL
<https://docs.microsoft.com/en-us/azure/virtual-network/create-vm-accelerated-networking-powershell>

- Enable RDMA over InfiniBand
- Configure the user of NIC teaming
- Install an additional network adapter

Q48)

Your company has an Azure virtual network and an on-premises network. You have to create a secure connection over a private network. This connection would be used to connect the on-premises network to the Azure virtual network. It has to be ensured that the connection offers a redundant pair of cross connections for high availability.

Which of the following would you recommend for this requirement?

- Azure Load Balancer
- Virtual network peering
- VPN Gateway
- ExpressRoute

Explanation:-

With Azure ExpressRoute, you can connect your Azure virtual network with your on-premises network via a private connection. Here the connections don't traverse via the Internet.

For more information on Azure ExpressRoute, one can go to the following URL
<https://docs.microsoft.com/en-us/azure/expressroute/expressroute-introduction>

Q49)

You have to design a system that would include a static web application. The application needs to meet the following requirements

The website latency must be consistent for all users located in different regions

The users for the website must be able to authenticate via Twitter and Facebook

The code will only include HTML and JavaScript

The costs must be minimized

The application must also support users sending text messages

You have to ensure the right services are put into place

Which of the following can be used for Service1?

- Azure App Service Plan
- Azure Front Door
- Azure Functions
- Azure Content Delivery Network

Explanation:-

Here you can use the Azure Content Delivery Network service. This service will ensure that all users would get the same latency no matter where they are located in the world.

For more information on Azure CDN, one can go to the following URL

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

Q50)

The company wants to move its application to Azure without any modifications. You recommend implementing a lift-and-shift migration.

What type of Cloud Adoption Framework migration strategy pattern would the company adopt following your recommendation?

- Rearchitect
- Rehost

Explanation:-

Migration efforts based on Azure Cloud Adoption Framework include the incremental approaches to the workloads. Each migration iteration is a batch of migration waves — the smallest workload that produces tangible results. Usually, the iteration consists of the three phases:

Assess workloads — these workloads help to evaluate costs, architecture, and deployment tools.

Deploy workloads — these workloads replicate the current functionality in a cloud using lift and shift, lift, and optimize approaches.

Release workloads — these workloads provide test, optimization, documentation, and release of the cloud migration efforts.

The Deploy workloads utilize the four general migration strategy patterns:

Rehost — often interchangeable with lift-and-shift migration. It does not require any code changes. Using this pattern, you can move your application to Azure quickly.

Refactor — requires minimal changes to applications before migration to Azure, often interchangeable with repackaging. An example of refactoring is moving the application to Azure App Service or AKS, requiring changes to port the code to the new services.

Rearchitect — requires changing the code to optimize the application scalability in a cloud.

Rebuild — requires when you need to rebuild an application from scratch using Azure technology to run in a cloud.

For more information about Cloud Adoption Framework migration strategy patterns, please visit the below URLs:

<https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/migrate/>

<https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/migrate/azure-best-practices/contoso-migration-overview>

- Refactor
- Rebuild