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# SKILLCERTPRO

IT CERTIFICATION TRAININGS



Microsoft Azure / By SkillCertPro

## Practice Set 8

Your results are here!! for" Microsoft Azure AZ-305 Practice Test 8 "

59 of 74 questions answered correctly

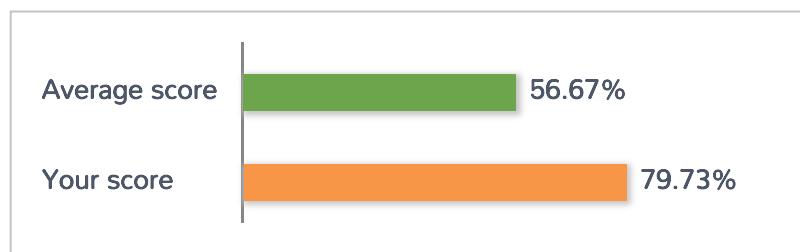
Your time: 00:13:18

Your Final Score is : 59

You have attempted : 74

Number of Correct Questions : 59 and scored 59

Number of Incorrect Questions : 15 and Negative marks 0



You can review your answers by clicking view questions.

**Important Note :** Open Reference Documentation Links in New Tab (Right Click and Open in Ne

[Restart Test](#)

[View Answers](#)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
64	65	66	67	68	69	70	71	72	73	74								

 Answered  Review

## 1. Question

View Case Study:

Overview:

skillcertlabs is an online training provider. They have several main offices and a couple of branch offices.

Existing Environment:

- Their existing environment consists of an Active Directory domain named skillcertlabs.com. This is being hosted on a Windows Server.
- A set of web servers hosted on a VMWare environment.
- A set of Microsoft SQL server database servers hosted on physical servers.
- The company has also setup an Azure AD tenant
- Their subscription currently consists of Azure AD basic licences.

Network Infrastructure:

- Each of the main offices has a data center in place.
- Each office also has a dedicated Internet connection

Requirements:

Planned Changes:

- The company wants to setup a new office in Mumbai
- All resources for the Mumbai office will be hosted in Azure
- The On-premise Active Directory will be synchronized to Azure AD.
- All client computers in the Mumbai office will be joined to the Azure AD domain

Planned Azure Networking Infrastructure:

The following Virtual networks will be setup in Azure:

Name

skillcertlab-mumbai

skillcertlab-office

skillcertlab-client

The following subnets will be in place

Virtual Network Name – Subnet

skillcertlab-mumbai – SubnetA

skillcertlab-mumbai – SubnetB

skillcertlab-client – SubnetC

skillcertlab-office – SubnetD

skillcertlab-office – SubnetE

The following additional settings will be in place:

- Default routes in Azure will be used to route traffic
- A peering connection will be established between the virtual networks skillcertlab-mumbai and skillcertlab-client.
- The peering connection for skillcertlab-mumbai will have Remote gateways enabled.
- A private DNS zone will be created named skillcertlabs.local. The registration network will be set to the skillcertlab-mumbai virtual network

The company has the following additional requirements:

- A number of web apps will be deployed. The initial settings of the web apps will be the same.
- The senior management needs to have the ability to view the costs for Azure resources from the prior month.

The company wants to store the backups taken for the SQL Server instance which would be hosted on an Azure VM. Which of the following could be used to store the backups?

Azure SQL Managed Instance

Azure Storage Accounts

Azure CosmosDB

Azure SQL Data Warehouse

### Correct

You can store the backup's using the Azure Blob service in Azure storage accounts

The Microsoft documentation mentions the following

The other options are incorrect since they can't be used to store the backups for the SQL Server.

For more information on SQL Server backup, please go ahead and visit the below URL

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/sql/virtual-machines-windows-use-storage-accounts-backup-restore>

## 2. Question

View Case Study:

Overview:

skillcertlabs is an online training provider. They have several main offices and a couple of branch offices.

Existing Environment:

The company currently has the following Active Directory Environment in place:

- Two Active Directory forests – One is quiz.skillcertlabs.com and the other is research.skillcertlabs.com
- Currently there is no trust relationship between the forests
- The quiz.skillcertlabs.com is the production forest that hosts all the identities required for internal user authentication.
- The research.skillcertlabs.com forest is only used by the research department

The company currently has the following Networking Environment in place:

- The offices currently contain at least one domain controller from the quiz.skillcertlabs.com forest.
- The main head office contains the domain controller of the research.skillcertlabs.com forest
- All of the offices have high speed internet connections

Applications:

The company has a web application running on-premise named skillcertlab-app

- The application is running on Microsoft Internet Information Services
- The application stores its data on Microsoft SQL Server 2016
- The servers are all running on Hyper-V
- The same Hyper-V environment also hosts a staging environment to test all updates to the web applica

- All Microsoft based licences have been purchased via a Microsoft Enterprise Agreement that includes :

Planned Changes:

- The company wants to migrate its workloads to Azure.
- They also want to create a hybrid identity model along with a Microsoft Office 365 deployment
- The research department will continue to use the infrastructure in the on-premise environment.

Following are the key requirements for the migration to Azure:

- The Web application “skillcertlab-app” needs to be migrated to Azure
- Existing licences should be used wherever possible to minimize on costs
- Users need to always authenticate using their quiz.skillcertlabs.com UPN identity
- All new deployments to Azure must be redundant in the case of an Azure region failure
- PaaS deployments are preferred wherever possible
- Directory Synchronization must be established between Azure AD and the quiz.skillcertlabs.com forest synchronization must not be affected by a link failure between Azure and the on-premise network.

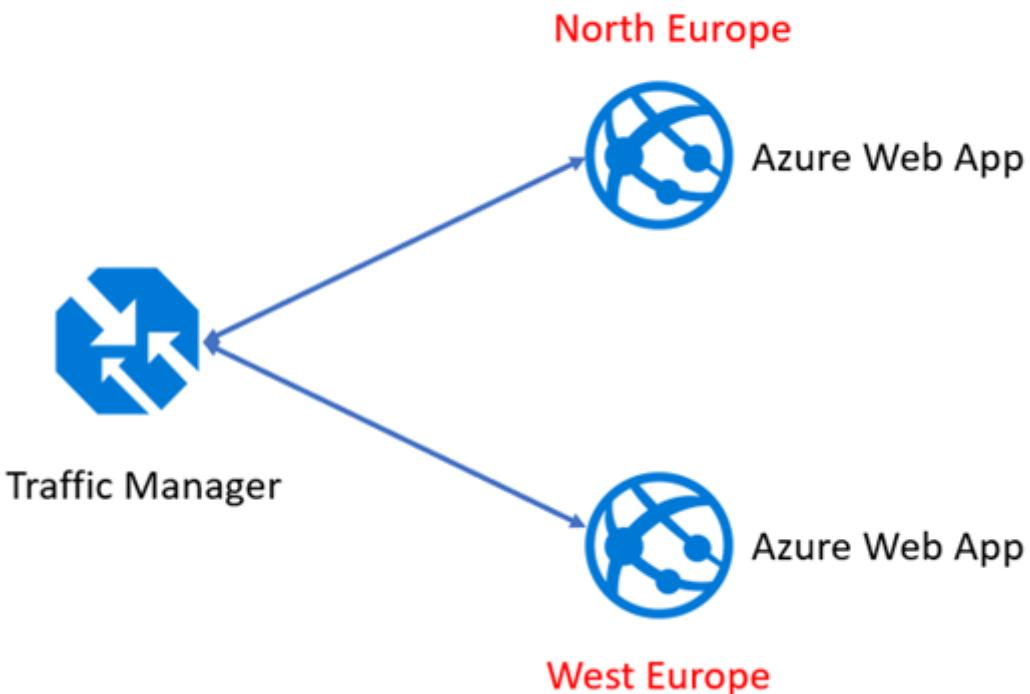
The following requirements need to be met in terms of the database:

- When the database is migrated to Azure, it needs to be ensured that metrics are recorded for the data administrators should be able to analyse the metrics for suggesting any further improvements to the database.
- Database downtime must be minimized when the database is being migrated onto Azure
- Database backup's must be maintained for a period of 5 years

The following requirements need to be met in terms of Security:

- Administrators should be able to authenticate to Azure by using the quiz.skillcertlabs.com credentials
- Any administrative access to Azure must be complemented by multi-factor authentication

Question: The following architecture is being recommended for the Web application



Would this architecture require a manual configuration if an Azure region fails?

Yes

No

### Correct

Here you can use the priority traffic routing method which would automatically failover the Web application in the primary region. The Microsoft documentation mentions the following

For more information on the priority routing method, please visit the below URL

<https://docs.microsoft.com/en-us/azure/traffic-manager/traffic-manager-routing-methods#priority>

### 3. Question

Overview:

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Existing Environment:

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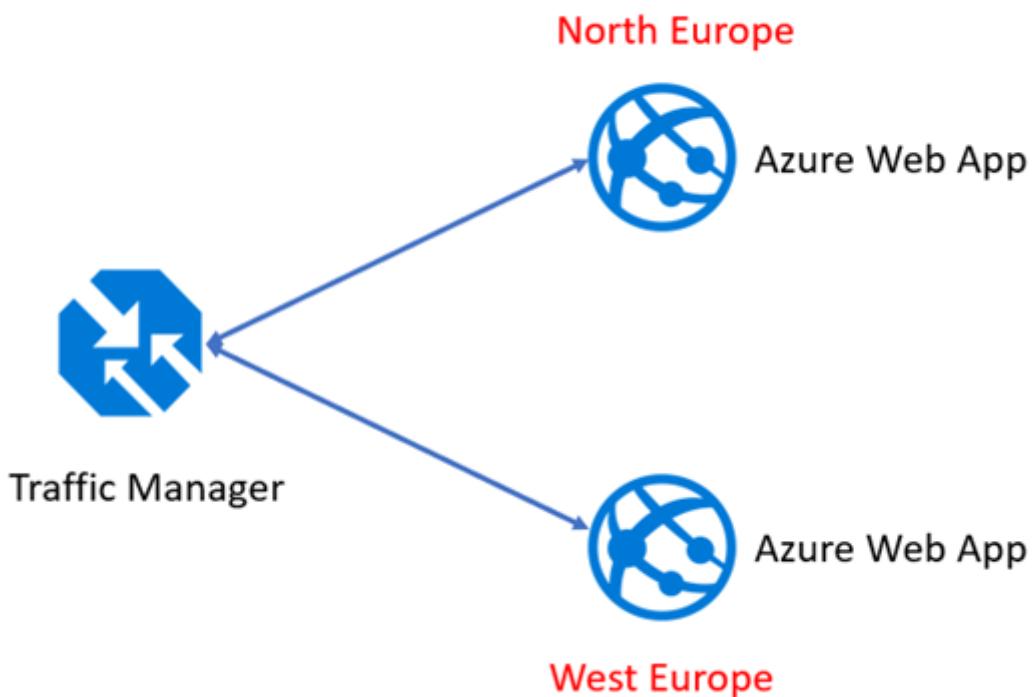
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The following requirements need to be met in terms of Security:

- Administrators should be able to authenticate to Azure by using the quiz.skillcertlabs.com credentials
- Any administrative access to Azure must be complemented by multi-factor authentication

Question: The following architecture is being recommended for the Web application



Would this architecture support autoscaling for the web application?

Yes

No

**Correct**

Azure App Service enables you to build and host web apps, mobile back ends, and RESTful APIs in the programming language of your choice without managing infrastructure. It offers auto-scaling and high availability, supports both Windows and Linux, and enables automated deployments from GitHub, Azure DevOps, or any Git repo. Learn how to use Azure App Service with quickstarts, tutorials, and samples.

For more information on the Azure web apps, please visit the below URL

<https://azure.microsoft.com/en-in/services/app-service/web/>

<https://docs.microsoft.com/en-us/azure/app-service/>

#### 4. Question

View Case Study:

## Overview:

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## Existing Environment:

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## Planned Changes:

- The company wants to migrate its workloads to Azure.
- They also want to create a hybrid identity model along with a Microsoft Office 365 deployment
- The research department will continue to use the infrastructure in the on-premise environment.

Following are the key requirements for the migration to Azure:

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- Users need to always authenticate using their quiz.skillcertlabs.com UPN identity

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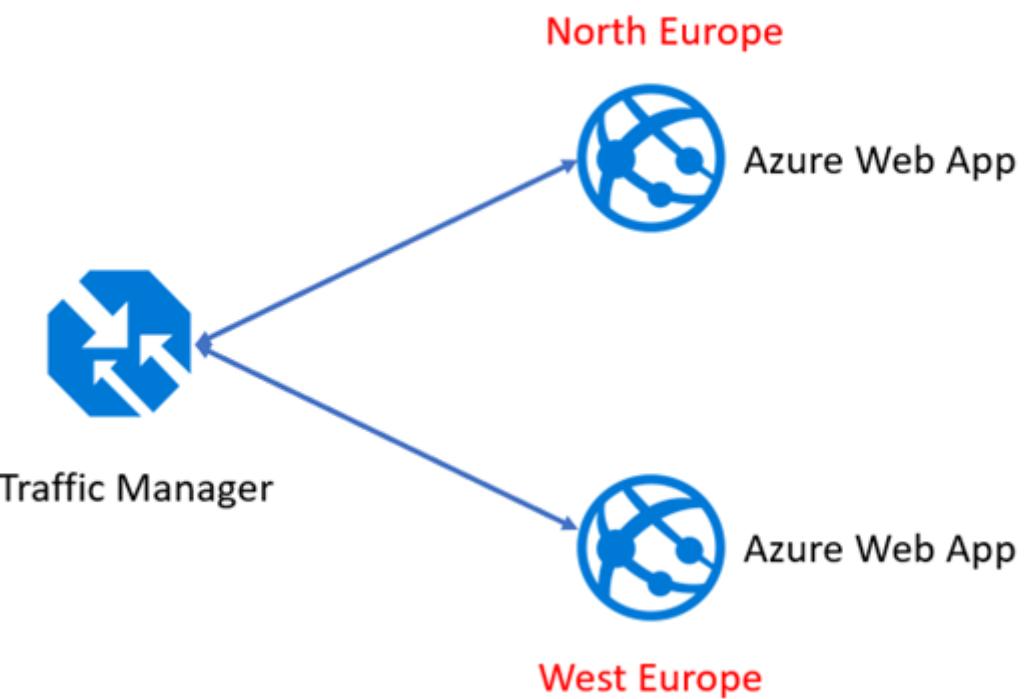
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The following requirements need to be met in terms of Security:

- Administrators should be able to authenticate to Azure by using the quiz.skillcertlabs.com credentials
- Any administrative access to Azure must be complemented by multi-factor authentication

Question: The following architecture is being recommended for the Web application



Would this architecture support redundancy for the web application?

Yes

No

Correct

Here you can use the priority traffic routing method which would automatically failover the Web application in the primary region. The Microsoft documentation mentions the following

For more information on the priority routing method, please visit the below URL

<https://docs.microsoft.com/en-us/azure/traffic-manager/traffic-manager-routing-methods#priority>

## 5. Question

View Case Study:

Overview:

skillcertlabs is an online training provider.

Existing Environment:

- The existing environment for skillcertlabs currently consists of the following resources:
- An on-premise data centre that hosts an Active Directory forest named skillcertlabs.com
- The Active Directory contains users from different departments – IT, Finance, HR

The following table shows the On-premise infrastructure. All servers are running in a virtualized environment:

On-premise server name – Type of Virtualization – Virtual Machine name

skillcertlabs-ser1 – VMware vCenter server – demovm

skillcertlabs-ser2 – Hyper-V host – demovm-test

There are 2 web applications that are hosted on the On-premise environment. The overall details of the web applications are listed below

- Programming Language – .Net
- Average memory used for each application – 1 GB

Proposed Environment:

- skillcertlabs is looking towards purchasing an Azure subscription and setting up their environment in Azure
- The Virtual Machines need to have a central location for storage of files. They would connect to these files via SMB.
- All applications and Virtual Machines need to be migrated onto Azure
- Active Directory users need to be synched onto Azure AD

The following Virtual Networks and subnets are going to be setup in Azure:

Virtual Network name – Address space

skillcertlabs-net1 – 10.0.0.0/16

skillcertlabs-net2 – 20.0.0.0/16

Subnet name – Virtual Network name – Address space

SubnetA – skillcertlabs-net1 – 10.0.1.0/24

SubnetB – skillcertlabs-net2 – 20.0.1.0/24

Technical Requirements:

- The Instances for the underlying Web applications should be able to scale up to 5 instances
- The migrated Virtual Machines in Azure should be able to communicate to the Internet on port 8080
- A workflow should be in place for demovm when it is migrated onto Azure. The IT Administrative staff on any changes that occur on this Virtual Machine
- Minimize costs wherever possible
- There should be an encrypted connection between the On-premise data centre and the Virtual Network

Question:

The IT Security department has the requirement to ensure they get notified if there are any changes made to the underlying Virtual Machines. A workflow needs to be designed for this requirement. Which of the following would serve this purpose?

Azure Notification Hub

Azure Event Hub

Azure Logic App

Azure services Bus

**Correct**

If you are looking at creating workflows, then you have to use Azure Logic Apps

The Microsoft documentation additionally mentions the following

Azure Logic Apps is a cloud service that helps you automate and orchestrate tasks, business processes, and you need to integrate apps, data, systems, and services across enterprises or organizations. Logic Apps simplify the design and build scalable solutions for app integration, data integration, system integration, enterprise application integration (EAI), and business-to-business (B2B) communication, whether in the cloud, on premises, or both.

Option A is incorrect since this is used for notifications  
Option B is incorrect since this is used for listening to events emitted by Azure resources  
Option D is incorrect since this is used to work with Azure queues and topics  
For more information on Azure Logic Apps, please go ahead and visit the below URL  
<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-overview>

## 6. Question

View Case Study:

Overview:

skillcertlabs is an online training provider.

Current System – Training Site:

The company currently has a training site system defined on their on-premise environment. The system consists of:

- Front end Web App
- Middle tier API
- Back end data store

The backend is running on Microsoft SQL server 2016

All servers are running on Windows 2016 DataCenter.

The Front and Middle tiers are written in C# and hosted on Internet Information Services

The system currently has the following requirements:

- The front and middle tier components currently make use of encryption keys to access the data store
- The backups need to be stored for up to 5 years
- Access to the system should only be via the internal network of skillcertlabs

Current System – Processing system:

skillcertlabs also has an internal processing system. This is a C# Windows based service that gets invoked by the main training system. Each invocation of this service lasts for a maximum of 2 minutes.

Planned Changes:

- skillcertlabs wants to migrate all systems to Azure

### Key requirements:

- Infrastructure services must remain available if a region or a data center fails.
- Failover must occur without any administrative intervention
- Wherever possible, Azure managed services must be used to manage overhead
- Whenever possible, costs must be minimized.
- An SLA of 99.95% must be guaranteed on the infrastructure for the middle tier system

### Question:

The Web application tier needs to be deployed using a service that could automatically scale the web service. Which of the following would you recommend?

- Azure virtual machines with Internet Information Services Installed
- Azure Web Apps using the Standard App Service Plan
- An Azure Standard Load Balancer
- An Azure Application Gateway with 2 medium instances

### Correct

The best solution is to use Azure Web Apps as the managed service. With the Standard App Service plan, it has the ability to support auto-scaling.

Option A is incorrect since the case study mentions that we need to use Azure managed services wherever possible. Options C and D are incorrect since these services are used to distribute traffic.

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

<https://docs.microsoft.com/en-us/azure/architecture/best-practices/auto-scaling>

## 7. Question

### View Case Study:

### Overview:

skillcertlabs is an online training provider.

### Current System – Training Site:

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Question:

There is a requirement to get detailed information for any HTTP request to the Azure Web App which results in a code of 400 or greater. Which of the following would you use for this requirement?

- Metrics available for the Azure Web App
- Web server diagnostics for the Azure Web App
- Network Watcher for the Azure Web App
- Azure Advisor for the Azure Web App

**Correct**

The right approach is to use Web server diagnostics as is also shown in the Microsoft documentation.

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

For more information on diagnostics logs for Azure Web Apps, please go ahead and visit the below URL

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

## 8. Question

View Case Study:

Overview:

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Existing Environment:

The company currently has the following Active Directory Environment in place:

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Applications:

The company has a web application running on-premise named skillcertlab-app

- The application is running on Microsoft Internet Information Services
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- The same Hyper-V environment also hosts a staging environment to test all updates to the web application
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Planned Changes:

- The company wants to migrate its workloads to Azure.
- They also want to create a hybrid identity model along with a Microsoft Office 365 deployment
- The research department will continue to use the infrastructure in the on-premise environment.

Following are the key requirements for the migration to Azure:

- The Web application “skillcertlab-app” needs to be migrated to Azure
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The following requirements need to be met in terms of the database:

- When the database is migrated to Azure, it needs to be ensured that metrics are recorded for the data administrators should be able to analyse the metrics for suggesting any further improvements to the database
- Database downtime must be minimized when the database is being migrated onto Azure
- Database backup's must be maintained for a period of 5 years

The following requirements need to be met in terms of Security:

- Administrators should be able to authenticate to Azure by using the quiz.skillcertlabs.com credentials
- Any administrative access to Azure must be complemented by multi-factor authentication

Question: What is the minimum number of Azure tenants that need to be setup?

0

1

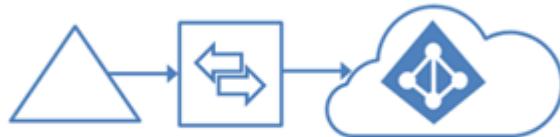
2

3

**Correct**

Since there is only one forest that needs to be synced with Azure AD, one can opt for having one Azure AD tenant with the simplest form of connectivity as shown below

## Single forest, single Azure AD tenant



The most common topology is a single on-premises forest, with one or multiple domains, and a single Azure AD tenant. For Azure AD authentication, password hash synchronization is used. The express installation of Azure AD Connect supports only this topology.

Since this is the ideal approach , all other options are incorrect

For more information on hybrid connections with Active Directory, please visit the below URL

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

## 9. Question

View Case Study:

Overview:

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The following requirements need to be met in terms of Security:

- Administrators should be able to authenticate to Azure by using the quiz.skillcertlabs.com credentials
- Any administrative access to Azure must be complemented by multi-factor authentication

Question:

What is the minimum number of conditional access policies that need to be created?

0

1

2

3

Incorrect

There is a baseline policy that ensures that Multi-factor authentication is present for administrative accounts  
You just need to enable this conditional access policy  
Hence you don't need additional conditional access policies and that is why the other options are incorrect  
For more information on baseline protection via conditional access policies, please visit the below URL  
<https://docs.microsoft.com/en-us/azure/active-directory/conditional-access/baseline-protection>

## 10. Question

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- Database backup's must be maintained for a period of 5 years

The following requirements need to be met in terms of Security:

- Administrators should be able to authenticate to Azure by using the quiz.skillcertlabs.com credentials
- Any administrative access to Azure must be complemented by multi-factor authentication

Question: What is the minimum number of custom domains to add to Azure AD?

0

1

2

3

### Correct

Since users need to authenticate via the UPN's associated with the quiz.skillcertlabs.com forest, you just need one custom domain in Azure AD. That custom domain will be quiz.skillcertlabs.com.

The Microsoft documentation mentions the following

Since this is the recommended answer, all other options are incorrect.

For more information on adding custom domains, please visit the below URL

<https://docs.microsoft.com/en-us/azure/active-directory/fundamentals/add-custom-domain>

## 11. Question

View Case Study:

Overview:

skillcertlabs is an online training provider.

Current System – Training Site:

The company currently has a training site system defined on their on-premise environment. The system consists of:

- Front end Web App
- Middle tier API
- Back end data store

The backend is running on Microsoft SQL server 2016

All servers are running on Windows 2016 DataCenter.

The Front and Middle tiers are written in C# and hosted on Internet Information Services

The system currently has the following requirements:

- The front and middle tier components currently make use of encryption keys to access the data store
- The backups need to be stored for up to 5 years
- Access to the system should only be via the internal network of skillcertlabs

Current System – Processing system:

skillcertlabs also has an internal processing system. This is a C# Windows based service that gets invoked by the main training system. Each invocation of this service lasts for a maximum of 2 minutes.

Planned Changes:

- skillcertlabs wants to migrate all systems to Azure

Key requirements:

- Infrastructure services must remain available if a region or a data center fails.
- Failover must occur without any administrative intervention
- Wherever possible, Azure managed services must be used to minimize management overhead
- Whenever possible, costs must be minimized.
- An SLA of 99.95% must be guaranteed on the Infrastructure for the middle tier system

**Question:**

Which of the following could be implemented the following requirement?

An SLA of 99.95% must be guaranteed on the Infrastructure for the middle tier system

You decide to implement an Azure Standard Load Balancer

Would this fulfil the requirement?

Yes

No

**Correct**

The Azure Load Balancer is used to distribute traffic and not from an availability perspective

For more information on the Azure Load Balancer, please go ahead and visit the below URL

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

**12. Question**

View Case Study:

Overview:

skillcertlabs is an online training provider.

Current System – Training Site:

The company currently has a training site system defined on their on-premise environment. The system consists of:

- Front end Web App
- Middle tier API
- Back end data store

The backend is running on Microsoft SQL server 2016

All servers are running on Windows 2016 DataCenter.

The Front and Middle tiers are written in C# and hosted on Internet Information Services

The system currently has the following requirements:

- The front and middle tier components currently make use of encryption keys to access the data store
- The backups need to be stored for up to 5 years
- Access to the system should only be via the internal network of skillcertlabs

### Current System – Processing system:

skillcertlabs also has an internal processing system. This is a C# Windows based service that gets invoked by the main training system. Each invocation of this service lasts for a maximum of 2 minutes.

### Planned Changes:

- skillcertlabs wants to migrate all systems to Azure

### Key requirements:

- Infrastructure services must remain available if a region or a data center fails.
- Failover must occur without any administrative intervention
- Wherever possible, Azure managed services must be used to manage overhead
- Whenever possible, costs must be minimized.
- An SLA of 99.95% must be guaranteed on the Infrastructure for the middle tier system

### Question:

Which of the following could be implemented to fulfill the following requirement?

An SLA of 99.95% must be guaranteed on the Infrastructure for the middle tier system

You decide to implement Azure availability sets

Would this fulfill the requirement?

Yes

No

### Correct

You can achieve an availability of 99.95% with the use of availability sets.

The Microsoft documentation mentions the following

For more information on availability sets, please go ahead and visit the below URL

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

## 13. Question

### View Case Study:

### Overview:

skillcertlabs is an online training provider.

### Current System – Training Site:

The company currently has a training site system defined on their on-premise environment. The system consists of:

- Front end Web App
- Middle tier API
- Back end data store

The backend is running on Microsoft SQL server 2016

All servers are running on Windows 2016 DataCenter.

The Front and Middle tiers are written in C# and hosted on Internet Information Services

The system currently has the following requirements:

- The front and middle tier components currently make use of encryption keys to access the data store
- The backups need to be stored for up to 5 years
- Access to the system should only be via the internal network of skillcertlabs

Current System – Processing system:

skillcertlabs also has an internal processing system. This is a C# Windows based service that gets invoked by the main training system. Each invocation of this service lasts for a maximum of 2 minutes.

Planned Changes:

- skillcertlabs wants to migrate all systems to Azure

Key requirements:

- Infrastructure services must remain available if a region or a data center fails.
- Failover must occur without any administrative intervention
- Wherever possible, Azure managed services must be used to manage overhead
- Whenever possible, costs must be minimized.
- An SLA of 99.95% must be guaranteed on the Infrastructure for the middle tier system

Question:

Which of the following could be implemented to fulfill the following requirement?

An SLA of 99.95% must be guaranteed on the Infrastructure for the middle tier system

You decide to implement Azure Virtual Machine scale sets

Would this fulfill the requirement?

Yes

No**Correct**

Virtual Machine scale sets are used more from a scaling perspective and not from an availability perspective

For more information on virtual machine scale sets, please go ahead and visit the below URL

<https://docs.microsoft.com/en-us/azure/virtual-machine-scale-sets/overview>

**14. Question**

View Case Study:

Overview:

skillcertlabs is an online training provider.

Existing Environment:

- The existing environment for skillcertlabs currently consists of the following resources:
- An on-premise data centre that hosts an Active Directory forest named skillcertlabs.com
- The Active Directory contains users from different departments – IT, Finance, HR

The following table shows the On-premise infrastructure. All servers are running in a virtualized environment:

On-premise server name – Type of Virtualization – Virtual Machine name

skillcertlabs-ser1 – VMware vCenter server – demovm

skillcertlabs-ser2 – Hyper-V host – demovm-test

There are 2 web applications that are hosted on the On-premise environment. The overall details of the web applications are listed below

- Programming Language – .Net
- Average memory used for each application – 1 GB

Proposed Environment:

- skillcertlabs is looking towards purchasing an Azure subscription and setting up their environment in Azure
- The Virtual Machines need to have a central location for storage of files. They would connect to these files via SMB.
- All applications and Virtual Machines need to be migrated onto Azure
- Active Directory users need to be synched onto Azure AD

The following Virtual Networks and subnets are going to be setup in Azure:

Virtual Network name – Address space

skillcertlabs-net1 – 10.0.0.0/16

skillcertlabs-net2 – 20.0.0.0/16

Subnet name – Virtual Network name – Address space

SubnetA – skillcertlabs-net1 – 10.0.1.0/24

SubnetB – skillcertlabs-net2 – 20.0.1.0/24

Technical Requirements:

- The Instances for the underlying Web applications should be able to scale up to 5 instances
- The migrated Virtual Machines in Azure should be able to communicate to the Internet on port 8080
- A workflow should be in place for demovm when it is migrated onto Azure. The IT Administrative staff should be notified on any changes that occur on this Virtual Machine
- Minimize costs wherever possible
- There should be an encrypted connection between the On-premise data centre and the Virtual Network

Question:

Which of the following service would you use to fulfil the below case study requirement

“The Virtual Machines need to have a central location for storage of files. They would connect to these file shares via the SMB protocol.”

Azure BLOB storage

Azure Site Recovery

Azure File Service

Azure Table Service

**Correct**

You would use the Azure File service which can be used to work with shares via the SMB protocol

Option A is incorrect since this is used for Object level storage

Option B is incorrect since this is used for backup and recovery purposes

Option D is incorrect since this is used for hosting tables in Azure

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

<https://azure.microsoft.com/en-us/services/storage/files/>

## 15. Question

View Case Study:

Overview:

skillcertlabs is an online training provider.

Current System – Financial Processing:

skillcertlabs currently has a system that consists of 3 tiers:

- Front end Web App
- Middle tier API
- Back end data store

Below is the current set of the system:

- The backend is running on Microsoft SQL server 2016
- All servers are running on Windows
- The Front and Middle tiers are written in C# and hosted on Internet Information Services
- The database is currently 1 TB in size. The growth of the database is not expected to grow beyond 3 T

The system currently has the following requirements:

- All data must be encrypted in rest and in transit
- The front and middle tier components currently make use of encryption keys to protect the data store. These should have the capability to access the encryption keys.
- Database backups need to be maintained in 2 separate locations that are at least 100 miles apart
- Database backups need to be stored for up to 7 years
- Traffic to the servers needs to be controlled via source IP address and port number
- Access to the system should only be via the internal network of skillcertlabs
- The Security team needs to be able to inspect all inbound and outbound traffic

Current System – Transactional Query System:

skillcertlabs also has a Transaction Query system built on .Net. The data is stored in Azure Table storage. This currently runs on a client computer

Planned Changes:

skillcertlabs wants to migrate the Financial Processing system to Azure

Key requirements:

- Infrastructure services must remain available if a region or a data center fails.
- Failover must occur without any administrative intervention
- Wherever possible, Azure managed services must be used to management overhead
- Whenever possible, costs must be minimized.
- Collect windows security logs from the Middle tier and retain the logs for several year
- Generate alerts if any unauthorized access to the backend Virtua machines are detected.
- The number of instances assigned to the front and middle tiers should be adjusted automatically based utilization
- An SLA of 99.95% must be guaranteed on the Infrastructure for the front and middle tier systems
- Identity management must be performed via Active directory and all password hashes must be stored environment.
- If there are any suspicious attempts for authentication, then that should trigger multi-factor authentication be allowed if the authentication attempt is successful.
- The data store for the transactional query system will be move from Azure Table storage to a CosmosDB

Question:

Which of the following should be recommended for the database backups?

- Long term retention for the database
- Use Azure Site Recovery for the database
- Configure geo-replication for the database
- Configure Azure backup for the database

Incorrect

You can use the long-term retention feature as mentioned in the Microsoft documentation below

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

For more information on database long term retention, please visit the below URL

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-long-term-retention>

## 16. Question

View Case Study:

Overview:

skillcertlabs is an online training provider. They have several main offices and a couple of branch offices.

#### Existing Environment:

The company currently has the following Active Directory Environment in place:

- Two Active Directory forests – One is quiz.skillcertlabs.com and the other is research.skillcertlabs.com
- Currently there is no trust relationship between the forests
- The quiz.skillcertlabs.com is the production forest that hosts all the identities required for internal user authentication.
- The research.skillcertlabs.com forest is only used by the research department

The company currently has the following Networking Environment in place:

- The offices currently contain at least one domain controller from the quiz.skillcertlabs.com forest.
- The main head office contains the domain controller of the research.skillcertlabs.com forest
- All of the offices have high speed internet connections

#### Applications:

The company has a web application running on-premise named skillcertlab-app

- The application is running on Microsoft Internet Information Services
- The application stores its data on Microsoft SQL Server 2016
- The servers are all running on Hyper-V
- The same Hyper-V environment also hosts a staging environment to test all updates to the web application
- All Microsoft based licences have been purchased via a Microsoft Enterprise Agreement that includes : .NET Core, Office 365 ProPlus, and System Center Configuration Manager

#### Planned Changes:

- The company wants to migrate its workloads to Azure.
- They also want to create a hybrid identity model along with a Microsoft Office 365 deployment
- The research department will continue to use the infrastructure in the on-premise environment.

Following are the key requirements for the migration to Azure:

- The Web application “skillcertlab-app” needs to be migrated to Azure
- Existing licences should be used wherever possible to minimize on costs
- Users need to always authenticate using their quiz.skillcertlabs.com UPN identity
- All new deployments to Azure must be redundant in the case of an Azure region failure
- PaaS deployments are preferred wherever possible
- Directory Synchronization must be established between Azure AD and the quiz.skillcertlabs.com forest
- synchronization must not be affected by a link failure between Azure and the on-premise network.

The following requirements need to be met in terms of the database:

- When the database is migrated to Azure, it needs to be ensured that metrics are recorded for the data administrators should be able to analyse the metrics for suggesting any further improvements to the database.
- Database downtime must be minimized when the database is being migrated onto Azure
- Database backup's must be maintained for a period of 5 years

The following requirements need to be met in terms of Security:

- Administrators should be able to authenticate to Azure by using the quiz.skillcertlabs.com credentials
- Any administrative access to Azure must be complemented by multi-factor authentication

Question:

Which of the following should be recommended for the database retention period?

Long term retention for the database

Use Azure Site Recovery for the database

Configure geo-replication for the database

Configure Azure backup for the database

**Correct**

You can use the long-term retention feature as mentioned in the Microsoft documentation below.

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

For more information on database long term retention, please visit the below URL

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-long-term-retention>

## 17. Question

View Case Study:

Overview:

skillcertlabs is an online training provider.

Current System – Financial Processing:

skillcertlabs currently has a system that consists of 3 tiers:

- Front end Web App
- Middle tier API
- Back end data store

Below is the current set of the system:

- The backend is running on Microsoft SQL server 2016
- All servers are running on Windows
- The Front and Middle tiers are written in C# and hosted on Internet Information Services
- The database is currently 1 TB in size. The growth of the database is not expected to grow beyond 3 T

The system currently has the following requirements:

- All data must be encrypted in rest and in transit
- The front and middle tier components currently make use of encryption keys to protect the data store. These should have the capability to access the encryption keys.
- Database backups need to be maintained in 2 separate locations that are at least 100 miles apart
- Database backups need to be stored for up to 7 years
- Traffic to the servers needs to be controlled via source IP address and port no
- Access to the system should only be via the internal network of skillcertlabs
- The Security team needs to be able to inspect all inbound and outbound traffic

Current System – Transactional Query System:

skillcertlabs also has a Transaction Query system built on .Net. The data is stored in Azure Table storage. This currently runs on a client computer

Planned Changes:

skillcertlabs wants to migrate the Financial Processing system to Azure

Key requirements:

- Infrastructure services must remain available if a region or a data center fails.
- Failover must occur without any administrative intervention
- Wherever possible, Azure managed services must be used to management overhead
- Whenever possible, costs must be minimized.
- Collect windows security logs from the Middle tier and retain the logs for several year
- Generate alerts if any unauthorized access to the backend Virtua machines are detected.
- The number of instances assigned to the front and middle tiers should be adjusted automatically based on utilization
- An SLA of 99.95% must be guaranteed on the Infrastructure for the front and middle tier systems
- Identity management must be performed via Active directory and all password hashes must be stored in a secure environment.
- If there are any suspicious attempts for authentication, then that should trigger multi-factor authentication. This should be allowed if the authentication attempt is successful.

- The data store for the transactional query system will be move from Azure Table storage to a CosmosDB

Question:

You have to recommend a solution for catering to the high availability requirements for the middle tier of the system. Which of the following would you implement?

The Premium App Service Plan

The Isolated App Service Plan

Use of Availability sets

Use of Availability Zones

#### Incorrect

Using Availability sets is the ideal solution for achieving 99.95% availability for your infrastructure. The Microsoft documentation mentions the following:

You can also configure availability sets for each of the tier's, the web and front end tier.

Options A and B are incorrect since Azure Web Apps are not going to be used. Based on the below requirements, the infrastructure will consist of Virtual Machines.

Generate alerts if any unauthorized access to the backend Virtual machines are detected.

Traffic to the servers needs to be controlled via source IP address and port number.

The Security team needs to be able to inspect all inbound and outbound traffic.

Option D is incorrect since Availability zones will give you a much better SLA but using availability sets would be a more effective option that would meet all the requirements.

For more information on managing availability, please visit the below URL:

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

## 18. Question

View Case Study:

Overview:

skillcertlabs is an online training provider.

### Current System – Financial Processing:

skillcertlabs currently has a system that consists of 3 tiers:

- Front end Web App
- Middle tier API

- Back end data store

Below is the current set of the system:

- The backend is running on Microsoft SQL server 2016
- All servers are running on Windows
- The Front and Middle tiers are written in C# and hosted on Internet Information Services
- The database is currently 1 TB in size. The growth of the database is not expected to grow beyond 3 T

The system currently has the following requirements:

- All data must be encrypted in rest and in transit
- The front and middle tier components currently make use of encryption keys to protect the data store. should have the capability to access the encryption keys.
- Database backups need to be maintained in 2 separate locations that are at least 100 miles apart
- Database backups need to be stored for up to 7 years
- Traffic to the servers needs to be controlled via source IP address and port no
- Access to the system should only be via the internal network of skillcertlabs
- The Security team needs to be able to inspect all inbound and outbound traffic

#### Current System – Transactional Query System:

skillcertlabs also has a Transaction Query system built on .Net. The data is stored in Azure Table storage. This currently runs on a client computer

Planned Changes:

skillcertlabs wants to migrate the Financial Processing system to Azure

Key requirements:

- Infrastructure services must remain available if a region or a data center fails.
- Failover must occur without any administrative intervention
- Wherever possible, Azure managed services must be used to management overhead
- Whenever possible, costs must be minimized.
- Collect windows security logs from the Middle tier and retain the logs for several year
- Generate alerts if any unauthorized access to the backend Virtua machines are detected.
- The number of instances assigned to the front and middle tiers should be adjusted automatically based utilization
- An SLA of 99.95% must be guaranteed on the Infrastructure for the front and middle tier systems
- Identity management must be performed via Active directory and all password hashes must be stored environment.

- If there are any suspicious attempts for authentication, then that should trigger multi-factor authentication to be allowed if the authentication attempt is successful.
- The data store for the transactional query system will be moved from Azure Table storage to a CosmosDB database.

You have to recommend a strategy for the compute solution for the Financial Processing system. Which of the following options do you recommend?

- Azure Kubernetes Service
- Virtual machine scale sets
- Availability sets
- App Service Environments

### Correct

Since we need to cater to the below requirement of the case study

## What are virtual machine scale sets?

03/27/2018 • 3 minutes to read • Contributors 

Azure virtual machine scale sets let you create and manage a group of identical, load balanced VMs. The number of VM instances can automatically increase or decrease in response to demand or a defined schedule. Scale sets provide high availability to your applications, and allow you to centrally manage, configure, and update a large number of VMs. With virtual machine scale sets, you can build large-scale services for areas such as compute, big data, and container workloads.

"The number of instances assigned to the front and middle tiers should be adjusted automatically based on traffic."

We have to use Virtual Machine scale sets for our compute solution. The Microsoft documentation mentions:

Option A is incorrect since there is no mention of orchestrating docker containers for the application

Option C is incorrect since this is used for achieving high availability of the solution

Option D is incorrect since this is used for the Azure Web App service

For more information on virtual machine scale sets, please visit the below URL

<https://docs.microsoft.com/en-us/azure/virtual-machine-scale-sets/overview>

## 19. Question

View Case Study:

Overview:

skillcertlabs is an online training provider.

Existing Environment:

- The existing environment for skillcertlabs currently consists of the following resources:
- An on-premise data centre that hosts an Active Directory forest named skillcertlabs.com

- The Active Directory contains users from different departments – IT, Finance, HR

The following table shows the On-premise infrastructure. All servers are running in a virtualized environment:

On-premise server name – Type of Virtualization – Virtual Machine name

skillcertlabs-ser1 – VMware vCenter server – demovm

skillcertlabs-ser2 – Hyper-V host – demovm-test

There are 2 web applications that are hosted on the On-premise environment. The overall details of the web apps are below

- Programming Language – .Net
- Average memory used for each application – 1 GB

Proposed Environment:

- skillcertlabs is looking towards purchasing an Azure subscription and setting up their environment in Azure.
- The Virtual Machines need to have a central location for storage of files. They would connect to these via SMB.
- All applications and Virtual Machines need to be migrated onto Azure
- Active Directory users need to be synched onto Azure AD

The following Virtual Networks and subnets are going to be setup in Azure:

Virtual Network name – Address space

skillcertlabs-net1 – 10.0.0.0/16

skillcertlabs-net2 – 20.0.0.0/16

Subnet name – Virtual Network name – Address space

SubnetA – skillcertlabs-net1 – 10.0.1.0/24

SubnetB – skillcertlabs-net2 – 20.0.1.0/24

Technical Requirements:

- The Instances for the underlying Web applications should be able to scale up to 5 instances

- The migrated Virtual Machines in Azure should be able to communicate to the Internet on port 8080
- A workflow should be in place for demovm when it is migrated onto Azure. The IT Administrative staff on any changes that occur on this Virtual Machine
- Minimize costs wherever possible
- There should be an encrypted connection between the On-premise data centre and the Virtual Network

Question:

You need to comply with the below case study requirement

“There should be an encrypted connection between the On-premise data centre and the Virtual Network skills

You decide to implement a site-to-site VPN Connection.

Would this fulfil the requirement?

Yes

No

**Correct**

This is the ideal and correct way to connect an Azure Virtual Network with an on-premise data center. The Microsoft documentation mentions the following

For more information on site to site VPN connections, please go ahead and visit the below URL

<https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-howto-site-to-site-resource-manager-port>

## 20. Question

View Case Study:

Overview:

skillcertlabs is an online training provider.

Existing Environment:

- The existing environment for skillcertlabs currently consists of the following resources:
- An on-premise data centre that hosts an Active Directory forest named skillcertlabs.com
- The Active Directory contains users from different departments – IT, Finance, HR

The following table shows the On-premise infrastructure. All servers are running in a virtualized environment:

On-premise server name – Type of Virtualization – Virtual Machine name

skillcertlabs-ser1 – VMware vCenter server – demovm

skillcertlabs-ser2 – Hyper-V host – demovm-test

There are 2 web applications that are hosted on the On-premise environment. The overall details of the web applications are listed below

- Programming Language – .Net
- Average memory used for each application – 1 GB

Proposed Environment:

- skillcertlabs is looking towards purchasing an Azure subscription and setting up their environment in Azure.
- The Virtual Machines need to have a central location for storage of files. They would connect to these via SMB.
- All applications and Virtual Machines need to be migrated onto Azure
- Active Directory users need to be synched onto Azure AD

The following Virtual Networks and subnets are going to be setup in Azure:

Virtual Network name – Address space

skillcertlabs-net1 – 10.0.0.0/16

skillcertlabs-net2 – 20.0.0.0/16

Subnet name – Virtual Network name – Address space

SubnetA – skillcertlabs-net1 – 10.0.1.0/24

SubnetB – skillcertlabs-net2 – 20.0.1.0/24

Technical Requirements:

- The Instances for the underlying Web applications should be able to scale up to 5 instances
- The migrated Virtual Machines in Azure should be able to communicate to the Internet on port 8080
- A workflow should be in place for demovm when it is migrated onto Azure. The IT Administrative staff should be notified on any changes that occur on this Virtual Machine
- Minimize costs wherever possible
- There should be an encrypted connection between the On-premise data centre and the Virtual Network

Question:

You need to comply with the below case study requirement

"There should be an encrypted connection between the On-premise data centre and the Virtual Network skillcertlabs"

You decide to implement Virtual Network Peering

Would this fulfil the requirement?

Yes

No

**Incorrect**

Virtual Network peering is used to connect multiple virtual networks together

For more information on Virtual Network Peering, please go ahead and visit the below URL

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

## 21. Question

View Case Study:

Overview:

skillcertlabs is an online training provider.

Existing Environment:

- The existing environment for skillcertlabs currently consists of the following resources:
- An on-premise data centre that hosts an Active Directory forest named skillcertlabs.com
- The Active Directory contains users from different departments – IT, Finance, HR

The following table shows the On-premise infrastructure. All servers are running in a virtualized environment:

On-premise server name – Type of Virtualization – Virtual Machine name

skillcertlabs-ser1 – VMware vCenter server – demovm

skillcertlabs-ser2 – Hyper-V host – demovm-test

There are 2 web applications that are hosted on the On-premise environment. The overall details of the web applications are listed below

- Programming Language – .Net
- Average memory used for each application – 1 GB

Proposed Environment:

- skillcertlabs is looking towards purchasing an Azure subscription and setting up their environment in Azure

- The Virtual Machines need to have a central location for storage of files. They would connect to these via SMB.
- All applications and Virtual Machines need to be migrated onto Azure
- Active Directory users need to be synched onto Azure AD

The following Virtual Networks and subnets are going to be setup in Azure:

Virtual Network name – Address space

skillcertlabs-net1 – 10.0.0.0/16

skillcertlabs-net2 – 20.0.0.0/16

Subnet name – Virtual Network name – Address space

SubnetA – skillcertlabs-net1 – 10.0.1.0/24

SubnetB – skillcertlabs-net2 – 20.0.1.0/24

Technical Requirements:

- The Instances for the underlying Web applications should be able to scale up to 5 instances
- The migrated Virtual Machines in Azure should be able to communicate to the Internet on port 8080
- A workflow should be in place for demovm when it is migrated onto Azure. The IT Administrative staff should be notified on any changes that occur on this Virtual Machine
- Minimize costs wherever possible
- There should be an encrypted connection between the On-premise data centre and the Virtual Network

Question:

You need to comply with the below case study requirement

“There should be an encrypted connection between the On-premise data centre and the Virtual Network skillcertlabs”

You decide to provision a point to site VPN connection

Would this fulfil the requirement?

Yes

No

Incorrect

Point to site connections are used when you want to connect to an Azure Virtual Network from workstation

For more information on point to site VPN connections, please go ahead and visit the below URL

<https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-howto-point-to-site-resource-manager-poi>

## 22. Question

View Case Study:

Overview:

skillcertlabs is an online training provider.

Existing Environment:

- The existing environment for skillcertlabs currently consists of the following resources:
- An on-premise data centre that hosts an Active Directory forest named skillcertlabs.com
- The Active Directory contains users from different departments – IT, Finance, HR

The following table shows the On-premise infrastructure. All servers are running in a virtualized environment:

On-premise server name – Type of Virtualization – Virtual Machine name

skillcertlabs-ser1 – VMware vCenter server – demovm

skillcertlabs-ser2 – Hyper-V host – demovm-test

There are 2 web applications that are hosted on the On-premise environment. The overall details of the web applications are listed below

- Programming Language – .Net
- Average memory used for each application – 1 GB

Proposed Environment:

- skillcertlabs is looking towards purchasing an Azure subscription and setting up their environment in Azure.
- The Virtual Machines need to have a central location for storage of files. They would connect to these files via SMB.
- All applications and Virtual Machines need to be migrated onto Azure
- Active Directory users need to be synched onto Azure AD

The following Virtual Networks and subnets are going to be setup in Azure:

Virtual Network name – Address space

skillcertlabs-net1 – 10.0.0.0/16

skillcertlabs-net2 – 20.0.0.0/16

Subnet name – Virtual Network name – Address space

SubnetA – skillcertlabs-net1 – 10.0.1.0/24

SubnetB – skillcertlabs-net2 – 20.0.1.0/24

Technical Requirements:

- The Instances for the underlying Web applications should be able to scale up to 5 instances
- The migrated Virtual Machines in Azure should be able to communicate to the Internet on port 8080
- A workflow should be in place for demovm when it is migrated onto Azure. The IT Administrative staff on any changes that occur on this Virtual Machine
- Minimize costs wherever possible
- There should be an encrypted connection between the On-premise data centre and the Virtual Network

Question:

You need to decide on the implementation strategy for the synchronization of user passwords between the company's on-premise Active Directory (AD) tenant and the Azure AD tenant. You need to ensure that the sign-in is completely managed in the cloud. The company can choose to sync users from their on-premise AD to Azure AD or vice versa. Which option would you consider for the configuration of the synchronization?

Password Hash Sync

Pass-through authentication

Federation

Federation with Password Hash Sync

**Correct**

A clear diagram on the decision for the type of synchronization to choose is given in the Microsoft documentation below.

Based on the decision tree we have to choose “Password Hash Sync” as the option and hence all other options are incorrect.

For more information on choosing the right authentication mechanism, please go ahead and visit the below link:

<https://docs.microsoft.com/en-us/azure/security/azure-ad-choose-authn>

## 23. Question

View Case Study:

## Overview:

skillcertlabs is an online training provider. They have several main offices and a couple of branch offices.

## Existing Environment:

The company currently has the following Active Directory Environment in place:

- Two Active Directory forests – One is quiz.skillcertlabs.com and the other is research.skillcertlabs.com
- Currently there is no trust relationship between the forests
- The quiz.skillcertlabs.com is the production forest that hosts all the identities required for internal user authentication.
- The research.skillcertlabs.com forest is only used by the research department

The company currently has the following Networking Environment in place:

- The offices currently contain at least one domain controller from the quiz.skillcertlabs.com forest.
- The main head office contains the domain controller of the research.skillcertlabs.com forest
- All of the offices have high speed internet connections

## Applications:

The company has a web application running on-premise named skillcertlab-app

- The application is running on Microsoft Internet Information Services
- The application stores its data on Microsoft SQL Server 2016
- The servers are all running on Hyper-V
- The same Hyper-V environment also hosts a staging environment to test all updates to the web application
- All Microsoft based licences have been purchased via a Microsoft Enterprise Agreement that includes the application

## Planned Changes:

- The company wants to migrate its workloads to Azure.
- They also want to create a hybrid identity model along with a Microsoft Office 365 deployment
- The research department will continue to use the infrastructure in the on-premise environment.

Following are the key requirements for the migration to Azure:

- The Web application “skillcertlab-app” needs to be migrated to Azure
- Existing licences should be used wherever possible to minimize on costs
- Users need to always authenticate using their quiz.skillcertlabs.com UPN identity
- All new deployments to Azure must be redundant in the case of an Azure region failure
- PaaS deployments are preferred wherever possible

- Directory Synchronization must be established between Azure AD and the quiz.skillcertlabs.com forest synchronization must not be affected by a link failure between Azure and the on-premise network.

The following requirements need to be met in terms of the database:

- When the database is migrated to Azure, it needs to be ensured that metrics are recorded for the data administrators should be able to analyse the metrics for suggesting any further improvements to the d
- Database downtime must be minimized when the database is being migrated onto Azure
- Database backup's must be maintained for a period of 5 years

The following requirements need to be met in terms of Security:

- Administrators should be able to authenticate to Azure by using the quiz.skillcertlabs.com credentials
- Any administrative access to Azure must be complemented by multi-factor authentication

Question:

You need to decide on whether Azure storage is required for the various requirements of the case study

Would you need to provision an Azure storage account for database metric monitoring?

Yes

No

**Incorrect**

The case study mentions that we need to have the database metrics in place for further analysis. So, we ne logs and metrics for the database. One way as mentioned below is to use Azure Storage accounts.

## 24. Question

View Case Study:

Overview:

skillcertlabs is an online training provider. They have several main offices and a couple of branch offices.

Existing Environment:

The company currently has the following Active Directory Environment in place:

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- Currently there is no trust relationship between the forests
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- The servers are all running on Hyper-V
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- All Microsoft based licences have been purchased via a Microsoft Enterprise Agreement that includes :

Planned Changes:

- The company wants to migrate its workloads to Azure.
- They also want to create a hybrid identity model along with a Microsoft Office 365 deployment
- The research department will continue to use the infrastructure in the on-premise environment.

Following are the key requirements for the migration to Azure:

- The Web application “skillcertlab-app” needs to be migrated to Azure
- Existing licences should be used wherever possible to minimize on costs
- Users need to always authenticate using their quiz.skillcertlabs.com UPN identity
- All new deployments to Azure must be redundant in the case of an Azure region failure
- PaaS deployments are preferred wherever possible
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The following requirements need to be met in terms of the database:

- When the database is migrated to Azure, it needs to be ensured that metrics are recorded for the data administrators should be able to analyse the metrics for suggesting any further improvements to the database
- Database downtime must be minimized when the database is being migrated onto Azure
- Database backup's must be maintained for a period of 5 years

The following requirements need to be met in terms of Security:

- Administrators should be able to authenticate to Azure by using the quiz.skillcertlabs.com credentials
- Any administrative access to Azure must be complemented by multi-factor authentication

Question:

You need to decide on whether Azure storage is required for the various requirements of the case study

Would you need to provision an Azure storage account for the SQL Server database migration?

Yes

No

**Incorrect**

You would need a storage account to store the BACPAC file which will be needed for the SQL database import. The file will need to be stored in Azure BLOB storage.

For more information on SQL database import, please visit the below URL

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-import>

## 25. Question

View Case Study:

Overview:

skillcertlabs is an online training provider. They have several main offices and a couple of branch offices.

Existing Environment:

The company currently has the following Active Directory Environment in place:

- Two Active Directory forests – One is quiz.skillcertlabs.com and the other is research.skillcertlabs.com
- Currently there is no trust relationship between the forests
- The quiz.skillcertlabs.com is the production forest that hosts all the identities required for internal user authentication.
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The company currently has the following Networking Environment in place:

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Applications:

The company has a web application running on-premise named skillcertlab-app

- The application is running on Microsoft Internet Information Services
- The application stores its data on Microsoft SQL Server 2016
- The servers are all running on Hyper-V
- The same Hyper-V environment also hosts a staging environment to test all updates to the web application
- All Microsoft based licences have been purchased via a Microsoft Enterprise Agreement that includes:

Planned Changes:

- The company wants to migrate its workloads to Azure.
- They also want to create a hybrid identity model along with a Microsoft Office 365 deployment
- The research department will continue to use the infrastructure in the on-premise environment.

Following are the key requirements for the migration to Azure:

- The Web application “skillcertlab-app” needs to be migrated to Azure
- Existing licences should be used wherever possible to minimize on costs
- Users need to always authenticate using their quiz.skillcertlabs.com UPN identity
- All new deployments to Azure must be redundant in the case of an Azure region failure
- PaaS deployments are preferred wherever possible
- Directory Synchronization must be established between Azure AD and the quiz.skillcertlabs.com forest. Synchronization must not be affected by a link failure between Azure and the on-premise network.

The following requirements need to be met in terms of the database:

- When the database is migrated to Azure, it needs to be ensured that metrics are recorded for the data. Administrators should be able to analyse the metrics for suggesting any further improvements to the database.
- Database downtime must be minimized when the database is being migrated onto Azure
- Database backup's must be maintained for a period of 5 years

The following requirements need to be met in terms of Security:

- Administrators should be able to authenticate to Azure by using the quiz.skillcertlabs.com credentials
- Any administrative access to Azure must be complemented by multi-factor authentication

Question:

You need to decide on whether Azure storage is required for the various requirements of the case study.

Would you need to provision an Azure storage account for Web site content?

Yes

No

### Correct

When you choose an App Service plan for an Azure Web app, it normally comes along with storage. An example shows you don't need a separate storage account for web site content.

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

<https://docs.microsoft.com/en-us/azure/app-service/overview-hosting-plans>

## 26. Question

View Case Study:

Overview:

skillcertlabs is an online training provider.

Current System – Financial Processing:

skillcertlabs currently has a system that consists of 3 tiers:

- Front end Web App
- Middle tier API
- Back end data store

Below is the current set of the system:

- The backend is running on Microsoft SQL server 2016
- All servers are running on Windows
- The Front and Middle tiers are written in C# and hosted on Internet Information Services
- The database is currently 1 TB in size. The growth of the database is not expected to grow beyond 3 T

The system currently has the following requirements:

- All data must be encrypted in rest and in transit
- The front and middle tier components currently make use of encryption keys to protect the data store. These should have the capability to access the encryption keys.
- Database backups need to be maintained in 2 separate locations that are at least 100 miles apart
- Database backups need to be stored for up to 7 years
- Traffic to the servers needs to be controlled via source IP address and port number
- Access to the system should only be via the internal network of skillcertlabs
- The Security team needs to be able to inspect all inbound and outbound traffic

Current System – Transactional Query System:

skillcertlabs also has a Transaction Query system built on .Net. The data is stored in Azure Table storage. This currently runs on a client computer

Planned Changes:

skillcertlabs wants to migrate the Financial Processing system to Azure

Key requirements:

- Infrastructure services must remain available if a region or a data center fails.
- Failover must occur without any administrative intervention
- Wherever possible, Azure managed services must be used to management overhead
- Whenever possible, costs must be minimized.
- Collect windows security logs from the Middle tier and retain the logs for several year
- Generate alerts if any unauthorized access to the backend Virtual machines are detected.
- The number of instances assigned to the front and middle tiers should be adjusted automatically based utilization
- An SLA of 99.95% must be guaranteed on the Infrastructure for the front and middle tier systems
- Identity management must be performed via Active directory and all password hashes must be stored environment.
- If there are any suspicious attempts for authentication, then that should trigger multi-factor authentication be allowed if the authentication attempt is successful.
- The data store for the transactional query system will be move from Azure Table storage to a CosmosDB

Question:

You need to manage secure access between the .Net service and the CosmosDB account.

What would the .Net service be used for in such a scenario?

- Create users and generate resource tokens
- Create users and request resource tokens
- Generate resource tokens and perform authentication
- Request resource tokens and perform authentication

Incorrect

The .Net service will be used to generate the resource tokens and perform the required authentication.

The Microsoft documentation also mentions an example workflow for a service that would make use of requests to CosmosDB

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

For more information on secure access to CosmosDB, please visit the below URL

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

## 27. Question

View Case Study:

Overview:

skillcertlabs is an online training provider.

Current System – Financial Processing:

skillcertlabs currently has a system that consists of 3 tiers:

- Front end Web App
- Middle tier API
- Back end data store

Below is the current set of the system:

- The backend is running on Microsoft SQL server 2016
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- The Front and Middle tiers are written in C# and hosted on Internet Information Services
- The database is currently 1 TB in size. The growth of the database is not expected to grow beyond 3 T

The system currently has the following requirements:

- All data must be encrypted in rest and in transit
- The front and middle tier components currently make use of encryption keys to protect the data store. The security team needs to have the capability to access the encryption keys.
- Database backups need to be maintained in 2 separate locations that are at least 100 miles apart
- Database backups need to be stored for up to 7 years
- Traffic to the servers needs to be controlled via source IP address and port number
- Access to the system should only be via the internal network of skillcertlabs
- The Security team needs to be able to inspect all inbound and outbound traffic

Current System – Transactional Query System:

skillcertlabs also has a Transaction Query system built on .Net. The data is stored in Azure Table storage. This system currently runs on a client computer

Planned Changes:

skillcertlabs wants to migrate the Financial Processing system to Azure

Key requirements:

- Infrastructure services must remain available if a region or a data center fails.
- Failover must occur without any administrative intervention
- Wherever possible, Azure managed services must be used to management overhead
- Whenever possible, costs must be minimized.
- Collect windows security logs from the Middle tier and retain the logs for several year
- Generate alerts if any unauthorized access to the backend Virtual machines are detected.
- The number of instances assigned to the front and middle tiers should be adjusted automatically based on utilization
- An SLA of 99.95% must be guaranteed on the Infrastructure for the front and middle tier systems
- Identity management must be performed via Active directory and all password hashes must be stored in a secure environment.
- If there are any suspicious attempts for authentication, then that should trigger multi-factor authentication and the user must be allowed if the authentication attempt is successful.
- The data store for the transactional query system will be moved from Azure Table storage to a CosmosDB account

Question:

You need to manage secure access between the .Net service and the CosmosDB account.

What would the CosmosDB account be used for in such a scenario

Create users and generate resource tokens

Create users and request resource tokens

Generate resource tokens and perform authentication

Request resource tokens and perform authentication

#### Incorrect

The CosmosDB account will be used to create the users. The following code snippet from the Microsoft documentation on how you can create CosmosDB account users

Next, if the CosmosDB account needs to be accessed,

CosmosDB would request for the right resource tokens to ensure that access could be granted. The Microsoft documentation also mentions an example workflow for a service that would make use of request tokens for CosmosDB. Since this is clearly given in the documentation, all other options are incorrect

For more information on secure access to CosmosDB, please visit the below URL

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

## 28. Question

View Case Study:

Overview:

skillcertlabs is an online training provider.

Current System – Financial Processing:

skillcertlabs currently has a system that consists of 3 tiers:

- Front end Web App
- Middle tier API
- Back end data store

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The system currently has the following requirements:

- All data must be encrypted in rest and in transit
- The front and middle tier components currently make use of encryption keys to protect the data store. These should have the capability to access the encryption keys.
- Database backups need to be maintained in 2 separate locations that are at least 100 miles apart
- Database backups need to be stored for up to 7 years
- Traffic to the servers needs to be controlled via source IP address and port no
- Access to the system should only be via the internal network of skillcertlabs
- The Security team needs to be able to inspect all inbound and outbound traffic

Current System – Transactional Query System:

skillcertlabs also has a Transaction Query system built on .Net. The data is stored in Azure Table storage. This currently runs on a client computer

Planned Changes:

skillcertlabs wants to migrate the Financial Processing system to Azure

Key requirements:

- Infrastructure services must remain available if a region or a data center fails.
- Failover must occur without any administrative intervention
- Wherever possible, Azure managed services must be used to management overhead
- Whenever possible, costs must be minimized.
- Collect windows security logs from the Middle tier and retain the logs for several year
- Generate alerts if any unauthorized access to the backend Virtua machines are detected.
- The number of instances assigned to the front and middle tiers should be adjusted automatically based utilization
- An SLA of 99.95% must be guaranteed on the Infrastructure for the front and middle tier systems
- Identity management must be performed via Active directory and all password hashes must be stored environment.
- If there are any suspicious attempts for authentication, then that should trigger multi-factor authentication be allowed if the authentication attempt is successful.
- The data store for the transactional query system will be move from Azure Table storage to a CosmosDB

Question:

You need to meet the following requirement of the case study

“Collect windows security logs from the Middle tier and retain the logs for several years”

Which of the following would you use for this purpose?

- Azure Notification Hubs
- Azure Diagnostics agent
- Azure Event Hubs
- Azure Log Analytics agent

Correct

You can use Log Analytics to get event data from Virtual Machines. The Log Analytics workspace can also retain indefinitely. The Microsoft documentation mentions the following

Option A is incorrect since this is only used for notifications

Option B is partially correct, but due to the aspect of the data being collected and the data retention required by Log Analytics

Option C is incorrect since this is used as a Big data ingestion service

For more information on collecting performance data, please visit the below URL

<https://docs.microsoft.com/en-us/azure/azure-monitor/learn/quick-collect-azurevm>

## 29. Question

View Case Study:

Overview:

skillcertlabs is an online training provider.

#### Current System – Financial Processing:

skillcertlabs currently has a system that consists of 3 tiers:

- Front end Web App
- Middle tier API
- Back end data store

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The system currently has the following requirements:

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- Database backups need to be maintained in 2 separate locations that are at least 100 miles apart
- Database backups need to be stored for up to 7 years
- Traffic to the servers needs to be controlled via source IP address and port no
- Access to the system should only be via the internal network of skillcertlabs
- The Security team needs to be able to inspect all inbound and outbound traffic

#### Current System – Transactional Query System:

skillcertlabs also has a Transaction Query system built on .Net. The data is stored in Azure Table storage. This system currently runs on a client computer

#### Planned Changes:

skillcertlabs wants to migrate the Financial Processing system to Azure

#### Key requirements:

- Infrastructure services must remain available if a region or a data center fails.
- Failover must occur without any administrative intervention
- Wherever possible, Azure managed services must be used to management overhead
- Whenever possible, costs must be minimized.

- Collect windows security logs from the Middle tier and retain the logs for several year
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- The number of instances assigned to the front and middle tiers should be adjusted automatically based utilization
- An SLA of 99.95% must be guaranteed on the Infrastructure for the front and middle tier systems
- Identity management must be performed via Active directory and all password hashes must be stored environment.
- If there are any suspicious attempts for authentication, then that should trigger multi-factor authentication be allowed if the authentication attempt is successful.
- The data store for the transactional query system will be move from Azure Table storage to a CosmosI

Question:

You need to recommend a solution for encrypting data at rest for the database. Which of the following would

Transparent data encryption

Always Encrypted

Azure storage encryption

SSL certificates

**Incorrect**

Option A: Transparent Data encryption

Please refer to <https://docs.microsoft.com/en-us/azure/sql-database/transparent-data-encryption-azure-sql#n> data-encryption-by-using-transact-sql

This encryption is for data at Rest but can be managed by T-SQL

Manage transparent data encryption by using Transact-SQL

Connect to the database by using a login that is an administrator or member of the dbmanager role in the master database.

Command Description

ALTER DATABASE (Azure SQL Database) SET ENCRYPTION ON/OFF encrypts or decrypts a database

sys.dm\_database\_encryption\_keys Returns information about the encryption state of a database and its associated database encryption keys

sys.dm\_pdw\_nodes\_database\_encryption\_keys Returns information about the encryption state of each data node and its associated database encryption keys

You can't switch the transparent data encryption protector to a key from Key Vault by using Transact-SQL. Use the Azure portal.

Option B: Always Encrypted

This is done on Column/Field of a table. All data in a particular field/column of a table within a database is encrypted. So this is not the correct solution

**Option C: Azure Data Storage Encryption**

This encryption is for data at Rest but can not be managed by T-SQL, hence wrong answer

**Option D: SSL Certificate**

SSL is not for encryption of data at Rest and hence the wrong answer

## 30. Question

View Case Study:

Overview:

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Current System – Transactional Query System:

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Planned Changes:

skillcertlabs wants to migrate the Financial Processing system to Azure

Key requirements:

- Infrastructure services must remain available if a region or a data center fails.
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- An SLA of 99.95% must be guaranteed on the Infrastructure for the front and middle tier systems
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- If there are any suspicious attempts for authentication, then that should trigger multi-factor authentication be allowed if the authentication attempt is successful.
- The data store for the transactional query system will be move from Azure Table storage to a CosmosDB

Question:

You need to recommend an availability solution for the Web tier of the application when it is moved to Azure. following would you recommend?

Standard Load Balancer

Traffic Manager

Basic Load Balancer

Application Gateway

**Correct**

The case study calls for infrastructure availability if a region fails. This can be done with the Traffic Manager. the priority routing method as stated below in the Microsoft documentation

The other options are incorrect since they cannot be used to perform disaster recovery if a region fails.

For more information on the Traffic Manager, please visit the below URL

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

## 31. Question

View Case Study:

Overview:

skillcertlabs is an online training provider. They have several main offices and a couple of branch offices.

Existing Environment:

The company currently has the following Active Directory Environment in place:

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- Currently there is no trust relationship between the forests
- The quiz.skillcertlabs.com is the production forest that hosts all the identities required for internal user authentication.
- The research.skillcertlabs.com forest is only used by the research department

The company currently has the following Networking Environment in place:

- The offices currently contain at least one domain controller from the quiz.skillcertlabs.com forest.
- The main head office contains the domain controller of the research.skillcertlabs.com forest
- All of the offices have high speed internet connections

Applications:

The company has a web application running on-premise named skillcertlab-app

- The application is running on Microsoft Internet Information Services
- The application stores its data on Microsoft SQL Server 2016
- The servers are all running on Hyper-V
- The same Hyper-V environment also hosts a staging environment to test all updates to the web application
- All Microsoft based licences have been purchased via a Microsoft Enterprise Agreement that includes :

Planned Changes:

- The company wants to migrate its workloads to Azure.
- They also want to create a hybrid identity model along with a Microsoft Office 365 deployment
- The research department will continue to use the infrastructure in the on-premise environment.

Following are the key requirements for the migration to Azure:

- The Web application “skillcertlab-app” needs to be migrated to Azure
- Existing licences should be used wherever possible to minimize on costs

- Users need to always authenticate using their quiz.skillcertlabs.com UPN identity
- All new deployments to Azure must be redundant in the case of an Azure region failure
- PaaS deployments are preferred wherever possible
- Directory Synchronization must be established between Azure AD and the quiz.skillcertlabs.com forest synchronization must not be affected by a link failure between Azure and the on-premise network.

The following requirements need to be met in terms of the database:

- When the database is migrated to Azure, it needs to be ensured that metrics are recorded for the data administrators should be able to analyse the metrics for suggesting any further improvements to the database
- Database downtime must be minimized when the database is being migrated onto Azure
- Database backup's must be maintained for a period of 5 years

The following requirements need to be met in terms of Security:

- Administrators should be able to authenticate to Azure by using the quiz.skillcertlabs.com credentials
- Any administrative access to Azure must be complemented by multi-factor authentication

Question:

You need to recommend how to setup the data store for hosting the SQL database in Azure. Which of the following recommendations do 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

**Correct**

Since the company already has existing Microsoft licences with software assurance, they can opt for a hybrid licensing model. This means they can benefit from huge discounts. This is also given in the Microsoft documentation.

Options A and C are incorrect since here you cannot use the Hybrid benefit from a licensing perspective.

Option B is incorrect since you would need to invest extra on the Virtual machine itself.

For more information on vCore based licensing, please visit the below URL

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-service-tiers-vcore>

## 32. Question

View Case Study:

Overview:

skillcertlabs is an online training provider. They have several main offices and a couple of branch offices.

#### Existing Environment:

The company currently has the following Active Directory Environment in place:

- Two Active Directory forests – One is quiz.skillcertlabs.com and the other is research.skillcertlabs.com
- Currently there is no trust relationship between the forests
- The quiz.skillcertlabs.com is the production forest that hosts all the identities required for internal user authentication.
- The research.skillcertlabs.com forest is only used by the research department

The company currently has the following Networking Environment in place:

- The offices currently contain at least one domain controller from the quiz.skillcertlabs.com forest.
- The main head office contains the domain controller of the research.skillcertlabs.com forest
- All of the offices have high speed internet connections

#### Applications:

The company has a web application running on-premise named skillcertlab-app

- The application is running on Microsoft Internet Information Services
- The application stores its data on Microsoft SQL Server 2016
- The servers are all running on Hyper-V
- The same Hyper-V environment also hosts a staging environment to test all updates to the web application
- All Microsoft based licences have been purchased via a Microsoft Enterprise Agreement that includes the application

#### Planned Changes:

- The company wants to migrate its workloads to Azure.
- They also want to create a hybrid identity model along with a Microsoft Office 365 deployment
- The research department will continue to use the infrastructure in the on-premise environment.

Following are the key requirements for the migration to Azure:

- The Web application “skillcertlab-app” needs to be migrated to Azure
- Existing licences should be used wherever possible to minimize on costs
- Users need to always authenticate using their quiz.skillcertlabs.com UPN identity
- All new deployments to Azure must be redundant in the case of an Azure region failure
- PaaS deployments are preferred wherever possible
- Directory Synchronization must be established between Azure AD and the quiz.skillcertlabs.com forest  
synchronization must not be affected by a link failure between Azure and the on-premise network.

The following requirements need to be met in terms of the database:

- When the database is migrated to Azure, it needs to be ensured that metrics are recorded for the data administrators should be able to analyse the metrics for suggesting any further improvements to the database.
- Database downtime must be minimized when the database is being migrated onto Azure
- Database backup's must be maintained for a period of 5 years

The following requirements need to be met in terms of Security:

- Administrators should be able to authenticate to Azure by using the quiz.skillcertlabs.com credentials
- Any administrative access to Azure must be complemented by multi-factor authentication

Question:

You need to recommend the approach to transferring the data from the on-premise SQL server to the SQL server. Which of the following would you recommend?

- Use Azure Site Recovery
- Use a BACPAC file stored in Azure BLOB storage
- Copy the VHD of the server to Azure BLOB storage
- Use Azure Backup

**Correct**

The ideal approach is to use a BACPAC file. This is also given in the Microsoft documentation.

Since this is clearly mentioned, all other options are incorrect

For more information on SQL database import, please visit the below URL

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-import>

### 33. Question

View Case Study:

Overview:

skillcertlabs is an online training provider.

Current System – Financial Processing:

skillcertlabs currently has a system that consists of 3 tiers:

- Front end Web App
- Middle tier API

- Back end data store

Below is the current set of the system:

- The backend is running on Microsoft SQL server 2016
- All servers are running on Windows
- The Front and Middle tiers are written in C# and hosted on Internet Information Services
- The database is currently 1 TB in size. The growth of the database is not expected to grow beyond 3 T

The system currently has the following requirements:

- All data must be encrypted in rest and in transit
- The front and middle tier components currently make use of encryption keys to protect the data store. should have the capability to access the encryption keys.
- Database backups need to be maintained in 2 separate locations that are at least 100 miles apart
- Database backups need to be stored for up to 7 years
- Traffic to the servers needs to be controlled via source IP address and port no
- Access to the system should only be via the internal network of skillcertlabs
- The Security team needs to be able to inspect all inbound and outbound traffic

Current System – Transactional Query System:

skillcertlabs also has a Transaction Query system built on .Net. The data is stored in Azure Table storage. This currently runs on a client computer

Planned Changes:

skillcertlabs wants to migrate the Financial Processing system to Azure

Key requirements:

- Infrastructure services must remain available if a region or a data center fails.
- Failover must occur without any administrative intervention
- Wherever possible, Azure managed services must be used to management overhead
- Whenever possible, costs must be minimized.
- Collect windows security logs from the Middle tier and retain the logs for several year
- Generate alerts if any unauthorized access to the backend Virtua machines are detected.
- The number of instances assigned to the front and middle tiers should be adjusted automatically based utilization
- An SLA of 99.95% must be guaranteed on the Infrastructure for the front and middle tier systems
- Identity management must be performed via Active directory and all password hashes must be stored environment.

- If there are any suspicious attempts for authentication, then that should trigger multi-factor authentication if the authentication attempt is successful.
- The data store for the transactional query system will be moved from Azure Table storage to a Cosmos DB.

Question:

You need to recommend the right solution for configuring Multi-Factor Authentication in Azure.

How would you address the access control for the sign-in risk policy?

Allow access and require multi-factor authentication

Allow access and require Azure MFA registration

Block access and require multi-factor authentication

Block access and require Azure MFA registration

**Correct**

Since the case study says to ensure that conditional access request for MFA, but still allow access we need to choose the option of “Require multi-factor authentication”

Since this is clear from the implementation, all other options are incorrect

For more information on conditional access, please visit the below URL

<https://docs.microsoft.com/en-us/azure/active-directory/conditional-access/overview>

### 34. Question

View Case Study:

Overview:

skillcertlabs is an online training provider.

Current System – Financial Processing:

skillcertlabs currently has a system that consists of 3 tiers:

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- Middle tier API
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- The backend is running on Microsoft SQL server 2016
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- The database is currently 1 TB in size. The growth of the database is not expected to grow beyond 3 T

The system currently has the following requirements:

- All data must be encrypted in rest and in transit
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- Database backups need to be stored for up to 7 years
- Traffic to the servers needs to be controlled via source IP address and port no
- Access to the system should only be via the internal network of skillcertlabs
- The Security team needs to be able to inspect all inbound and outbound traffic

Current System – Transactional Query System:

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Planned Changes:

skillcertlabs wants to migrate the Financial Processing system to Azure

Key requirements:

- Infrastructure services must remain available if a region or a data center fails.
- Failover must occur without any administrative intervention
- Wherever possible, Azure managed services must be used to management overhead
- Whenever possible, costs must be minimized.
- Collect windows security logs from the Middle tier and retain the logs for several year
- Generate alerts if any unauthorized access to the backend Virtua machines are detected.
- The number of instances assigned to the front and middle tiers should be adjusted automatically based utilization
- An SLA of 99.95% must be guaranteed on the Infrastructure for the front and middle tier systems
- Identity management must be performed via Active directory and all password hashes must be stored environment.
- If there are any suspicious attempts for authentication, then that should trigger multi-factor authentication be allowed if the authentication attempt is successful.
- The data store for the transactional query system will be move from Azure Table storage to a CosmosDB

Question:

You need to recommend the right solution for configuring Multi-Factor Authentication in Azure.

Which of the following would you recommend for licensing in Azure?

- Free
- Basic
- Premium P1
- Premium P2

### Incorrect

To implement conditional access policies, you can opt for Premium P1 licences. Premium licences are required for conditional access policies. And Premium P1 would be less expensive than Premium P2 licences. The Microsoft documentation states the following:

Options A and B are incorrect since these editions don't give access to conditional access policies.

Option D is incorrect since you can choose the less expensive option of Premium P1 licences.

For more information on conditional access, please visit the below URL:

<https://docs.microsoft.com/en-us/azure/active-directory/conditional-access/overview>

### 35. Question

When deploying a GPv2 account with archive storage in mind, what is the minimum amount of days the data should be stored before accessing it to avoid early access penalty costs?

- 30 Days
- 90 Days
- 120 Days
- 180 Days

### Correct

180 days is correct, this is the minimum amount of days the data should be stored before accessing it to avoid early access penalty costs. GPv2 cool tier storage is intended for data that will remain in the cool tier for at least 30 days. Standard storage does not have early access penalty costs, however, it has higher storage costs associated with that.

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-storage-tiers>

### 36. Question

You are an architect for the ACME banking group. You are responsible for designing a notification system that sends a confirmation email to users when they purchased a new service. The solution also requires to make use of direct delivery and collecting real-time metrics of who blocked email engagement. Which of the following technologies would be best suited for this requirement?

SendGrid

- Notification Hub
- Service Bus
- Event Grid

**Correct**

SendGrid is correct as this is an email solution that provides email functionality via distribution groups as we gathering. Notification Hub will not suffice as this is used to send PUSH notifications on a large scale. Event suffice as this is used to provide developers access to the events generated by cloud infrastructure. Service as this is a messaging service and not a notification service. <https://docs.microsoft.com/en-us/azure/sendgrid-send-email>

**37. Question**

You are an architect for the ACME banking group. Your company makes use of Microsoft Teams as a communication platform. Every time a new user joins the company HR manually creates a new post welcoming the users. You are tasked to implement a process by implementing a low-cost solution without having to write code for the solution to work. What technology should you implement based on the requirements?

- Function App

 Logic App

- Event Grid

- Service Bus

**Incorrect**

Logic App is correct as this can be used to create workflows without having to write code (i.e. when a new user joins the company, a logic app can trigger a workflow to automatically create a new post in MS Teams welcoming them). Functions will not suffice as they are more focused on executing code in a serverless environment. Event Grid will not suffice as this is more focused on serverless event processing from blob storage, resource groups, and even custom events. Service bus will not suffice as it is used where different platforms are decoupled, an example would be inter-bank transfers as the banks do not have to be integrated with each other, hence this will not suffice as Teams is responsible for the messaging in this scenario. <https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-overview>

**38. Question**

You are in the process of planning Azure Data Box solution for an organization, which of the following subscriptions does not require an Azure Data Box? Choose all that apply.

Enterprise Agreement (EA) Cloud Solution Provider (CSP) Pay-As-You-Go**Correct**

Only EA and CSP subscriptions offer support Azure Data Box. <https://docs.microsoft.com/en-us/azure/databox/>

**39. Question**

You are responsible for managing all identities in Azure, you need to report monthly on risk events such as impossible travel to atypical locations and sign-ins from infected devices. You also need to investigate these risks and resolve them.

Which of the following technologies do you need to configure?

 Azure AD conditional access Privileged Identity Management Identity Protection Multi-Factor Authentication**Correct**

Identity Protection is correct as this will show you the risk events such as users who sign in from infected devices or specific roles for resources in Azure like the Contributor role. MFA will not suffice as this only provides a single authentication factor for users when signing in.

<https://docs.microsoft.com/en-us/azure/active-directory/identity-protection/overview>

**40. Question**

You are the architect for Fabrikam publishers who are looking to move to Azure as their cloud platform of choice. You have two subscriptions with the following purpose:

- USA-Production where all the production servers should be deployed
- USA-Test where all the testing of resources should happen before deploying to the production subscription

Requirement 1: You need to plan for availability for the “Finance” system in the event that one of the racks in the Microsoft data center goes down, the application will continue functioning. This application should also not leave the data center due to regulatory compliance reasons.

Requirement 2: You need to plan for availability for the “Sales” system in the event that the underlying Microsoft data center be rebooted, the application will continue functioning. This application should also not leave its deployed in due to regulatory compliance reasons.

Requirement 3: You need to plan for availability for the “HR” system in the event that the data center where it is deployed goes down, the application will continue functioning.

Which of the following options should be part of the solution for requirement 1?

Availability Zone

Availability Set with Update Domain

Availability Set with Fault Domain

Virtual Machine Scale Set

### Incorrect

Availability set with fault domain is correct as this configuration option will allow you to choose how many failure domains to require in your availability set. This will protect you from a single point of failure which is out of your control like the rack in the data center and physical hardware failure where your VMs are running on. Update domain is incorrect as this availability set option is used to distribute your VMs across a logical grouping. If Microsoft decides to push updates to the underlying server infrastructure and the equipment requires a reboot, your servers will be spread out to different racks and won't be rebooted at the same time. Virtual Machine Scale Sets (VMSS) is incorrect as this configuration automatically scales up or down depending on the load of the VMs. Availability zone is incorrect as this is part of the underlying infrastructure and not a subdirectory of availability sets, these zones spread your servers across physical locations to different regions to protect against a single point of failures like hardware failure and underlying hardware rebooting.

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

## 41. Question

You are the architect for Fabrikam publishers who are looking to move to Azure as their cloud platform of choice. You have created two subscriptions with the following purpose:

- USA-Production where all the production servers should be deployed
- USA-Test where all the testing of resources should happen before deploying to the production subscription

Requirement 1: You need to plan for availability for the “Finance” system in the event that one of the racks in the data center goes down, the application will continue functioning. This application should also not leave the data center due to regulatory compliance reasons.

Requirement 2: You need to plan for availability for the “Sales” system in the event that should the underlying Microsoft data center be rebooted, the application will continue functioning. This application should also not leave its deployed in due to regulatory compliance reasons.

Requirement 3: You need to plan for availability for the “HR” system in the event that the data center where it is deployed goes down, the application will continue functioning.

Which of the following options should be part of the solution for requirement 2?

Availability Zone

Availability Set with Update Domain

- Availability Set with Fault Domain
- Virtual Machine Scale Set (VMSS)

### Correct

Availability Set with update domain is correct as this configuration option used to protect against unwanted reboots of underlying hardware which was updated, this is done via spreading the VMs into logical groupings and rebooting one number at a time. Virtual Machine Scale Sets (VMSS) is incorrect as this configuration option is used to automatically scale down depending on the load of the VMs. Availability zone is incorrect as this is part of the availability options subdirectory of availability sets, these zones spread your servers across physical locations instead of logical groups against a single point of failures like hardware failure and underlying hardware rebooting. Fault domain is incorrect as it protect you from a single point of failure which is out of your control like power failures to the rack in the data center or physical hardware failure where your VMs are running on, this is also considered a logical grouping/spreading of VMs.

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

## 42. Question

You are the architect for Fabrikam publishers who are looking to move to Azure as their cloud platform of choice. You have subscriptions with the following purpose:

- USA-Production where all the production servers should be deployed
- USA-Test where all the testing of resources should happen before deploying to the production subscription

Requirement 1: You need to plan for availability for the “Finance” system in the event that one of the racks in the data center goes down, the application will continue functioning. This application should also not leave the data center due to regulatory compliance reasons.

Requirement 2: You need to plan for availability for the “Sales” system in the event that should the underlying Microsoft data center be rebooted, the application will continue functioning. This application should also not leave its deployed in due to regulatory compliance reasons.

Requirement 3: You need to plan for availability for the “HR” system in the event that the data center where it is deployed goes down, the application will continue functioning without any downtime.

Which of the following options should be part of the solution for requirement 3?

- Availability Zone
- Availability Set with Update Domain
- Availability Set with Fault Domain
- Virtual Machine Scale Set (VMSS)

### Incorrect

The availability zone is correct as the application server is spread across different zones which are physical locations in the Azure region. Each zone is made up of one or more data centers equipped with independent power, cooling, and networking. Update domain is incorrect as this configuration option used to protect against unwanted rebooting of under-

which was updated, this is done via spreading the VMs into logical groupings and rebooting one grouping now within the same datacenter. Virtual Machine Scale Sets (VMSS) is incorrect as this configuration option is used to scale up or down depending on the load of the VMs. Fault domain is incorrect as this will protect you from a failure which is out of your control like power failures to the rack in the data center and physical hardware failure. VMs are running on, this is also considered a logical grouping/spreading of servers within the same datacenter. <https://docs.microsoft.com/en-us/azure/virtual-machines/windows/manage-availability>

### 43. Question

You are the architect for Fabrikam publishers. You are responsible for guiding the administrator on Azure resources. The admin decides to create a new backup policy that should backup all VM's which have SQL server running. This is able to backup only the data that has changed since the full backup. Which of the following policy types should be used?

- Azure Virtual Machine policy - > Differential backup
- SQL Server in Azure VM ->Differential backup
- SQL Server in Azure VM ->Log backup
- Azure Virtual Machine policy - > Full backup

#### Correct

SQL Server in Azure VM is correct as this supports differential backup which is required to only backup the changes made since the last full backup. SQL Server in Azure Log backup is incorrect as this will focus on log backups and not differential data backup. Azure VMs full backup policy is incorrect as this does not meet the requirements of backing up the data as well as SQL backup running inside the VM. Azure VM differential backup is incorrect as only full backups are supported by Azure VMs for differential backups for Azure VMs. <https://docs.microsoft.com/en-us/azure/virtual-machines/windows/sql/virtual-machines-windows-sql-backup-recovery>

### 44. Question

You are the architect for Fabrikam publishers. You need to guide the administrator on exporting all the data within the “Fab\_Prod” storage account to your on-premises backup server which is around 70 terabytes in size. The network environment has 200Mbps internet speed. You need to have the data backed up within the next 30 days. What is the most reliable and secure way to get the data to your on-premises backup server?

- Storage Explorer Web
- Storage Explorer Application
- Data Box offline transfer
- Data Box online transfer

**Correct**

Data Box offline transfer is correct as this is used to move large amounts of data to and from Azure when tire availability is limited. Data Box online transfer will not suffice as this is used to create a link from your on-premises environment to Azure. In this case, the time and network speed is the limiting factor. Storage Explorer Web will not suffice as this is used to move smaller files or data to and from Azure (HTTPS is not the most reliable method to transfer a large amount of data over the internet). Storage Explorer Application is more reliable than the web version, however, it will still not suffice as the transfer files to/from Azure and the network speed and time it will take to complete the download is still the limiting factor.

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

**45. Question**

You are the architect for the ACME banking group. You are responsible for security on the Azure SQL database named SQL\_DB\_Main. You have been tasked to ensure that all data in transit should be encrypted as well as that data at rest should be encrypted so that users are not able to view sensitive information in the database. Which encryption technology should be used?

- Transparent Data Encryption (TDE)
- Always Encrypted

**Correct**

Always encrypted is correct as this ensures encryption happens during transport and that the encryption key is stored in the database engine. Transparent Data Encryption will not suffice as this is database-level encryption which is only protected at rest.

<https://docs.microsoft.com/en-us/sql/relational-databases/security/encryption/always-encrypted-database-engine>  
sql-server-ver15

**46. Question**

You are the architect for the ACME group. ACME currently has a hybrid environment that consists of one main data center located in the East US and Azure in the East US 2 region. Within the data center, there are three storage solutions that need to be moved to Azure. The on-premises data center where the 3 solutions are running at is limited at 25Mbps in terms of transfer speed, however, download speed is 1Gbps.

Solution 1: The storage attached to this solution is at 57 Terabytes and currently has RAID 5 configured for redundancy. The solution should cater for incremental uploads as well.

Solution 2: The storage attached to this solution is 650 Terabytes and needs to be moved to Azure, however, the requirement is that authentication should be provided via the Azure portal. The solution should cater for migration.

Solution 3: The storage attached to this solution is 25 Terabytes, however, the requirement is that the solution should not require external power.

Which of the following solutions is best suited for the requirements for solution 1 and will also be the most cost-effective?

**Azure Data Box**

- Azure Data Box Heavy
- Azure Data Box Disk
- Azure Storage explorer

**Correct**

Azure Databox is correct as this is offline data transfer due to the limited internet upload speed. Databox supports up to 80TB after RAID 5 configuration. Databox heavy is incorrect as this is overkill for this solution as this supports up to 1 Petabyte. Data Box Disk is incorrect as this solution only supports up to 35TB of storage. Azure storage explorer is incorrect as this is used for online migrations where upload speed is not limited.

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

**47. Question**

You are the architect for the ACME group. ACME currently has a hybrid environment that consists of one main data center located in the East US and Azure in the East US 2 region. Within the data center, there are three storage solutions that need to be moved to Azure. The on-premises data center where the 3 solutions are running at is limited at 25Mbps in upload transfer speed, however, download speed is 1Gbps.

Solution 1: The storage attached to this solution is at 57 Terabytes and currently has RAID 5 configured for redundancy. The solution should cater for incremental uploads as well.

Solution 2: The storage attached to this solution is 650 Terabytes and needs to be moved to Azure, however, the requirement is that authentication should be provided via the Azure portal. The solution should cater for large data volumes.

Solution 3: The storage attached to this solution is 25 Terabytes, however, the requirement is that the solution must run on external power.

Which of the following solutions is best suited for the requirements for solution 2 and will also be the most cost-effective?

- Azure Data Box
- Azure Data Box Heavy**
- Azure Data Box Disk
- Azure Storage explorer

**Correct**

Azure Data Box Heavy is correct as this supports large data volumes of up to 1 Petabytes, this solution also requires external power and cannot be rack-mounted, this solution is recommended when large amounts of data need to be transferred and internet speeds are slow. Data Box is incorrect as this supports up to 80TB after RAID 5 configuration. Data Box Disk is incorrect as this solution only supports up to 35TB of storage.

as this solution only supports up to 35TB of usable storage. Azure storage explorer is incorrect as this is used for migrations where upload speed is not limited. <https://docs.microsoft.com/en-us/azure/databox/data-box-heavy/>

## 48. Question

You are the architect for the ACME group. ACME currently has a hybrid environment that consists of one main premises in the East US and Azure in the East US 2 region. Within the data center, there are three storage solutions that need to be moved to Azure. The on-premises data center where the 3 solutions are running at is limited at 25Mbps in terms of transfer speed, however, download speed is 1Gbps.

Solution 1: The storage attached to this solution is at 57 Terabytes and currently has RAID 5 configured for redundancy. The solution should cater for incremental uploads as well.

Solution 2: The storage attached to this solution is 650 Terabytes and needs to be moved to Azure, however, the requirement is that authentication should be provided via the Azure portal. The solution should cater for migration.

Solution 3: The storage attached to this solution is 25 Terabytes, however, the requirement is that the solution can run on external power and also supports USB 3.0 transfers.

Which of the following solutions is best suited for the requirements for solution 3 and will also be the most cost-effective?

- Azure Data Box
- Azure Data Box Heavy
- Azure Data Box Disk
- Azure Storage explorer

### Correct

Azure Data Box Disk is correct as this solution is recommended when “medium” amounts of data need to be moved. It is designed for environments where internet speeds are slow, this solution supports up to 35TB of useable storage and has a USB 3.0 port for easy deployment. Azure Data Box Heavy is incorrect as this supports large data volumes of up to 1 Petabytes, this solution also requires AC power and cannot be rack-mounted, this solution is recommended when large amounts of data need to be moved and internet speeds are slow. Data Box is incorrect as this supports up to 80TB after RAID 5 configuration, however, it does not offer a USB interface. <https://docs.microsoft.com/en-us/azure/databox/data-box-disk-overview>

## 49. Question

You are the architect for the ACME shipping group. You are responsible for designing a messaging system that users purchase goods, as such the messaging system needs to be reliable. Which of the following technologies would be fit for the design?

- Event Hub

- Notification Hub
- Event Grid
- Service Bus

### Correct

Service bus is correct as this is used as a reliable messaging service. Notification Hub will not suffice as this PUSH notifications on a large scale. Event Hub will not suffice as this is used to collect millions of events per processing. Event Grid would not suffice as this is used to provide developers access to the events generated infrastructure. <https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-messaging-overview>

## 50. Question

You are the architect for the ACME shipping group. You are responsible for designing a notification system that send promotional content via push notifications to millions of devices. The design should cater to all popular platforms: Android, iOS, and Windows. You are also planning to use this solution with shared access secrets. Which of the following technologies would best fit the design?

- Event Hub
- Notification Hub
- Service Bus
- Event Grid

### Correct

Notification Hub is correct as this supports the sending of large amounts of data to the popular devices via Push notifications as well as make use of shared access secrets. Event Hub will not suffice as this is used to collect millions of events per processing, not sending the notifications. Service bus will not suffice as this is a messaging service and not a notification hub. Service bus is used for apps that make use of transactions, ordering, and duplicate detection as well as apps handling of high-value messages that cannot be lost. Event Grid would not suffice as this is used to provide access to the events generated by cloud infrastructure. <https://docs.microsoft.com/en-us/azure/notification-hubs/notification-hubs-notification-overview>

## 51. Question

You are the architect for the ACME shipping group. You are responsible for designing a solution which should monitor events and action-specific events. You are tasked to design a solution that should automatically notify if a new resource is created or deleted in the “Production” resource group. Which technology should you use to track events?

- Event Hub

Event Grid Resource Lock Service Bus**Correct**

Event grid is correct as this can be used to create events when resources are deleted or created within a resource group. Once the event is created you can configure a function trigger or logic app to send an email notification. Event grid can ingest and process real-time data streams from apps or devices. Resource lock will not suffice as the requirement is to be notified when a resource is created/deleted, not to prevent it from happening. Service bus will not suffice this as it is designed to send messages between applications that are decoupled. <https://docs.microsoft.com/en-us/azure/event-grid/resource-changes-trigger>

**52. Question**

You are the architect for the ACME shipping group. You are responsible for designing a storage solution for a new application. The application requires to store a list of client details in Azure. The solution needs to enable the administrators to filter the client details. Which Azure storage service should you use?

 Blob Storage File Storage Table Storage Queue Storage**Correct**

Table Storage is correct as its structured storage providing a key/attribute store for storing client details. Blob Storage will not suffice as it is used to store blob objects, azure disks and not suitable for structured data. File Storage will not suffice as it is used for file shares. Queue Storage will not suffice as this is used for storing message queues. <https://docs.microsoft.com/en-us/learn/modules/choose-best-storage-service/3-table-storage-overview>

**53. Question**

You are the architect for the ACME shipping group. You are responsible for designing a storage solution for a new application. The application requires storage that needs to be accessed frequently and must be available across several datacenters. What storage type should be used?

 General-purpose V1 with hot tier storage General-purpose V2 with archive tier storage General-purpose V2 with hot tier storage

- General-purpose v2 with cool tier storage

### Correct

General purpose V2 hot tier storage is correct as this is optimized for data that is accessed frequently, when account it is by default assigned to the hot tier. General-purpose V2 cool tier is incorrect as this is used for data infrequently. General-purpose V2 archive tier is used for archiving data, there are penalty costs associated with before 180 days. General-purpose V1 does not support hot/cool tier access.

<https://docs.microsoft.com/en-us/azure/storage/common/storage-account-overview>

## 54. Question

You are the architect for the ACME shipping group. You are responsible for designing a storage solution for a application should be able to store logs for up to 6 years and should be encrypted at rest. This solution should replacement for on-premises tape storage while minimizing costs.

Which storage type should be used?

- General-purpose V1 with cold tier storage
- General-purpose V2 with archive tier storage
- General-purpose V2 with cold tier storage
- General-purpose v1 with archive tier storage

### Correct

General purpose V2 with archive tier access is correct as this option is the best way to achieve long term retention also serve as a replacement for tape storage. GPv1 with cold tier storage is incorrect as this does not support tier storage. GPv2 with cold tier storage can work, however, it is still more costly than archive tier storage. G storage is incorrect as this does not support hot/cool/archive tier storage.

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-storage-tiers>

## 55. Question

You are the architect for the ACME shipping group. You are responsible for the design of a scalable application load varies dramatically, especially towards the end of the month where the load usually spikes to 10x the usual goes back to normal. Which of the following Azure availability and/or scalability solutions will meet this requirement effective to implement?

- Availability set
- Internal load balancer
- Virtual Machine Scale Set (VMSS)

- Public load balancer

### Correct

Virtual Machine Scale Sets (VMSS) is correct as this allows the application to scale automatically (increase or decrease number of VMs based on load criteria which can be configured). Availability sets will not work as these are used for redundancy purpose. Internal load balancers will not work as they are used to distribute load across VMs which are already part of an availability set. External load balancers will not work as they are used to map a public IP address and port across internal VMs which are part of an availability set. <https://docs.microsoft.com/en-us/azure/virtual-machine-scale-sets/overview>

## 56. Question

You are the architect for the Contoso financial group. You are responsible for security on the Azure SQL database named Finance\_DB\_Main. You have been tasked to ensure that the database and its data is secure at rest via encryption. The solution should be flexible enough to support geo-replication and geo-restore. Which encryption technology should you use?

- Transparent Data Encryption (TDE)

- Always Encrypted
- Always Encrypted

### Correct

Transparent Data Encryption is correct as this allows the data stored on the disk to be encrypted and it supports geo-replication and geo-restore. Always Encrypted will not suffice as this is focused on transport encryption (data in transit is encrypted). A key vault will not suffice as this is a vault where you can store passwords and certificates, not a specific data encryption tool.

<https://docs.microsoft.com/en-us/azure/sql-database/transparent-data-encryption-azure-sql?tabs=azure-portals>

## 57. Question

You are the architect for the Contoso financial group. You have been tasked to explain to the Azure administrator how to grant limited access to the Blob files in the storage account “Company\_function” with another company for a limited time. The other company should only be able to list and read the data in the blob storage. The other company’s administrator has Storage Explorer and wants your administrator to share secure access with him by using this tool. Which info do you need to configure and give the administrator?

- Create Shared Access Signature for “Company\_function” and configure the following: start and expiry time, permissions, service access to Blobs. Send the administrator the SAS URI to be used in Storage Explorer.
- Create Shared Access Signature for “Company\_function” and configure the following: start and expiry time, permissions, service access to Blobs. Send the administrator the SAS URI to be used in Storage Explorer.

- Create Shared Access Signature for “Company\_function” and configure the following: read and list permission access to Blobs. Send the administrator the SAS URI to be used in Storage Explorer.
- Provide the administrator with the storage name and key

**Correct**

You need to create a Shared Access Signature for “Company\_function” and configure start and expiry time as time limitation request, list and read permissions are the least intrusive and blob storage is correct. The administrator is able to use the SAS URI to configure access in Storage Explorer in their side. Option 1 is incorrect as there are no assigned. Option 3 is incorrect as there is no time limitation set. Option 4 is incorrect as sending a storage name will provide limited access as required. <https://docs.microsoft.com/en-us/rest/api/storageservices/delegate-access-signature>

**58. Question**

You are the architect of the Contoso group. Currently, Contoso has an Azure SQL Database which is running with 1 database of 1.5 GB. They have the following requirements:

- Requirement 1: Expand the database storage size to 50 Gigabytes whilst minimizing costs as far as possible.
- Requirement 2: Connect to the SQL DB remotely without incurring additional costs
- Requirement 3: Securely configure communication between the database and an application running on a VM
- Requirement 4: Ensure the Database has an uptime SLA of 99.99%.
- Requirement 5: Increase SQL DB backup retention period to 35 days.

You decide to address requirement 1 by changing the SQL DB to the premium tier. Does this resolve the issue?

 Yes No**Correct**

The Premium tier is more expensive than the Standard tier, the Standard tier supports max DB sizes up to 1 TB.

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-service-tiers-dtu>

**59. Question**

You are the architect of the Contoso group. Currently, Contoso has an Azure SQL Database which is running with 1 database of 1.5 GB. They have the following requirements:

- Requirement 1: Expand the database storage size to 50 Gigabytes whilst minimizing costs as far as possible.
- Requirement 2: Connect to the SQL DB remotely without incurring additional costs
- Requirement 3: Securely configure communication between the database and an application running on a VM
- Requirement 4: Ensure the Database has an uptime SLA of 99.99%.
- Requirement 5: Increase SQL DB backup retention period to 35 days.

You decide to address requirement 2 by adding allowed trusted public IP's of the organization to the SQL DB

Yes

No

### Correct

Yes is correct, you can add trusted public IPs to access the DB.

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-firewall-configure>

## 60. Question

You are the architect of the Contoso group. Currently, Contoso has an Azure SQL Database which is running with 1 database of 1.5 GB. They have the following requirements:

Requirement 1: Expand the database storage size to 50 Gigabytes whilst minimizing costs as far as possible.

Requirement 2: Connect to the SQL DB remotely without incurring additional costs

Requirement 3: Securely configure communication between the database and an application running on a VM

Requirement 4: Ensure the Database has an uptime SLA of 99.99%.

Requirement 5: Increase SQL DB backup retention period to 35 days.

You decide to address requirement 3 by enabling virtual network service endpoints.

Yes

No

### Correct

Yes is correct, by enabling virtual network endpoints you extend your VNet private address space and the idea to other Azure services, which in this case is the Azure SQL DB.

[https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-service-endpoints-overview#:~:targetText=Virtual%20Network%20\(VNet\)%20service%20endpoints,to%20only%20your%20](https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-service-endpoints-overview#:~:targetText=Virtual%20Network%20(VNet)%20service%20endpoints,to%20only%20your%20)

## 61. Question

You are the architect of the Contoso group. Currently, Contoso has an Azure SQL Database which is running with 1 database of 1.5 GB. They have the following requirements:

Requirement 1: Expand the database storage size to 50 Gigabytes whilst minimizing costs as far as possible.

Requirement 2: Connect to the SQL DB remotely without incurring additional costs

Requirement 3: Securely configure communication between the database and an application running on a VM

Requirement 4: Ensure the Database has an uptime SLA of 99.99%.

Requirement 5: Increase SQL DB backup retention period to 35 days.

You decide to address requirement 4 by upgrading the service tier to Standard.

Yes

No

### Correct

No is correct, the Basic, Standard and Premium tiers all support an uptime SLA of 99.99%.

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-service-tiers-dtu>

## 62. Question

You are the architect of the Contoso group. Currently, Contoso has an Azure SQL Database which is running with 1 database of 1.5 GB. They have the following requirements:

Requirement 1: Expand the database storage size to 50 Gigabytes whilst minimizing costs as far as possible.

Requirement 2: Connect to the SQL DB remotely without incurring additional costs

Requirement 3: Securely configure communication between the database and an application running on a VM

Requirement 4: Ensure the Database has an uptime SLA of 99.99%.

Requirement 5: Increase SQL DB backup retention period to 35 days.

You decide to address requirement 5 by upgrading the service tier to Standard.

Yes

No

### Correct

Yes is correct, both Standard and Premium tiers support a maximum backup retention period of 35 days.

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-service-tiers-dtu>

## 63. Question

You have to design an architecture for an application that needs to be deployed onto Azure. The application will use a Microservices architecture pattern. Below are the key design patterns for the application

A set of services would be made available

These services would be build using Docker containers

External clients should be able to make REST based calls to these services

Which of the following could you use as service orchestrators for managing the application-based containers? Select from the options given below

Azure Kubernetes

Service Fabric Batch Accounts Azure Logic Apps**Correct**

You can choose Azure Kubernetes and Service Fabric for managing your container-based applications.

The Microsoft documentation mentions the following

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

For more information on compute options for microservice based architectures, please go to the below URL

<https://docs.microsoft.com/en-us/azure/architecture/microservices/design/compute-options>

**64. Question**

You have to design an architecture for an application that needs to be deployed onto Azure. The application will follow a Microservices architecture pattern. Below are the key design patterns for the application

A set of services would be made available

These services would be built using Docker containers

External clients should be able to make REST based calls to these services

You need a highly available and scalable service to expose the services which could then be consumed by the external clients. Which of the following could you use for this purpose?

 Azure Kubernetes Azure Functions Azure API Gateway Azure Logic Apps**Correct**

The Azure API gateway is the perfect service for this requirement.

The Microsoft documentation gives a sample microservices based architecture in which you can make use of an API gateway.

Option A is incorrect since this is just a container orchestration service

Option B is incorrect since this is a serverless compute service

Option D is incorrect since this is a workflow-based service

For more information on using API gateways in microservices, please go to the below URL

<https://docs.microsoft.com/en-us/azure/architecture/microservices/design/gateway>

**65. Question**

You have to manage the backup of several Azure SQL databases in your company's Azure subscription. You require long term retention for backups as well. The Azure subscription has a collection of single, pooled databases and elastic pools.

Instances as well.

For which of the following can you configure long term retention? Choose 2 answers from the options given

Azure SQL database – Single instance

Azure SQL database – Pooled instance

Azure SQL Managed Instance

Azure SQL datawarehouse

### Incorrect

Long term retention can be configured for Azure SQL database – Single and pooled instances.

The Microsoft documentation mentions the following

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

For more information on long term retention, please visit the below URL

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-long-term-retention>

## 66. Question

You have to manage the backup of several Azure SQL databases in your company's Azure subscription. You require long term retention for backup's as well. The Azure subscription has a collection of single, pooled databases and managed instances as well.

Which of the following can be used to create long term backup's for Azure SQL Managed Instances?

Az Copy

Data Explorer

SQL Agent jobs

Data Factory

### Correct

You can achieve this with SQL agent jobs.

The Microsoft documentation mentions the following

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

For more information on long term retention, please visit the below URL

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-long-term-retention>

## 67. Question

Your company has a set of VMware virtual machines that need to be migrated onto Azure. As the architect you are asked to provide an estimation on the cost for the migrating the machines onto Azure. You plan to use the Azure Migrate assessment tool to help with this.

Which of the following costs would be given as part of the assessment tool? Choose 2 answers from the options.

Network cost

Bandwidth cost

Compute cost

Storage cost

### Correct

This is given in the Microsoft documentation. The assessment tool would give the Compute and storage costs.

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

For more information on the assessment tool, please go ahead and visit the below URL

<https://docs.microsoft.com/en-us/azure/migrate/tutorial-assessment-vmware>

## 68. Question

Your company needs to generate a monthly report to determine the what, who, and when for any write operations to resources that were deployed to the Azure subscription. Which of the following would help achieve this requirement?

Azure Log Analytics

Azure Activity Log

Azure Monitor action groups

Azure Advisor

### Correct

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

Since this is clear from the implementation, all other options are incorrect.

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>

## 69. Question

Your team currently has an Azure Batch account defined. You need to use Azure AD authentication with the account. Which of the following are two authentication techniques available for the Azure Batch account with Azure AD?

Basic Authentication

Role Based Access Integrated Authentication Service Principal

### Correct

This is clearly given in the Microsoft documentation

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

For more information on authentication of Azure Batch with Azure AD, please go to the below URL

<https://docs.microsoft.com/en-us/azure/batch/batch-aad-auth>

### 70. Question

Your team is planning on hosting an application that will be hosted on 2 virtual machines in Azure named den demovm2. You have to load balance the traffic from the Internet to the Virtual Machines using one Azure Load Balancer.

You need to recommend the minimum number of Public IP addresses that would be required

What is the minimum number of Public IP addresses that would be required for the Load Balancer?

 0 1 2 3

### Correct

You would just need one Public IP address assigned to the Load Balancer. If you look at the example given in the documentation on the public load balancer, you can see that the request comes from the clients to the public load balancer

Since this is a clear concept of the Load balancer, all other options are incorrect

For more information on the concepts of the load balancer, please visit the below URL

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

### 71. Question

Your team is planning on hosting an application that will be hosted on 2 virtual machines in Azure named den demovm2. You have to load balance the traffic from the Internet to the Virtual Machines using one Azure Load Balancer.

You need to recommend the minimum number of Public IP addresses that would be required

What is the minimum number of Public IP addresses that would be required for demovm1?

 0

1 2 3

### Correct

When the request is directed from the load balancer to the back end virtual machine, it is made to the Private backend virtual machine. This is why you don't need to have a public IP address assigned to the Virtual Machine given in the Microsoft documentation

Since this is a clear concept of the Load balancer, all other options are incorrect

For more information on the concepts of the load balancer, please visit the below URL

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

## 72. Question

Your team is planning on hosting an application that will be hosted on 2 virtual machines in Azure named demovm1 and demovm2. You have to load balance the traffic from the Internet to the Virtual Machines using one Azure Load Balancer. You need to recommend the minimum number of Public IP addresses that would be required

What is the minimum number of Public IP addresses that would be required for demovm2?

 0 1 2 3

### Correct

When the request is directed from the load balancer to the back end virtual machine, it is made to the Private backend virtual machine. This is why you don't need to have a public IP address assigned to the Virtual Machine given in the Microsoft documentation

Since this is a clear concept of the Load balancer, all other options are incorrect

For more information on the concepts of the load balancer, please visit the below URL

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

## 73. Question

Your team needs to deploy a Virtual machine that will host a SQL Server. The Virtual machine will have 2 data log file and the other for the data files. You need to recommend a caching policy for each disk

Which of the following would you recommend for the data disk containing the logs?

 None

- ReadOnly
- WriteOnly
- ReadWrite

**Correct**

This is clearly mentioned in the Microsoft documentation

Since this is clearly mentioned, all other options are incorrect

For more information on the performance guidelines for SQL Server on Virtual Machines, please go ahead and click the URL

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/sql/virtual-machines-windows-sql-performance-best-practices>

**74. Question**

Your team needs to deploy a Virtual machine that will host a SQL Server. The Virtual machine will have 2 data disks. One disk will contain the log file and the other for the data files. You need to recommend a caching policy for each disk

Which of the following would you recommend for the data disk containing the data?

- None
- ReadOnly
- WriteOnly
- ReadWrite

**Correct**

This is clearly mentioned in the Microsoft documentation

Since this is clearly mentioned, all other options are incorrect

For more information on the performance guidelines for SQL Server on Virtual Machines, please go ahead and click the URL

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/sql/virtual-machines-windows-sql-performance-best-practices>



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