SKILLCERTPRO

IT CERTIFICATION TRAININGS

0

Microsoft Azure / By SkillCertPro

Practice Set 5

Your results are here!! for" Microsoft Azure AZ-305 Practice Test 5 "

39 of 70 questions answered correctly

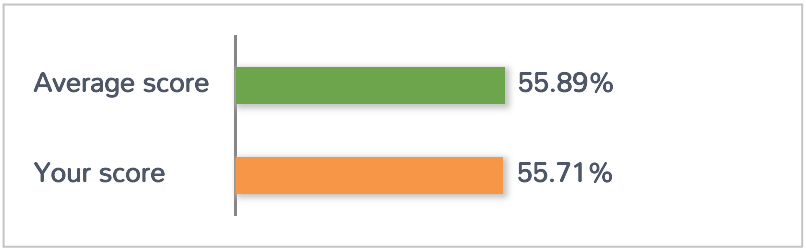
Your time: 01:25:16

Your Final Score is : 39

You have attempted : 70

Number of Correct Questions : 39 and scored 39

Number of Incorrect Questions : 31 and Negative marks 0

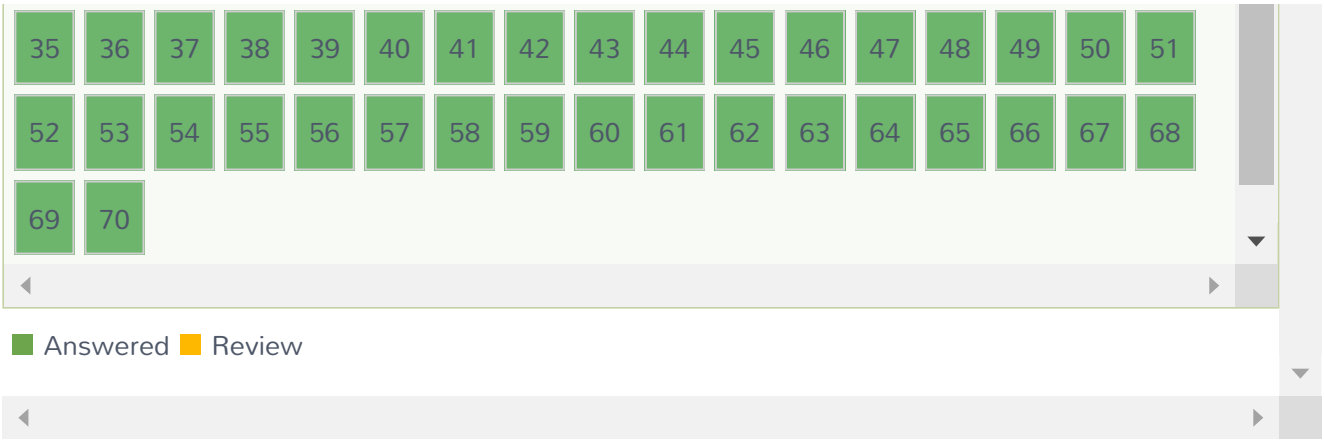


You can review your answers by clicking view questions.

Important Note : Open Reference Documentation Links in New Tab (Right Click and Open in New Tab).

Restart Test View Answers

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34



1. Question

frezecontrol company is developing a solution that allows smart refrigerators to send temperature details to centralized location. The solution must receive and store messages until they can be processed. You create an Azure Service Bus instance by providing a name, pricing tier, subscription, resource group, and location. You need to complete the configuration. Which Azure CLI or PowerShell command should you run?

- New-AzureRmServiceBusQueue -ResourceGroup fridge-rg -NamespaceName fridge-ns -Name fridge-q -EnablePartitioning $False
- az group create --name fridge-rg --location fridge-loc
- **connectionString=$(az servicebus namespace authorization-rule keys list --resource-group fridge-rg --namespace-name fridge-ns --name RootManageSharedAccessKey --query primaryConnectionString --output tsv)**
- New-AzureRmResourceGroup -Name fridge-rg -Location fridge-loc

Incorrect

Get the connection string for the namespace after resource group, Service bus queue & namespaces are created https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-quickstart-cli#use-the-azure-cli-to-create-resources

2. Question

You develop an entertainment application where users can buy and trade virtual real estate. The application must scale to support thousands of users. The current architecture includes five Azure virtual machines (VM) that connect to an Azure SQL Database for account information and Azure Table Storage for backend services. A user interacts with these components in the cloud at any given time. Routing Service – Routes a request to the appropriate service and must not persist data across sessions. Account Service – Stores and manages all account information and authentication and requires data to persist across sessions User Service – Stores and manages all user information and requires data to persist across sessions. Housing Network Service – Stores and manages the current real-estate economy and requires data to persist across sessions. Trade Service – Stores and manages virtual trade between accounts and requires data to persist

across sessions. Due to volatile user traffic, a microservices solution is selected for scale agility. You need to migrate to a distributed microservices solution on Azure Service Fabric. You recommend to create a Service Fabric Cluster with a stateful Reliable Service for each component. Does the solution meet the goal?

- (selected) No
- Yes

Correct

Creating a Service Fabric Cluster with a stateless Reliable Service for Routing Service and stateful Reliable Services for all other components is recommended. Below are quick references https://docs.microsoft.com/en-us/azure/service-fabric/service-fabric-application-scenarios#designing-applications-composed-of-stateless-and-stateful-microservices https://docs.microsoft.com/en-us/azure/service-fabric/service-fabric-reliable-services-introduction#stateful-reliable-services

3. Question

Case Study

Overview

LabelMaker app – Coho Winery produces bottles, and distributes a variety of wines globally. You are developer implementing highly scalable and resilient applications to support online order processing by using Azure solutions.

Coho Winery has a LabelMaker application that prints labels for wine bottles. The application sends data to several printers. The application consists of five modules that run independently on virtual machines (VMs).

Coho Winery plans to move the application to Azure and continue to support label creation.

External partners send data to the LabelMaker application to include artwork and text for custom label designs.

Data –

You identify the following requirements for data management and manipulation:

Order data is stored as nonrelational JSON and must be queried using Structured Query Language (SQL).

Changes to the Order data must reflect immediately across all partitions. All reads to the Order data must fetch the most recent writes.

You have the following security requirements:

– Users of Coho Winery applications must be able to provide access to documents, resources, and applications to external partners.

– External partners must use their own credentials and authenticate with their organization's identity management solution.

– External partner logins must be audited monthly for application use by a user account administrator to maintain company compliance.

– Storage of e-commerce application settings must be maintained in Azure Key Vault.

– E-commerce application sign-ins must be secured by using Azure App Service authentication and Azure Active Directory (AAD).

– Conditional access policies must be applied at the application level to protect company content

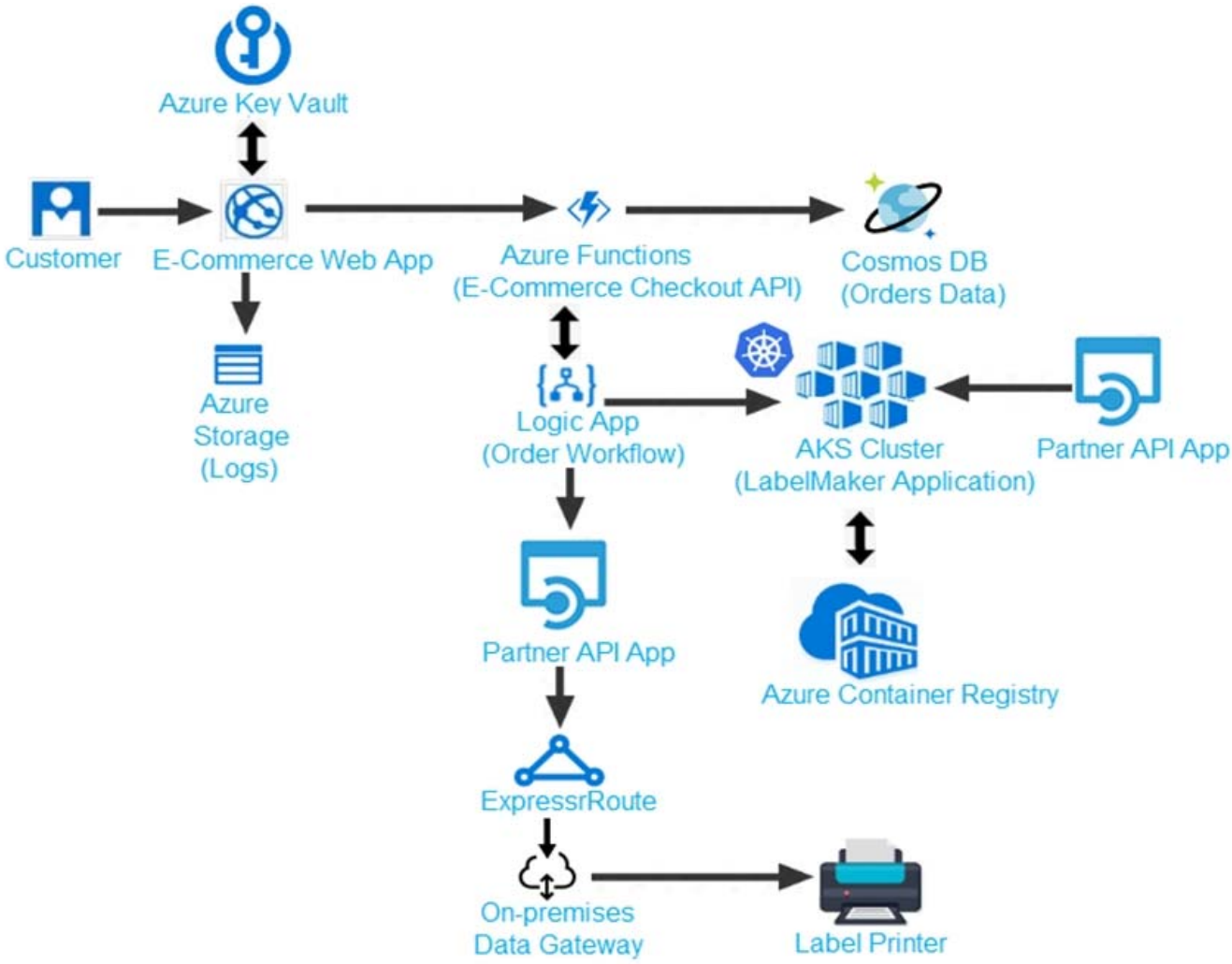
– The LabelMaker applications must be secured by using an AAD account that has full access to all namespaces of the Azure Kubernetes Service (AKS) cluster.

LabelMaker app –

Azure Monitor Container Health must be used to monitor the performance of workloads that are deployed to Kubernetes environments and hosted on Azure Kubernetes Service (AKS).

You must use Azure Container Registry to publish images that support the AKS deployment.

L



Calls to the Printer API App fail periodically due to printer communication timeouts.

Printer communications timeouts occur after 10 seconds. The label printer must only receive up to 5 attempts within one minute.

The order workflow fails to run upon initial deployment to Azure.

Order json. Relevant portions of the app files are shown below. Line numbers are included for reference only. This JSON file contains a representation of the data for an order that includes a single item.

Order .json –

```
01 {
02  "id : 1,
03  "customers" : [
04  {
05    "familyName" : "Doe",
06    "givenName" :  "John",
07    "customerid" :  5
08  }
09  ],
10  "line"_items" : [
11 {
12   "fulfillable_quantity" : 1,
13  "id" : 6,
14  "price" : "199.99",
15  "product_id" : 7513594,
16  "quantity": 1,
17  "requires_shipping" : true,
18  "sku" : "SFC-342-N" ,
19 "title" : "Surface Go",
```

```
23  "tax"_lines" : [
24  {
25   "title" : "State Tax",
26  "price" : "3.98",
27  "rate" : 0.06
28  }
29 ],
30  "total_discount" : "5.00"
31  "discount_allocations" : [
32  {
33   "amount" : "5.00",
34   "discount_application_index" : 2
35     }
36    ]
37   }
38  ],
39 "address" : {
40 "state" : "NY",
41 "country" : "Manhattan",
42  "city" : "NY"
43    }
44   }
```

You need to deploy a new version of the Label Maker application.

Which three actions should you perform in sequence?

- [x] Restart the cluster.
- [x] Log in to the registry and push image.
- [ ] Create an alias of the image with the fully qualified path to the registry.
- [ ] Download the image to your local computer.

Create an alias of the image with the a new build number.

Build a new application image by using dockerfile.

Incorrect

Azure Container Registry (ACR) is a private registry for container images. A private container registry lets you securely build and deploy your applications and custom code. In this tutorial, part two of seven, you deploy an ACR instance and push a container image to it.

Create an Azure Container Registry (ACR) instance

Tag a container image for ACR

Upload the image to ACR

https://docs.microsoft.com/en-us/azure/aks/tutorial-kubernetes-prepare-acr

https://docs.microsoft.com/en-us/azure/container-registry/container-registry-get-started-docker-cli

4. Question

You are developing a workflow solution using Azure technologies. You need to meet the below requirements. Debug the solution by using Visual Studio Deploy the component by using Visual Studio Team Services What tool should you recommend?

Durable Functions Only

Logic Apps Only

Durable Functions and Logic Apps

Correct

Durable Functions is an extension of Azure Functions. It enables to write stateful functions in a serverless environment, and it allows us to define workflows in code. https://docs.microsoft.com/en-us/azure/azure-functions/durable/durable-functions-overview?tabs=csharp

5. Question

You have an ERP System with two modules for order processing and Customer relations management. Each of these modules generate messages that are enqueued into corresponding topic. These messages must be received by all sales represntatives team. You need to implement a Service Bus queue that guarantees queueing of these messages to all representitives individual queue. How can you achieve this?

Enable Autoforwarding

Enable Dead letter Queue

Enable partitioning

Enable Sessions

Incorrect

To forward messages in Service Bus, use Autoforwarding. The autoforwarding feature chains a queue or subscription to another queue or topic. https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-messaging-overview#autoforwarding https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-auto-forwarding#using-autoforwarding

6. Question

Your company is developing an e-commerce Azure App Service Web App to support hundreds of restaurant locations around the world. You are designing the messaging solution architecture to support the e-commerce transactions and messages. The e-commerce application has the following features and requirements:

Larger image

You need to choose the Azure messaging solution to support the inventory Distribution feature. Which Azure service should you use?

Azure Event Hub

Azure Service Bus

Azure Relay

Azure Event Grid

Incorrect

Microsoft Azure Service Bus is a fully managed enterprise integration message broker. Service Bus is most commonly used to decouple applications and services from each other, and is a reliable and secure platform for asynchronous data and state transfer. One common messaging scenario is Messaging: transfer business data, such as sales or purchase orders, journals, or inventory movements. https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-messaging-overview

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– External partners must use their own credentials and authenticate with their organization's identity management solution.
– External partner logins must be audited monthly for application use by a user account administrator to maintain company compliance.
– Storage of e-commerce application settings must be maintained in Azure Key Vault.
– E-commerce application sign-ins must be secured by using Azure App Service authentication and Azure Active Directory (AAD).
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– The LabelMaker applications must be secured by using an AAD account that has full access to all namespaces of the Azure Kubernetes Service (AKS) cluster.

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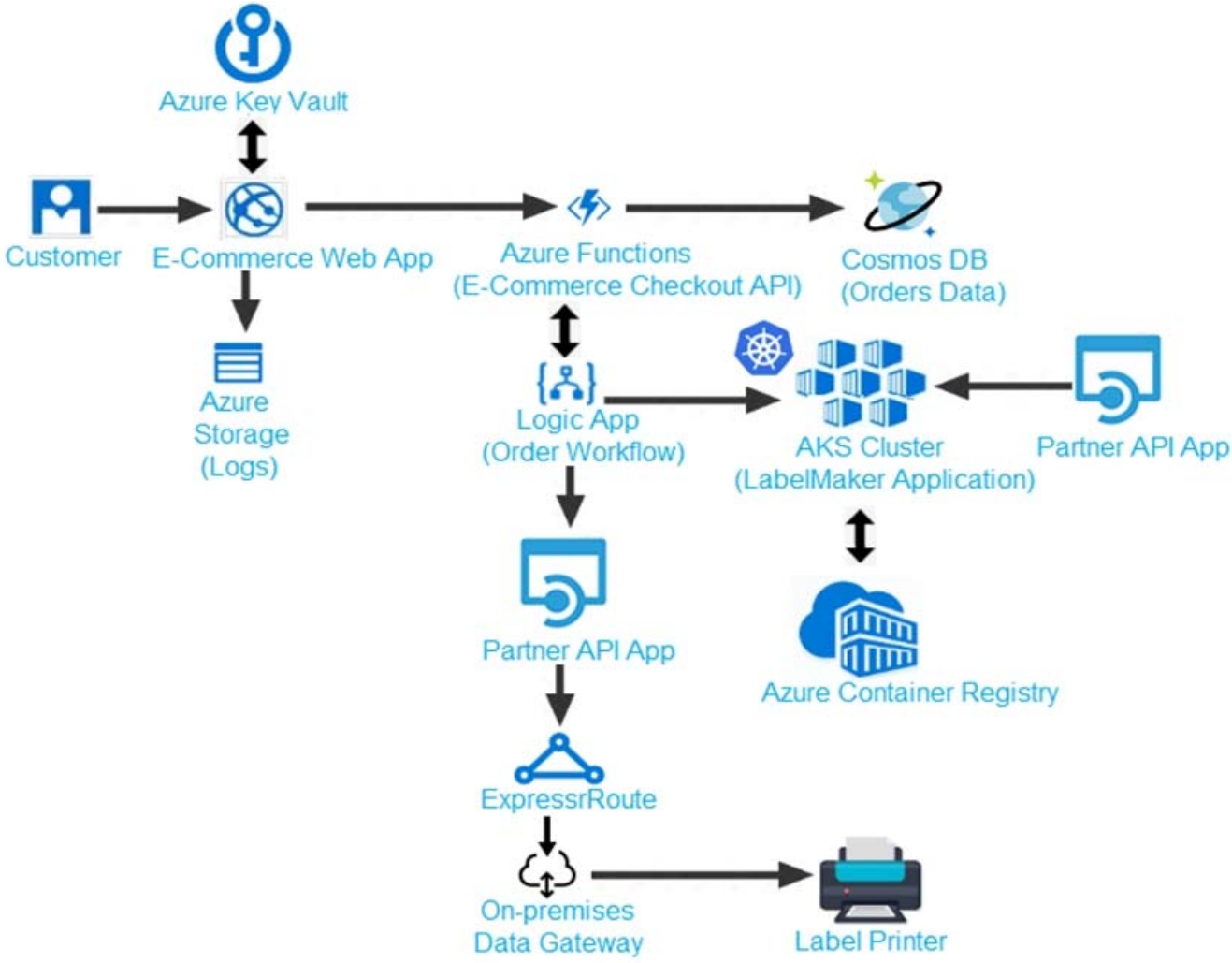

Calls to the Printer API App fail periodically due to printer communication timeouts.

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The order workflow fails to run upon initial deployment to Azure.

Order json. Relevant portions of the app files are shown below. Line numbers are included for reference only. This JSON file contains a representation of the data for an order that includes a single item.

Order .json –

```
01 {
02  "id : 1,
03  "customers" : [
04  {
05    "familyName" : "Doe",
06    "givenName" :  "John",
07    "customerid" :  5
08  }
09  ],
10  "line"_items" : [
11 {
12   "fulfillable_quantity" : 1,
13  "id" : 6,
14  "price" : "199.99",
15  "product_id" : 7513594,
16  "quantity": 1,
17  "requires_shipping" : true,
18  "sku" : "SFC-342-N" ,
19 "title" : "Surface Go",
```

```
23  "tax"_lines" : [
24  {
25   "title" : "State Tax",
26  "price" : "3.98",
27  "rate" : 0.06
28  }
29 ],
30  "total_discount" : "5.00"
31  "discount_allocations" : [
32  {
33   "amount" : "5.00",
34   "discount_application_index" : 2
35     }
36    ]
37   }
38  ],
39 "address" : {
40 "state" : "NY",
41 "country" : "Manhattan",
42  "city" : "NY"
43    }
44   }
```

You need to troubleshoot the order workflow. Which two actions should you perform?

- [x] Review the API connections.
- [ ] Review the trigger history.
- [ ] Review the run history.
- [x] Review the activity log.

Incorrect

Scenario: The order workflow fails to run upon initial deployment to Azure.

Deployment errors arise from conditions that occur during the deployment process. They appear in the activity log. https://docs.microsoft.com/en-us/azure/azure-resource-manager/resource-group-audit

8. Question

You are developing an Azure Web App. You configure TLS mutual authentication for the web app. You need to validate the client certificate in the web app. Which of these must be taken care of in validating client certificate for app?

- [ ] Select any of non free tiers for app
- [x] Run the command from Azure CLI. az webapp update –set clientCertEnabled=true –name –resource-group
- [ ] Ensure web app in F1 or D1 Tier
- [x] You should not allow requests to your application over HTTP.

Incorrect

If you access your site over HTTP and not HTTPS, you will not receive any client certificate. So if your application requires client certificates, you should not allow requests to your application over HTTP. Select any of the non-free tiers (B1, B2, B3, or any tier in the Production category). To set up your app to require client certificates, you need to set the clientCertEnabled setting for your app to true. https://docs.microsoft.com/en-us/azure/app-service/app-service-web-configure-tls-mutual-auth

9. Question

You are building a custom Azure function app to connect to Azure Event Grid. You need to ensure that high CPU & Memory are allocated and code must run atleast 30 mins. Which plan should you consider while you create the function app?

- ( ) Standard plan
- (x) Premium plan
- (x) Consumption plan
- ( ) Basic plan

Incorrect

Premium plan supports the following features: Perpetually warm instances to avoid any cold start VNet connectivity Unlimited execution duration (60 minutes guaranteed) Premium instance sizes (one core,

two core, and four core instances) https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale#premium-plan https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale#timeout

10. Question

You have a web app named WebApp1 that uses an Azure App Service plan named Plan1. Plan1 uses the D1 pricing tier and has an instance count of 1. You need to ensure that all connections to WebApp1 use HTTPS. What should you do first?

- Scale out Plan1
- **Scale up Plan1**
- Disable anonymous access to WebApp1
- Modify the connection strings for WebApp1

Incorrect

You will have to be on "Basic" plan in order to have SSL.

See below link for more details on app service plans https://azure.microsoft.com/en-us/pricing/details/app-service/plans/

11. Question

You are developing a workflow solution using Azure technologies. You need to Use a collection of ready-made actions What tool should you recommend?

- Durable Functions and Logic Apps
- **Logic Apps Only**
- Durable Functions Only

Correct

Durable Functions is an extension of Azure Functions. It enables to write Azure Logic Apps is a cloud service that helps you schedule, automate, and orchestrate tasks, business processes, and workflows when you need to integrate apps, data, systems, and services across enterprises or organizations. Logic Apps simplifies how you 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. https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-overview https://docs.microsoft.com/en-us/azure/logic-apps/quickstart-create-first-logic-app-workflow

12. Question

You have an Azure subscription. You plan to deploy Azure web app (App1) with below requirements. – Accessible by using a URL of https://app1.contoso.com – Scalable to two instances during busy periods – Supports two deployment slots You need to select the App Service plans for the web app aiming minimum costs. Which App Service plan should you select for the web app?

- S1 Standard
- B1 Basic
- P1v2 PremiumV2
- D1 Shared

Correct

Capabilities and limits available within App Service Plans is below for your reference https://azure.microsoft.com/en-us/pricing/details/app-service/plans/ https://docs.microsoft.com/en-us/azure/app-service/overview-hosting-plans#how-does-my-app-run-and-scale

13. Question

You are developing an ASP.NET web application that you will deploy to Azure. The solution must meet the following requirements: – Store user session state by using only serializable data types. – Provide customizable caching of session data. – Support scaling out the number of web hosts. – Maximize performance.

- Clustered Azure Redis Cache
- in-memory session state provider
- ASP.NET Output Cache provider for Azure Redis Cache
- SQL Server session state provider

Incorrect

https://azure.microsoft.com/en-au/services/cache/#documentation https://azure.microsoft.com/en-us/services/cache/#features

14. Question

You have an Azure subscription. You plan to deploy Azure web app (App2) with below requirements. – Accessible by using a URL of https://app2.contoso.com – Scalable to 15 instances during busy periods – Supports three deployment slots You need to select the App Service plans for the web app aiming minimum costs. Which App Service plan should you select for the web app?

- S1 Standard
- D1 Shared
- **P1v2 PremiumV2**
- B1 Basic

Correct

Capabilities and limits available within App Service Plans is below for your reference https://azure.microsoft.com/en-us/pricing/details/app-service/plans/ https://docs.microsoft.com/en-us/azure/app-service/overview-hosting-plans#how-does-my-app-run-and-scale

15. Question

You have an Azure Cosmos DB account named Account1. Account1 includes a database named DB1 that contains a container named Container 1.

The partition key tor Container1 is set to /city. You plan to change the partition key for Container1.

What should you do first?

- **Implement the Azure CosmosDNET SDK**
- Delete Container1
- Create a new container in DB1
- Regenerate the keys for Account1.

Incorrect

16. Question

Your organization has developed and deployed several Azure App Service Web and API applications. The applications use Azure SQL Database to store and retrieve data. Development Team has requested to enable the applications to retrieve x.509 certificates, stored in an Azure AD-protected resource, by using an access token. You need to recommend the appropriate Azure service to meet team's request. What Azure Service should you recommend?

- Azure AD Privileged Identity Management
- **Azure Key Vault**
- Azure AD Managed Service Identity
- Azure Security Center

Incorrect

https://docs.microsoft.com/en-us/azure/sql-database/transparent-data-encryption-azure-sql

17. Question

Case Study

Overview

Best For You Organics Company is a global restaurant franchise that has multiple locations. The company wants to enhance user experiences and vendor integrations. The company plans to implement automated mobile ordering and delivery services.

Best For You Organics hosts an Azure web app at the URL https://www.bestforyouorganics.com. Users can use the web app to browse restaurant location, menu items, nutritional information, and company information. The company developed and deployed a cross-platform mobile app.

Requirements

Chatbot

You must develop a chatbot by using the Bot Builder SDK and Language Understanding Intelligence Service (LUIS). The chatbot must allow users to order food for pickup or delivery.

The chatbot must meet the following requirements:

– Ensure that chatbot is secure by using the Bot Framework connector.

– Use natural language processing and speech recognition so that users can interact with the chatbot by using text and voice. Processing must be server-based.

– Alert users about promotions at local restaurants.

– Enable users to place an order for delivery or pickup by using their voice.

– Greet the user upon sign-in by displaying a graphical interface that contains action buttons.

– The chatbot greeting interface must match the formatting of the following example:

Welcome to the Restaurant

John Doe
Sun, Aug 26,2018

Welcome to Best For You Organics Company!
How can we help you today?

Specials: Chicken Masala

Order Pickup **Order Delivery**

Vendor API

Vendors receive and provide updates for the restaurant inventory and delivery services by using Azure API Management hosted APIs. Each vendor uses their own subscription to access each of the APIs.

APIs must meet the following conditions:

– API usage must not exceed 5,000 calls and 50,000 kilobytes of bandwidth per hour per vendor.

– If a vendor is nearing the number of calls or bandwidth limit, the API must trigger email notifications to the vendor.

– API must prevent API usage spikes on a per-subscription basis by limiting the call rate to 100 calls per minute.

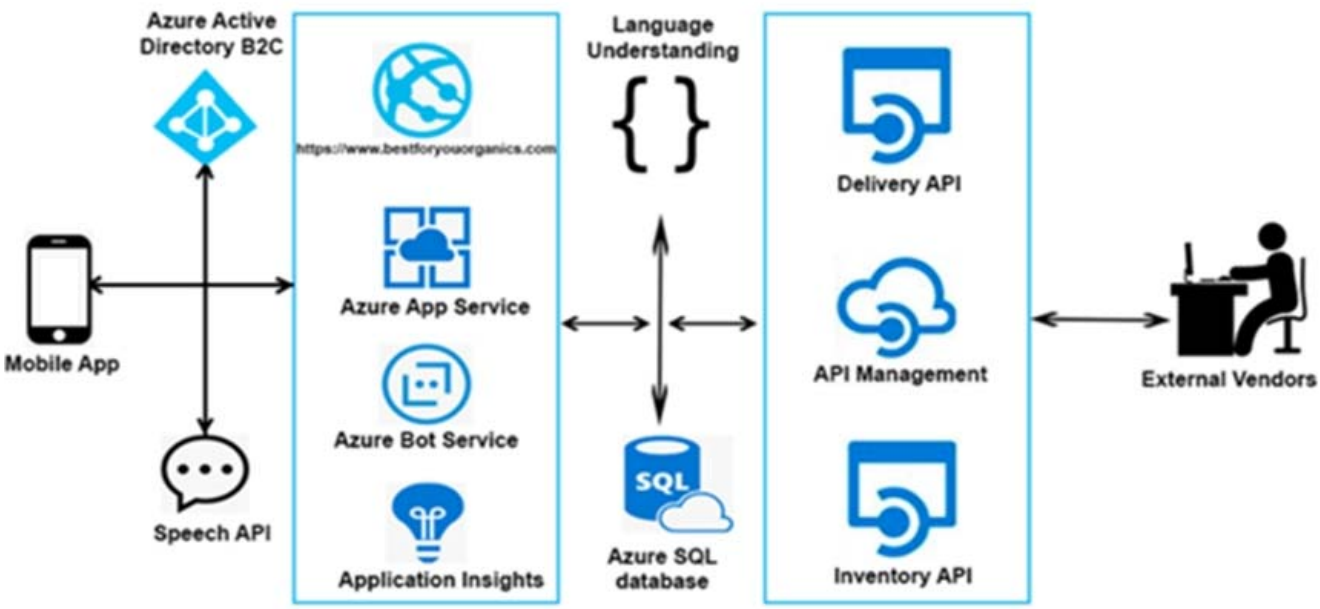
– The Inventory API must be written by using ASP.NET Core and Node.js.

– The API must be updated to provide an interface to Azure SQL Database objects must be managed by using code.

– The Delivery API must be protected by using the OAuth 2.0 protocol with Azure Active Directory (Azure AD) when called from the Azure web app. You register the Delivery API and web app in Azure AD. You enable OAuth 2.0 in the web app.

– The delivery API must update the Products table, the Vendor transactions table, and the Billing table in a single transaction.

The Best For You Organics Company architecture team has created the following diagram depicting the expected deployments into Azure:



Architecture

Issues

Delivery API

The Delivery API intermittently throws the following exception:

“System.Data.Entity.Core.EntityCommandExecutionException: An error occurred while executing the command definition. See the inner exception for details. —>System.Data.SqlClient.SqlException: A transport-level error has occurred when receiving results from the server. (provider: Session Provider, error: 19 —Physical connection is not usable)”

Chatbot greeting

The chatbot’s greeting does not show the user’s name. You need to debug the chatbot locally.

Language processing

Users report that the bot fails to understand when a customer attempts to order dishes that use Italian names.

App code

Relevant portions of the app files are shown below. Line numbers are included for reference only and include a two-character prefix that denotes the specific file to which they belong.

Startup.cs

```
SU01 namespace DeliveryApi
SU02 {
SU03  public class Startup
SU04  {
SU05   public Startup(IConfiguration configuration)
SU06    {
SU07      Configuration = configuration;
SU08    }
SU09    public IConfiguration Configuration { get; }
SU10    public void ConfigureService(IServiceCollection services)
SU11    {
SU12     services.AddDbContext<RestaurantsContext>(opt =>
SU13      opt.UseSqlServer(Configuration.GetSection("ConnectionStrings")
["RestaurantDatabase"],
SU14       sqlServerOptionsAction: sqlOptions =>
SU15       {
SU16        . . .
SU17       }));
SU18     services.AddMvc()
SU19       .SetCompatibilityVersion(CompatibilityVersion.Version_2_1);
SU20   }
SU21   public void Configure(IApplicationBuilder app)
SU22   {
SU23     app.UseMvc();
SU24   }
SU25  }
SU26 }
```

You need to resolve the delivery API error. What should you do?

- Implement exponential backoff by using the EnableRetryOnFailure feature of Entity Framework.
- Implement simple retry by using the EnableRetryOnFailure feature of Entity Framework.
- Implement a Circuit Breaker pattern by using the EnableRetryOnFailure feature of Entity Framework.
- Invoke a custom execution strategy in Entity Framework.

Incorrect

It is strongly recommended that your client program has retry logic so that it could reestablish a connection after giving the transient fault time to correct itself. https://docs.microsoft.com/en-us/azure/sql-database/troubleshoot-connectivity-issues-microsoft-azure-sql-database#implementing-retry-logic

18. Question

Your organization has developed and deployed several Azure App Service Web and API applications. The applications use Azure SQL Database to store and retrieve data. Security Team has requested to protect Azure SQL Database connection strings and only allow access to the connection strings during the application runtime. You need to recommend the appropriate Azure service to meet team's request. What Azure Service should you recommend?

- ○ Azure Security Center
- ○ Azure AD Privileged Identity Management
- ○ Azure Key Vault
- ○ **Azure AD Managed Service Identity**

Incorrect

https://docs.microsoft.com/en-us/azure/sql-database/transparent-data-encryption-azure-sql

19. Question

You have an on-premises network that includes a Microsoft SQL Server instance named SQL1. You create an Azure Logic App named App1. You need to ensure that App1 can query a database on SQL1. Which three actions should you perform?

- ☑ **From the Azure portal, Create an on-premises data gateway.**
- ☐ From an Azure Virtual Machine, install an on-premises data gateway.
- ☑ **From an on-premises computer, install an on-premises data gateway.**
- ☑ **From the Logic App Designer in the Azure portal, add a connector.**
- ☐ Create an Azure Virtual Machine that runs Widows Server 2016

Correct

https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-gateway-connection

20. Question

You have an Azure Cosmos DB database that contains a container named Container1. The partition key for Container1 is set to /day. Container1 contains the items shown below

Name	Content
Item1	{ "id": "1", "day": "Mon", "value" : "10" }
Item2	{ "id": "2", "day": "Mon", "value" : "15" }
Item3	{ "id": "3", "day": "Tue", "value" : "10" }
Item4	{ "id": "4", "day": "Wed", "value" : "15" }

You need to programmatically query Azure Cosmos DB and retrieve Item1 and Item2 only. You run th following query SELECT day FROM c WHERE c.value = "10" OR c.value = "15" You set the EnableCrossPartitionQuery property to True. Does this meet the goal?

- Yes
- No

Correct

Query Returns Item1, Item2, Item3, and Item4. https://docs.microsoft.com/en-us/azure/cosmos-db/sql-query-where https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.documents.client.feedoptions.enablecrosspartitionquery?view=azure-dotnet

21. Question

You have an Azure subscription that contains the resource groups shown in the following table.

Name	Region
RG1	West US
RG2	West US
RG3	East US

You have the Azure SQL servers shown below

Name	Region	In resource Group
Sql1	West US	RG1
Sql2	East US	RG2
Sql3	West US	RG3
Sql4	West US	RG1

You create an Azure SQL database named DB1 on Sql1 in an elastic pool named Pool1. You need to create an Azure SQL database named DB2 in Pool1. Where should you deploy DB2?

- Sql2
- **Sql1**
- Sql3
- Sql4

Correct

The databases in an elastic pool are on a single Azure SQL Database server and share a set number of resources at a set price. https://docs.microsoft.com/en-us/azure/sql-database/sql-database-elastic-pool

22. Question

You have an Azure subscription. You are planning data security for Azure resources. You need to ensure that Data in Azure SQL databases that is at rest, in transit, and in use must be encrypted. Which feature should you use?

- Always Encrypted
- Advanced Data Security
- **Transparent Data Encryption (TDE)**
- Elastic Pools

Incorrect

Azure SQL Database currently supports encryption at rest for Microsoft-managed service side and client-side encryption scenarios. Support for server encryption is currently provided through the SQL feature called Transparent Data Encryption. Once an Azure SQL Database customer enables TDE key are automatically created and managed for them. Encryption at rest can be enabled at the database and server levels. https://docs.microsoft.com/en-us/azure/security/fundamentals/encryption-atrest#what-is-encryption-at-rest

23. Question

You are developing an app that references data which is sharded across multiple Azure SQL databases. The app must guarantee transactional consistency for changes across several different sharding key values. You need to manage the transactions. What should you implement?

- Distributed transactions coordinated by Microsoft Distributed Transaction Coordinator (MSDTC).
- Elastic database transactions with vertical partitioning.
- **Elastic database transactions with horizontal partitioning.**
- Server-coordinated transactions from .NET application.

Incorrect

Elastic database transactions for Azure SQL Database (SQL DB) allow you to run transactions that span several databases in SQL DB. Elastic database transactions for SQL DB are available for .NET applications using ADO .NET and integrate with the familiar programming experience using the System.Transaction classes. https://docs.microsoft.com/mt-mt/azure/sql-database/sql-database-elastic-transactions-overview?view=azurermps-6.13.0

24. Question

You have an Azure Cosmos DB database that contains a container named Container1. The partition key for Container1 is set to /day. Container1 contains the items shown below

Name	Content
Item1	{ "id": "1", "day": "Mon", "value" : "10" }
Item2	{ "id": "2", "day": "Mon", "value" : "15" }
Item3	{ "id": "3", "day": "Tue", "value" : "10" }
Item4	{ "id": "4", "day": "Wed", "value" : "15" }

You need to programmatically query Azure Cosmos DB and retrieve Item1 and Item2 only. You run th following query SELECT id FROM c WHERE c.day = "Mon" You set the EnableCrossPartitionQuery property to True. Does this meet the goal?

- (●) Yes
- ( ) No

Correct

Query Returns Item1 and Item2. https://docs.microsoft.com/en-us/azure/cosmos-db/sql-query-where https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.documents.client.feedoptions.enablecrosspartitionquery?view=azure-dotnet

25. Question

You have an Azure Cosmos DB database that contains a container named Container1. The partition key for Container1 is set to /day. Container1 contains the items shown below

Name	Content
Item1	{ "id": "1", "day": "Mon", "value" : "10" }
Item2	{ "id": "2", "day": "Mon", "value" : "15" }
Item3	{ "id": "3", "day": "Tue", "value" : "10" }
Item4	{ "id": "4", "day": "Wed", "value" : "15" }

You need to programmatically query Azure Cosmos DB and retrieve Item1 and Item2 only. You run th following query SELECT day WHERE value = "10" You set the EnableCrossPartitionQuery property to False. Does this meet the goal?

- Yes
- **No**

Correct

Query Returns Item1 only as EnableCrossPartitionQuery property to False. If EnableCrossPartitionQuery property is set to true, it will return Item1 and Item3. https://docs.microsoft.com/en-us/azure/cosmos-db/sql-query-where https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.documents.client.feedoptions.enablecrosspartitionquery?view=azure-dotnet

26. Question

Your organization has developed and deployed several Azure App Service Web and API applications. The applications use Azure SQL Database to store and retrieve data. Database Team has requested to store an asymmetric key to allow real-time I/O encryption and decryption of the Azure SQL Database data and log files. You need to recommend the appropriate Azure service to meet team's request. What Azure Service should you recommend?

- [x] Azure Key Vault
- [ ] Azure AD Managed Service Identity
- [ ] Azure AD Privileged Identity Management
- [ ] Azure Security Center

Correct

https://docs.microsoft.com/en-us/azure/sql-database/transparent-data-encryption-azure-sql

27. Question

You maintain an existing Azure SQL Database instance. Management of the database is performed by an external party. All cryptographic keys are stored in an Azure Key Vault. You must ensure that the external party cannot access the data in the SSN column of the Person Table. Which protection method does not meet the requirement?

- [ ] Enable Always Encrypted
- [x] Store column encryption keys in the system catalog view in the database.
- [x] Set the column encryption setting to disabled
- [x] Assign users to the Public fixed databased role

Incorrect

https://docs.microsoft.com/en-us/azure/security/fundamentals/database-security-overview

28. Question

You have an Azure Cosmos DB database that contains a container named Container1. The partition key for Container1 is set to /day. Container1 contains the items shown below

Name	Content
Item1	{ "id": "1", "day": "Mon", "value" : "10" }
Item2	{ "id": "2", "day": "Mon", "value" : "15" }
Item3	{ "id": "3", "day": "Tue", "value" : "10" }
Item4	{ "id": "4", "day": "Wed", "value" : "15" }

You need to programmatically query Azure Cosmos DB and retrieve Item1 and Item2 only. You run th following query SELECT id FROM c WHERE c.day = "Mon" OR c.day = "Tue" You set the EnableCrossPartitionQuery property to False. Does this meet the goal?

- Yes
- **No**

Correct

Query Returns Item1 only as EnableCrossPartitionQuery property to False. If EnableCrossPartitionQuery property is set to true, it will return Item1, Item2, and Item3. https://docs.microsoft.com/en-us/azure/cosmos-db/sql-query-where https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.documents.client.feedoptions.enablecrosspartitionquery?view=azure-dotnet

29. Question

You maintain an existing Azure SQL Database instance. Management of the database is performed by an external party. All cryptographic keys are stored in an Azure Key Vault. You must ensure that the external party cannot access the data in the SSN column of the Person Table. Which protection method meets the requirement?

- Store column encryption keys in the system catalog view in the database.
- Assign users to the Public fixed databased role
- **Enable Always Encrypted**
- Set the column encryption setting to disabled

Correct

Always Encrypted is a new data encryption technology in Azure SQL Database and SQL Server that helps protect sensitive data at rest on the server, during movement between client and server, and while the data is in use. Always Encrypted ensures that sensitive data never appears as plaintext inside the database system. https://docs.microsoft.com/en-us/azure/sql-database/sql-database-always-encrypted-azure-key-vault?tabs=azure-powershell https://docs.microsoft.com/en-us/azure/sql-database/sql-database-always-encrypted-azure-key-vault?tabs=azure-powershell#column-selection

30. Question

You have an Azure SQL database named DB1. You plan to create the following four tables in DB1 by using the following code.

Table1.

```
CREATE TABLE Table1
(
    StudentId INT IDENTITY PRIMARY KEY,
    PersonId INT REFERENCES Table4 (PersonId),
    Email NVARCHAR(256)
)
```

Table2.

```
CREATE TABLE Table2
(
    StudentId INT REFERENCES Table1 (StudentId),
    CourseId INT REFERENCES Table3 (CourseId),
    Grade DECIMAL(5,2) CHECK (Grade <= 100.00),
    Attempt TINYINT
)
```

Table3.

```
CREATE TABLE Table3
(
    CourseId INT IDENTITY PRIMARY KEY,
    Name NVARCHAR(50) NOT NULL,
    Teacher NVARCHAR(256) NOT NULL
)
```

Table4.

```
CREATE TABLE Table4
(
    PersonId INT IDENTITY PRIMARY KEY,
    FirstName NVARCHAR(128) NOT NULL,
    MiddleInitial NVARCHAR(10),
    LastName NVARCHAR(128) NOT NULL,
    DateOfBirth DATE NOT NULL
)
```

You need to identify which table must be created last. What should you identify?

- ○ Table3

Table4

Table1

Table2

Correct

Table1 references Table4. Therefore Table4 must be created before Table1. Table2 references Table1 and Table3. Therefore Table1 and Table3 must be created before Table2. Note: FOREIGN KEY REFERENCES is a constraint that provides referential integrity for the data in the column or columns. FOREIGN KEY constraints require that each value in the column exists in the corresponding referenced column or columns in the referenced table. FOREIGN KEY constraints can reference only columns that are PRIMARY KEY or UNIQUE constraints in the referenced table or columns referenced in a UNIQUE INDEX on the referenced table. https://docs.microsoft.com/en-us/sql/t-sql/statements/create-table-transact-sql?view=sql-server-ver15

31. Question

You have a Microsoft SQL Server Always On availability group on Azure virtual machines. You need to configure an Azure internal load balancer as a listener for the availability group. What should you do?

Set Session persistence to Client IP and protocol.

Create an HTTP health probe on port 1433.

Enable Floating IP.

Set Session persistence to Client IP.

Incorrect

https://docs.microsoft.com/en-us/azure/virtual-machines/windows/sql/virtual-machines-windows-portal-sql-alwayson-int-listener https://docs.microsoft.com/en-us/azure/virtual-machines/windows/sql/virtual-machines-windows-portal-sql-alwayson-int-listener#step-4-set-the-load-balancing-rules

32. Question

You have an Azure subscription named Subscription1. Subscription1 contains a resource group named RG1. RG1 contains resources that were deployed by using templates. You need to view the date and time when the resources were created in RG1. You click Automation script, under the RG1 blade. Does this meet the goal?

Yes

No

Correct

From the RG1 blade, click Deployments https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/template-tutorial-create-firsttemplate?tabs=azure-powershell

33. Question

You have an Azure Cosmos DB database that contains a container named Container1. The partition key for Container1 is set to /day. Container1 contains the items shown below

Name	Content
Item1	{ "id": "1", "day": "Mon", "value" : "10" }
Item2	{ "id": "2", "day": "Mon", "value" : "15" }
Item3	{ "id": "3", "day": "Tue", "value" : "10" }
Item4	{ "id": "4", "day": "Wed", "value" : "15" }

You need to programmatically query Azure Cosmos DB and retrieve Item1 and Item2 only. You run th following query SELECT id FROM c WHERE c.day = "Mon" OR c.day = "Tue" You set the EnableCrossPartitionQuery property to False. Does this meet the goal?

- (●) No
- ( ) Yes

Correct

Query Returns Item1 only as EnableCrossPartitionQuery property to False. If EnableCrossPartitionQuery property is set to true, it will return Item1, Item2, and Item3. https://docs.microsoft.com/en-us/azure/cosmos-db/sql-query-where https://docs.microsoft.com/en-

us/dotnet/api/microsoft.azure.documents.client.feedoptions.enablecrosspartitionquery?view=azure-dotnet

34. Question

Case Study

Overview

ProtectLives Insurance is an insurance company that has three offices in Berlin, Tokyo and Bangkok. Each office has 5.000 users.

Existing Environment

Active Directory Environment

ProtectLives Insurance has a single-domain Active Directory forest named ProtectLivesinsurance.com. The functional level of the forest is Windows Server 2012.

You recently provisioned an Azure Active Directory (Azure AD) tenant.

Network Infrastructure

Each office has a local data center that contains all the servers for that office. Each office has a dedicated connection to the Internet.

Each office has several link load balancers that provide access to the servers.

Active Directory Issue

Several users in ProtectLivesinsurance.com have UPNs that contain special characters.

You suspect that some of the characters are unsupported in Azure AD.

Licensing Issue

You attempt to assign a license in Azure to several users and receive the following error message: "Licenses not assigned. License agreement failed for one user."

You verify that the Azure subscription has the available licenses.

Requirements

Planned Changes

ProtectLives Insurance plans to open a new office in Paris. The Paris office will contain 1,000 users who will be hired during the next 12 months. All the resources used by the Paris office users will be hosted in Azure.

Planned Azure AD Infrastructure

The on-premises Active Directory domain will be synchronized to Azure AD.

All client computers in the Paris office will be joined to an Azure AD domain.

Planned Azure Networking Infrastructure

You plan to create the following networking resources in a resource group named All_Resources:

– Default Azure system routes that will be the only routes used to route traffic

– A virtual network named Paris-VNet that will contain two subnets named Subnet1 and Subnet2

– A virtual network named ClientResources-VNet that will contain one subnet named ClientSubnet

– A virtual network named AllOffices-VNet that will contain two subnets named Subnet3 and Subnet4

You plan to enable peering between Paris-VNet and AllOffices-VNet. You will enable the Use remote gateways setting for the Paris-VNet peerings.

You plan to create a private DNS zone named ProtectLivesinsurance.local and set the registration network to the ClientResources-VNet virtual network.

Planned Azure Computer Infrastructure

Each subnet will contain several virtual machines that will run either Windows Server 2012 R2, Windows Server 2016, or Red Hat Linux.

Department Requirements

ProtectLives Insurance identifies the following requirements for the company's departments:

– Web administrators will deploy Azure web apps for the marketing department. Each web app will be added to a separate resource group. The initial configuration of the web apps will be identical. The web administrators have permission to deploy web apps to resource groups.

– During the testing phase, auditors in the finance department must be able to review all Azure costs from the past week.

Authentication Requirements

Users in the Berlin office must use Azure Active Directory Seamless Single Sign-on (Azure AD Seamless SSO) when accessing resources in Azure.

You need to define a custom domain name for Azure AD to support the planned infrastructure.

Which domain name should you use?

- ProtectLivesinsurance.onmicrosoft.com
- ProtectLivesinsurance.local
- ad.ProtectLivesinsurance.com
- **ProtectLivesinsurance.com**

Incorrect

Every Azure AD directory comes with an initial domain name in the form of domainname.onmicrosoft.com. The initial domain name cannot be changed or deleted, but you can add

your corporate domain name to Azure AD as well.
For example, your organization probably has other domain names used to do business and users who sign in using your corporate domain name. Adding custom domain names to Azure AD allows you to assign user names in the directory that are familiar to your users, such as 'alice@contoso.com.' instead of 'alice@domain name.onmicrosoft.com'.
Scenario: Network Infrastructure: Each office has a local data center that contains all the servers for that office. Each office has a dedicated connection to the Internet.
ProtectLives Insurance has a single-domain Active Directory forest named ProtectLivesinsurance.com
Planned Azure AD Infrastructure: The on-premises Active Directory domain will be synchronized to Azure AD.
https://docs.microsoft.com/en-us/azure/active-directory/fundamentals/add-custom-domain

35. Question

Case Study
Background –
You are a developer for Proseware, Inc. You are developing an application that applies a set of governance policies for Proseware's internal services, external services, and applications. The application will also provide a shared library for common functionality.

Requirements –
Policy service –
You develop and deploy a stateful ASP.NET Core 2.1 web application named Policy service to an Azure App Service Web App. The application reacts to events from Azure Event Grid and performs policy actions based on those events.
The application must include the Event Grid Event ID field in all Application Insights telemetry.
Policy service must use Application Insights to automatically scale with the number of policy actions that it is performing.

Policies –
Log Policy –
All Azure App Service Web Apps must write logs to Azure Blob storage. All log files should be saved to a container named logdrop. Logs must remain in the container for 15 days.

Authentication events –
Authentication events are used to monitor users signing in and signing out. All authentication events must be processed by Policy service. Sign outs must be processed as quickly as possible.

PolicyLib –
You have a shared library named PolicyLib that contains functionality common to all ASP.NET Core web services and applications. The PolicyLib library must:
Exclude non-user actions from Application Insights telemetry.

Provide methods that allow a web service to scale itself
Ensure that scaling actions do not disrupt application usage

Anomaly detection service –
You have an anomaly detection service that analyzes log information for anomalies. It is implemented as an Azure Machine Learning model. The model is deployed as a web service.
If an anomaly is detected, an Azure Function that emails administrators is called by using an HTTP WebHook.

Health monitoring –
All web applications and services have health monitoring at the /health service endpoint.

Policy loss –
When you deploy Policy service, policies may not be applied if they were in the process of being applied during the deployment.

Performance issue –
When under heavy load, the anomaly detection service undergoes slowdowns and rejects connections.

Notification latency –
Users report that anomaly detection emails can sometimes arrive several minutes after an anomaly is detected.
Relevant portions of the app files are shown below. Line numbers are included for reference only and include a two-character prefix that denotes the specific file to which they belong.

EventGridController.cs

```
EG01  public class EventGridController : Controller
EG02  {
EG03    public static AsyncLocal<string> EventId = new AsyncLocal<string>();
EG04    public IActionResult Process([FromBody]) string eventsJson
EG05   {
EG06     var events = JArray.Parse(eventsJson);
EG07
EG08     foreach (var @event in events)
EG09     {
EG10       EventId.Value = @event ["id"].ToString();
EG11       if (@event["topic"].ToString().Contains("providers/Microsoft.Storage"))
EG12       {
EG13         SendToAnomalyDetectionService(@event["data"]["url"].ToString());
EG14        }
EG15
EG16        {
EG17          EnsureLogging(@event["subject"].ToString());
EG18         }
EG19       }
EG20        return null;
EG21   }
EG22   private void EnsureLogging(string resource)
EG23   {
EG24     . . .
EG25   }
EG26   private async Task SendToAnomalyDetectionService(string uri)
EG27   {
EG28     var content = GetLogData(uri);
EG29     var scoreRequest = new
EG30     {
EG31       Inputs = new Dictionary<string, List<Dictionary<string, string>>>()
EG32       {
EG33          {
EG34            "input1",


EG35              new List<Dictionary<string, string>>()
EG36              {
EG37                 new Dictionary<string, string>()
EG38                 {
EG39               {
EG40                 "logcontent", content
EG41                }
EG42               }
EG43             }
EG44          },
EG45        },
EG46        GlobalParameters = new Dictionary<string, string>() { }
EG47       };
EG48       var result = await (new HttpClient()).PostAsJsonAsync(". . .", scoreRequest);
EG49       var rawModelResult = await result.Content.ReadAsStringAsync();
EG50       var modelResult = JObject.Parse(rawModelResult);
EG51       if (modelResult["notify"].HasValues)
EG52       {
EG53         . . .
EG54        }
EG55     }
EG56     private (string name, string resourceGroup) ParseResourceId(string
resourceId)
EG57     {
EG58       . . .
EG59      }
EG60      private string GetLogData(string uri)
EG61     {
EG62       . . .
EG63     }
EG64     static string BlobStoreAccountSAS(string containerName)
EG65     {
EG66       . . .
EG67      ]
EG68   }
```

Relevant portions of the app files are shown below. Line numbers are included for reference only and include a two-character prefix that denotes the specific file to which they belong.

```
LoginEvent.cs
LE01  public class LoginEvent
LE02  {
LE03
LE04  public string subject { get; set; }
LE05  public DateTime eventTime { get; set; }
LE06  public Dictionary<string, string> data { get; set; }
LE07  public string Serialize()
LE08  {
LE09    return JsonConvert.SerializeObject(this);
LE10   }
LE11 }
```

You need to meet the scaling requirements for Policy Service. What should you store in Azure Redis Cache?

- Http Context.Items
- View State
- Temp Data
- **Session state**

Correct

Azure Cache for Redis provides a session state provider that you can use to store your session state in-memory with Azure Cache for Redis instead of a SQL Server database. To use the caching session state provider, first configure your cache, and then configure your ASP.NET application for cache using the Azure Cache for Redis Session State NuGet package.
https://docs.microsoft.com/en-us/azure/azure-cache-for-redis/cache-aspnet-session-state-provider

https://docs.microsoft.com/en-us/azure/azure-cache-for-redis/cache-aspnet-session-state-provider#store-aspnet-session-state-in-the-cache

36. Question

You set the multi-factor authentication status for a user named bala@contoso.com to Enabled. Bala accesses the Azure portal by using a web browser. Which additional security verifications can bala use when accessing the Azure portal?

an app password, a text message that contains a verification code, and a notification sent from the Microsoft Authenticator app

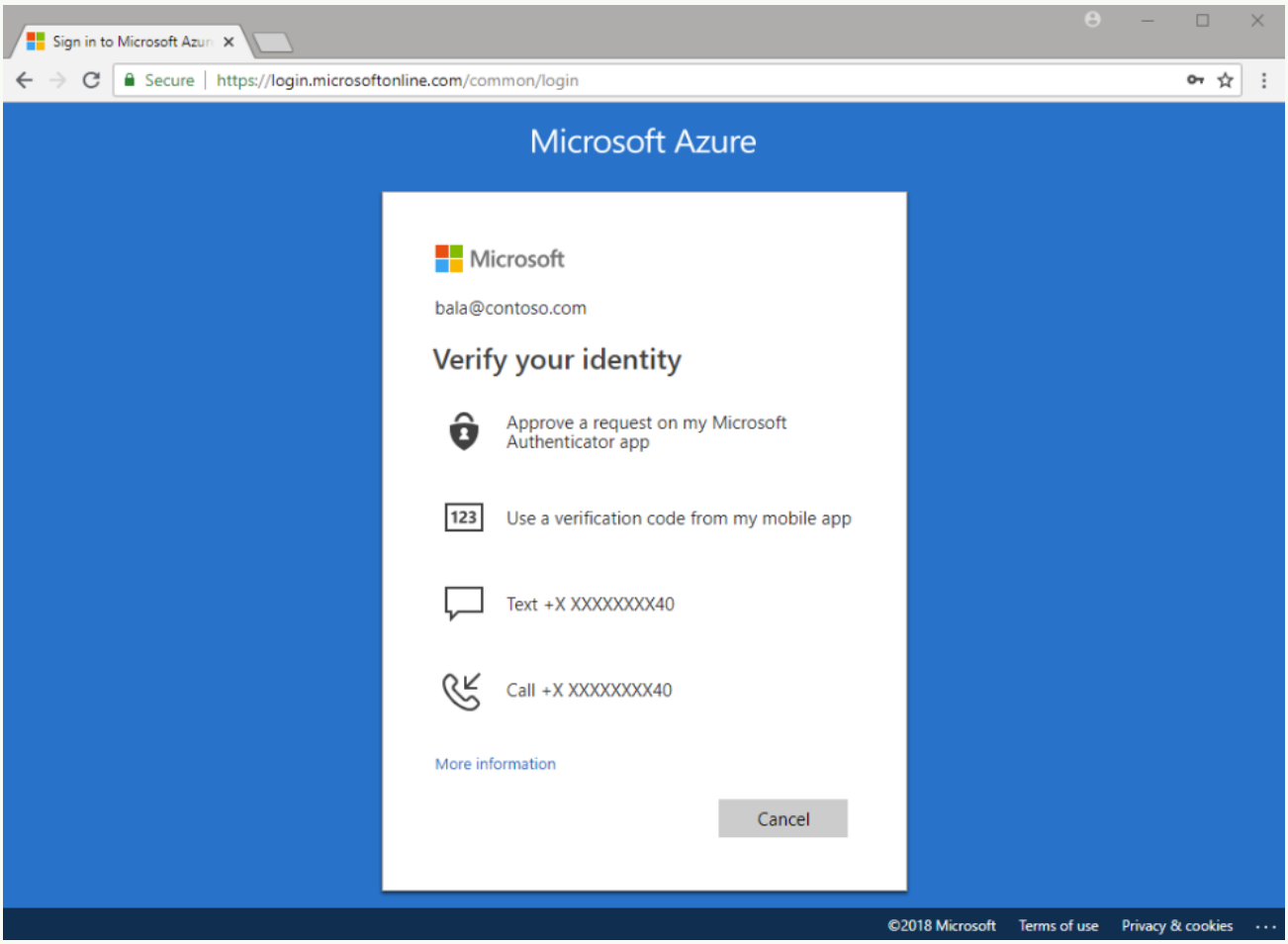
a phone call, an email message that contains a verification code, and a text message that contains an app password

an app password, a text message that contains a verification code, and a verification code sent from the Microsoft Authenticator app

a phone call, a text message that contains a verification code, and a notification or a verification code sent from the Microsoft Authenticator app

Incorrect

Bala would receive below set of additional security verifications The Microsoft Authenticator app can help prevent unauthorized access to accounts and stop fraudulent transactions by pushing a notification to your smartphone or tablet. Users view the notification, and if it's legitimate, select Verify. Otherwise, they can select Deny.



https://docs.microsoft.com/en-us/azure/active-directory/authentication/concept-authentication-methods

37. Question

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Policy service must use Application Insights to automatically scale with the number of policy actions that it is performing.

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Log Policy –

All Azure App Service Web Apps must write logs to Azure Blob storage. All log files should be saved to a container named logdrop. Logs must remain in the container for 15 days.

Authentication events –

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PolicyLib –

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Exclude non-user actions from Application Insights telemetry.

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If an anomaly is detected, an Azure Function that emails administrators is called by using an HTTP WebHook.

Health monitoring –

All web applications and services have health monitoring at the /health service endpoint.

Policy loss –

When you deploy Policy service, policies may not be applied if they were in the process of being applied

during the deployment.

Performance issue –

When under heavy load, the anomaly detection service undergoes slowdowns and rejects connections.

Notification latency –

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EG14        }
EG15
EG16        {
EG17          EnsureLogging(@event["subject"].ToString());
EG18         }
EG19       }
EG20        return null;
EG21   }
EG22   private void EnsureLogging(string resource)
EG23   {
EG24     . . .
EG25   }
EG26   private async Task SendToAnomalyDetectionService(string uri)
EG27   {
EG28     var content = GetLogData(uri);
EG29     var scoreRequest = new
EG30     {
EG31       Inputs = new Dictionary<string, List<Dictionary<string, string>>>()
EG32       {
EG33          {
EG34            "input1",
```

```
EG35            new List<Dictionary<string, string>>()
EG36            {
EG37               new Dictionary<string, string>()
EG38               {
EG39             {
EG40               "logcontent", content
EG41             }
EG42            }
EG43          }
EG44        },
EG45       },
EG46       GlobalParameters = new Dictionary<string, string>() { }
EG47      };
EG48      var result = await (new HttpClient()).PostAsJsonAsync(". . .", scoreRequest);
EG49      var rawModelResult = await result.Content.ReadAsStringAsync();
EG50      var modelResult = JObject.Parse(rawModelResult);
EG51      if (modelResult["notify"].HasValues)
EG52      {
EG53        . . .
EG54       }
EG55    }
EG56    private (string name, string resourceGroup) ParseResourceId(string
resourceId)
EG57    {
EG58      . . .
EG59     }
EG60     private string GetLogData(string uri)
EG61    {
EG62      . . .
EG63    }
EG64    static string BlobStoreAccountSAS(string containerName)
EG65    {
EG66      . . .
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EG68  }
```

Relevant portions of the app files are shown below. Line numbers are included for reference only and include a two-character prefix that denotes the specific file to which they belong.

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LE03
LE04  public string subject { get; set; }
LE05  public DateTime eventTime { get; set; }
LE06  public Dictionary<string, string> data { get; set; }
LE07  public string Serialize()
LE08  {
LE09    return JsonConvert.SerializeObject(this);
LE10   }
LE11 }
```

You need to resolve a notification latency issue. Which two actions should you perform?

- [ ] Ensure that the Azure Function is set to use a consumption plan.
- [x] Ensure that the Azure Function is using an App Service plan.

- [x] Set Always On to true.
- [ ] Set Always On to false.

Correct

Azure Functions can run on either a Consumption Plan or a dedicated App Service Plan. If you run in a dedicated mode, you need to turn on the Always On setting for your Function App to run properly. The Function runtime will go idle after a few minutes of inactivity, so only HTTP triggers will actually "wake up" your functions. This is similar to how WebJobs must have Always On enabled.

Scenario: Notification latency: Users report that anomaly detection emails can sometimes arrive several minutes after an anomaly is detected.

Anomaly detection service: You have an anomaly detection service that analyzes log information for anomalies. It is implemented as an Azure Machine Learning model.

The model is deployed as a web service. If an anomaly is detected, an Azure Function that emails administrators is called by using an HTTP WebHook.

Refer below article for reference.

https://github.com/Azure/Azure-Functions/wiki/Enable-Always-On-when-running-on-dedicated-App-Service-Plan

38. Question

You plan to automate the deployment of a virtual machine scale set that uses the Windows Server 2016 DataCenter image. You need to ensure that when the scale set virtual machines are provisioned, they have web server components installed. Which two actions should you perform?

- [ ] Create an automation account.
- [x] Upload a configuration script.
- [ ] Create an Azure policy.
- [ ] Create a new virtual machine scale set in the Azure portal.
- [x] Modify the extensionProfile section of the Azure Resource Manager template

Incorrect

You can automate the install of applications to a scale set after each VM instance is deployed, or update an application that already runs on a scale set. https://docs.microsoft.com/en-us/azure/virtual-machine-scale-sets/tutorial-install-apps-template

39. Question

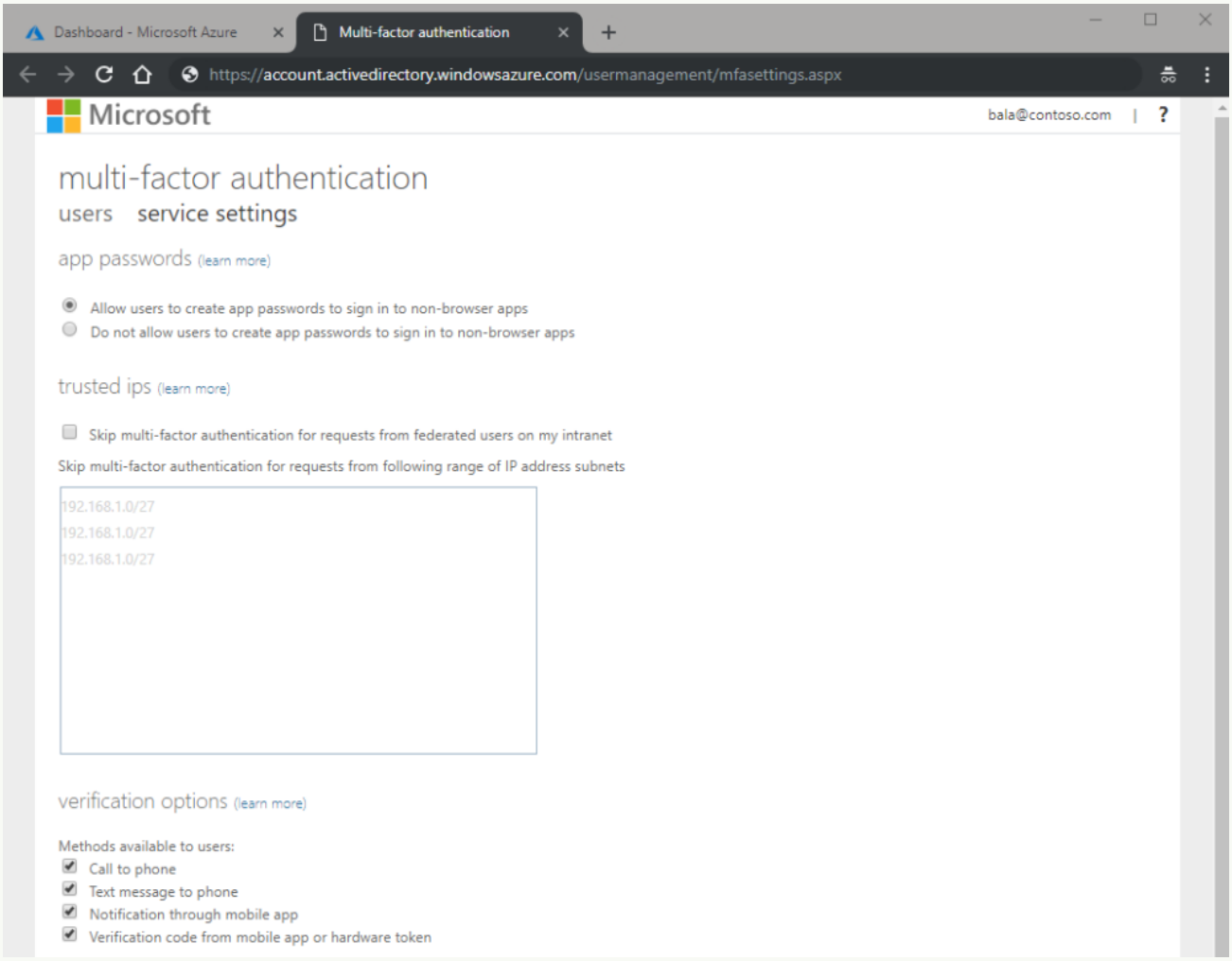
You have an Azure Active Directory (Azure AD) tenant. All administrators must enter a verification code to access the Azure portal. You need to ensure that the administrators can access the Azure portal from on-

premises network wihtout being promped for MFA. What should you configure?

- the multi-factor authentication service settings
- an Azure AD Identity Protection user risk policy
- an Azure AD Identity Protection sign-in risk policy
- the default for all the roles in Azure AD Privileged Identity Management

Correct

Define trusted Ip's from where portal can be accessed without MFA prompt



https://docs.microsoft.com/en-us/azure/active-directory/authentication/howto-mfa-mfasettings#mfa-service-settings

40. Question

Case Study

Overview

ADatum Corporation is a financial company that has two main offices in New York and Los Angeles.

ADatum has a subsidiary named Fabrikam, Inc. that shares the Los Angeles office.

ADatum is conducting an initial deployment of Azure services to host new line-of-business applications and

is preparing to migrate its existing on-premises workloads to Azure.

ADatum uses Microsoft Exchange Online for email.

Existing Environment

On-Premises Environment

The on-premises workloads run on virtual machines hosted in a VMware vSphere 6 infrastructure. All the virtual machines are members of an Active Directory forest named adatum.com and run Windows Server 2016.

The New York office uses an IP address space of 10.0.0.0/16. The Los Angeles office uses an IP address space of 10.10.0.0/16.

The offices connect by using a VPN provided by an ISP. Each office has one Azure ExpressRoute circuit that provides access to Azure services and Microsoft Online Services. Routing is implemented by using Microsoft peering.

The New York office has a virtual machine named VM1 that has the vSphere console installed.

Azure Environment

You provision the Azure infrastructure by using the Azure portal. The infrastructure contains the resources shown in the following table.

Name	Type	Azure Region
ASRV1	Azure Site Recovery vault	East US
ASRV2	Azure Site Recovery vault	West US
ASE1	Azure App Service Environment	East US
AG1	Azure Application Gateway (internal)	East US
AG2	Azure Application Gateway (Internet-facing)	West US
ER1	ExpressRoute circuit	East US
ER2	ExpressRoute circuit	West US

AG1 has two backend pools named Pool11 and Pool12. AG2 has two backend pools named Pool21 and Pool22.

Requirements

Planned Changes

ADatum plans to migrate the virtual machines from the New York office to the East US Azure region by using Azure Site Recovery.

Infrastructure Requirements

ADatum identifies the following infrastructure requirements:

– A new web app named App1 that will access third-parties for credit card processing must be

deployed.

– A newly developed API must be implemented as an Azure function named App2. App2 will use a blob storage trigger. App2 must process new blobs immediately.

– The Azure infrastructure and the on-premises infrastructure must be prepared for the migration of the VMware virtual machines to Azure.

– The sizes of the Azure virtual machines that will be used to migrate the on-premises workloads must be identified.

– All migrated and newly deployed Azure virtual machines must be joined to the adatum.com domain.

– AG1 must load balance incoming traffic in the following manner:

– http://corporate.adatum.com/video/* will be load balanced across Pool11.

– http://corporate.adatum.com/images/* will be load balanced across Pool12.

– AG2 must load balance incoming traffic in the following manner:

– http://www.adatum.com will be load balanced across Pool21.

– http://fabrikam.com will be load balanced across Pool22.

– ER1 must route traffic between the New York office and platform as a service (PaaS) services in the East US Azure region, as long as ER1 is available.

– ER2 must route traffic between the Los Angeles office and the PaaS services in the West US region, as long as ER2 is available.

– ER1 and ER2 must be configured to fail over automatically.

Application Requirements

App2 must be available to connect directly to the private IP addresses of the Azure virtual machines. App2 will be deployed directly to an Azure virtual network.

Inbound and outbound communications to App1 must be controlled by using NSGs.

Pricing Requirements

ADatum identifies the following pricing requirements:

– The cost of App1 and App2 must be minimized

– The transactional charges of Azure Storage accounts must be minimized You need to provision the resources in Azure to support the virtual machine that will be migrated from the New York office. What should be the IP address space of the virtual Network?

- 10.10.0.0/16
- 10.0.0.0/16
- **10.20.0.0/16**

Correct

Azure address space shouldn't overlap with on-premises networks.

Since the New York office uses an IP address space of 10.0.0.0/16 and The Los Angeles office uses an IP address space of 10.10.0.0/16, we shall go with 10.20.0.0/16

41. Question

Case Study

Overview

Contoso, Ltd. is a consulting company that has a main office in Montreal and two branch offices in Seattle and New York.

The Montreal office has 2,000 employees. The Seattle office has 1,000 employees. The New York office has 200 employees.

All the resources used by Contoso are hosted on-premises.

Contoso creates a new Azure subscription. The Azure Active Directory (Azure AD) tenant uses a domain named contoso.onmicrosoft.com. The tenant uses the P1 pricing tier.

Existing Environment

The network contains an Active Directory forest named contoso.com. All domain controllers are configured as DNS servers and host the contoso.com DNS zone.

Contoso has finance, human resources, sales, research, and information technology departments. Each department has an organizational unit (OU) that contains all the accounts of that respective department. All the user accounts have the department attribute set to their respective department. New users are added frequently.

Contoso.com contains a user named User1.

All the offices connect by using private links.

Contoso has data centers in the Montreal and Seattle offices. Each data center has a firewall that can be configured as a VPN device.

All infrastructure servers are virtualized. The virtualization environment contains the servers in the following table.

Name	Role	Contains Virtual Machine
Server1	VMWare vCenter Server	VM1
Server2	Hyper-V Host	VM2

Contoso uses two web applications named App1 and App2. Each instance on each web application requires 1GB of memory.

The Azure subscription contains the resources in the following table.

Name	Type
VNet1	Virtual Network
VM3	Virtual Machine
VM4	Virtual Machine

The network security team implements several network security groups (NSGs).

Planned Changes

Contoso plans to implement the following changes:

– Deploy Azure ExpressRoute to the Montreal office.

– Migrate the virtual machines hosted on Server1 and Server2 to Azure.

– Synchronize on-premises Active Directory to Azure Active Directory (Azure AD).

– Migrate App1 and App2 to two Azure web apps named WebApp1 and WebApp2.

Technical Requirements

Contoso must meet the following technical requirements:

– Ensure that WebApp1 can adjust the number of instances automatically based on the load and can scale up to five instances.

– Ensure that VM3 can establish outbound connections over TCP port 8080 to the applications servers in the Montreal office.

– Ensure that routing information is exchanged automatically between Azure and the routers in the Montreal office.

– Enable Azure Multi-Factor Authentication (MFA) for the users in the finance department only.

– Ensure that webapp2.azurewebsites.net can be accessed by using the name app2.contoso.com

– Connect the New York office to VNet1 over the Internet by using an encrypted connection.

– Create a workflow to send an email message when the settings of VM4 are modified.

– Create a custom Azure role named Role1 that is based on the Reader role.

– Minimize costs whenever possible.

You need to meet the connection requirements for the New York office. What should you do in the New York Office?

- Create a virtual network gateway and an on-premises data gateway
- Deploy a DirectAccess server
- Implement a web application Proxy
- **Configure a site-to-site VPN Connection**
- Deploy ExpressRoute

Correct

On premises create a site-to-site connection for the virtual network gateway and the local network gateway.
Scenario: Connect the New York office to VNet1 over the Internet by using an encrypted connection.
Refer the below article for more information.
https://docs.microsoft.com/en-us/azure/architecture/reference-architectures/hybrid-networking/vpn

42. Question

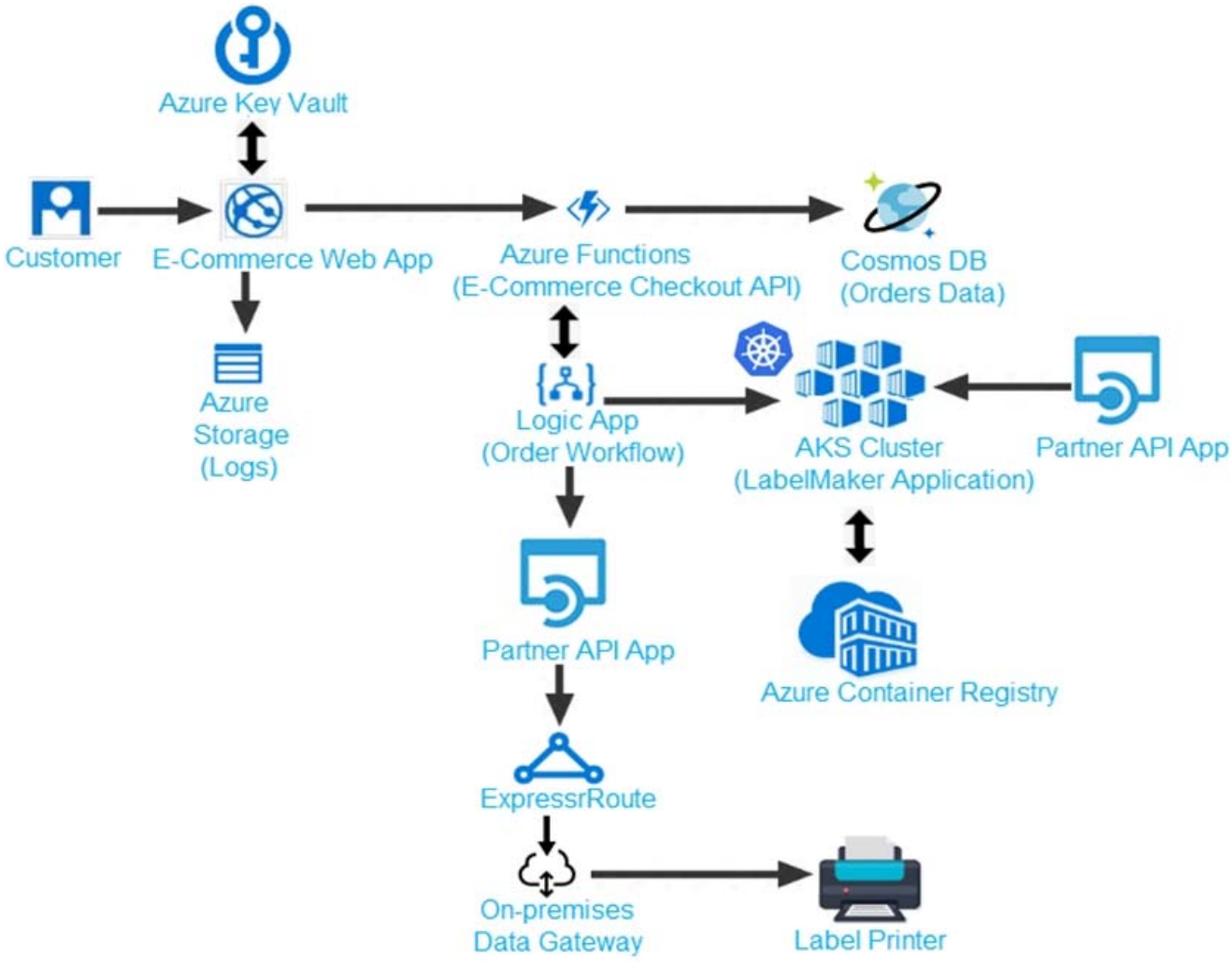
Case Study
Overview
LabelMaker app – Coho Winery produces bottles, and distributes a variety of wines globally. You are developer implementing highly scalable and resilient applications to support online order processing by using Azure solutions.
Coho Winery has a LabelMaker application that prints labels for wine bottles. The application sends data to several printers. The application consists of five modules that run independently on virtual machines (VMs). Coho Winery plans to move the application to Azure and continue to support label creation.
External partners send data to the LabelMaker application to include artwork and text for custom label designs.

Data –
You identify the following requirements for data management and manipulation:
Order data is stored as nonrelational JSON and must be queried using Structured Query Language (SQL).
Changes to the Order data must reflect immediately across all partitions. All reads to the Order data must fetch the most recent writes.
You have the following security requirements:
– Users of Coho Winery applications must be able to provide access to documents, resources, and applications to external partners.
– External partners must use their own credentials and authenticate with their organization's identity management solution.
– External partner logins must be audited monthly for application use by a user account administrator to maintain company compliance.
– Storage of e-commerce application settings must be maintained in Azure Key Vault.
– E-commerce application sign-ins must be secured by using Azure App Service authentication and Azure Active Directory (AAD).
– Conditional access policies must be applied at the application level to protect company content
– The LabelMaker applications must be secured by using an AAD account that has full access to all namespaces of the Azure Kubernetes Service (AKS) cluster.

LabelMaker app –
Azure Monitor Container Health must be used to monitor the performance of workloads that are deployed

to Kubernetes environments and hosted on Azure Kubernetes Service (AKS).

You must use Azure Container Registry to publish images that support the AKS deployment.



Calls to the Printer API App fail periodically due to printer communication timeouts.

Printer communications timeouts occur after 10 seconds. The label printer must only receive up to 5 attempts within one minute.

The order workflow fails to run upon initial deployment to Azure.

Order json. Relevant portions of the app files are shown below. Line numbers are included for reference only. This JSON file contains a representation of the data for an order that includes a single item.

Order .json –

```
01 {
02  "id : 1,
03  "customers" : [
04  {
05    "familyName" : "Doe",
06    "givenName" :  "John",
07    "customerid" :  5
08  }
09  ],
10  "line"_items" : [
11 {
12   "fulfillable_quantity" : 1,
13  "id" : 6,
14  "price" : "199.99",
15  "product_id" : 7513594,
16  "quantity": 1,
17  "requires_shipping" : true,
18  "sku" : "SFC-342-N" ,
19 "title" : "Surface Go",
```

```
23  "tax"_lines" : [
24  {
25   "title" : "State Tax",
26  "price" : "3.98",
27  "rate" : 0.06
28  }
29 ],
30  "total_discount" : "5.00"
31  "discount_allocations" : [
32  {
33   "amount" : "5.00",
34   "discount_application_index" : 2
35     }
36    ]
37   }
38  ],
39 "address" : {
40 "state" : "NY",
41 "country" : "Manhattan",
42  "city" : "NY"
43    }
44   }
```

You need to ensure that you can deploy the LabelMaker application. Which set of CLI commands would accomlish the task?

- az group create --name LabelMakerCluster --location eastus az aks create --resource-group CohoWineryLabelMaker --name CohoWineryLabelMaker --node-count 5 --enable-addons monitoring
- az aks create --name CohoWineryLabelMaker --location eastus az aks create --resource-group CohoWineryLabelMaker --name LabelMakerCluster --node-count 5 --enable-addons monitoring

az group create --name CohoWineryLabelMaker --location eastus az aks create --resource-group CohoWineryLabelMaker --name LabelMakerCluster --node-count 5 --enable-addons monitoring

az acr create --name LabelMakerCluster --location eastus az aks create --resource-group CohoWineryLabelMaker --name LabelMakerCluster --node-count 5 --enable-addons http_application_routing

Correct

Scenario: LabelMaker app – Azure Monitor Container Health must be used to monitor the performance of workloads that are deployed to Kubernetes environments and hosted on Azure Kubernetes Service (AKS).

You must use Azure Container Registry to publish images that support the AKS deployment.

43. Question

You have configured Azure AD Connect for Azure Active Directory Seamless Single Sign-On (Azure AD Seamless SSO) for an on-premises network. Users report that when they attempt to access myapps.microsoft.com, they are prompted multiple times to sign in and are forced to use an account name that ends with onmicrosoft.com. You discover that there is a UPN mismatch between Azure AD and the on-premises Active Directory. You need to ensure that the users can use single-sign on (SSO) to access Azure resources. What should you do first?

From the on-premises network, request a new certificate that contains the Active Directory domain name.

From the server that runs Azure AD Connect, modify the filtering options

From Azure AD, add and verify a custom domain name

From the on-premises network, deploy Active Directory Federation Services (AD FS)

Correct

Verify your domain name under custom domain names registered. propagation from your domain registrar to Azure AD can be instantaneous or it can take a few days, depending on your domain registrar. Follow the steps mentioned in below article https://docs.microsoft.com/bs-latn-ba/azure/active-directory/fundamentals/add-custom-domain#verify-your-custom-domain-name

44. Question

Case Study

Overview

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The Montreal office has 2,000 employees. The Seattle office has 1,000 employees. The New York office has 200 employees.

All the resources used by Contoso are hosted on-premises.

Contoso creates a new Azure subscription. The Azure Active Directory (Azure AD) tenant uses a domain named contoso.onmicrosoft.com. The tenant uses the P1 pricing tier.

Existing Environment

The network contains an Active Directory forest named contoso.com. All domain controllers are configured as DNS servers and host the contoso.com DNS zone.

Contoso has finance, human resources, sales, research, and information technology departments. Each department has an organizational unit (OU) that contains all the accounts of that respective department. All the user accounts have the department attribute set to their respective department. New users are added frequently.

Contoso.com contains a user named User1.

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All infrastructure servers are virtualized. The virtualization environment contains the servers in the following table.

Name	Role	Contains Virtual Machine
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Server2	Hyper-V Host	VM2

Contoso uses two web applications named App1 and App2. Each instance on each web application requires 1GB of memory.

The Azure subscription contains the resources in the following table.

Name	Type
VNet1	Virtual Network
VM3	Virtual Machine
VM4	Virtual Machine

The network security team implements several network security groups (NSGs).

Planned Changes

Contoso plans to implement the following changes:

– Deploy Azure ExpressRoute to the Montreal office.
– Migrate the virtual machines hosted on Server1 and Server2 to Azure.
– Synchronize on-premises Active Directory to Azure Active Directory (Azure AD).
– Migrate App1 and App2 to two Azure web apps named WebApp1 and WebApp2.

Technical Requirements

Contoso must meet the following technical requirements:

– Ensure that WebApp1 can adjust the number of instances automatically based on the load and can scale up to five instances.
– Ensure that VM3 can establish outbound connections over TCP port 8080 to the applications servers in the Montreal office.
– Ensure that routing information is exchanged automatically between Azure and the routers in the Montreal office.
– Enable Azure Multi-Factor Authentication (MFA) for the users in the finance department only.
– Ensure that webapp2.azurewebsites.net can be accessed by using the name app2.contoso.com
– Connect the New York office to VNet1 over the Internet by using an encrypted connection.
– Create a workflow to send an email message when the settings of VM4 are modified.
– Create a custom Azure role named Role1 that is based on the Reader role.
– Minimize costs whenever possible. You need to configure a host name for WebApp2. What should you do first?

- In Azure AD, add webapp2.azurewebsites.net as a custom domain name
- In the public DNS zone of contoso.onmicrosoft.com, add an NS record
- In Azure AD, add contoso.com as a custom domain name
- In the public DNS zone of contoso.com, add a CNAME record

Incorrect

Techncal Requirements : Ensure that webapp2.azurewebsites.net can be accessed by using the name app2.contoso.com

When you create a Cloud Service, Azure assigns it to a subdomain of cloudapp.net. For example, if your Cloud Service is named “contoso”, your users will be able to access your application on a URL like http://contoso.cloudapp.net. Azure also assigns a virtual IP address.

However, you can also expose your application on your own domain name, such as contoso.com.

https://docs.microsoft.com/en-us/azure/cloud-services/cloud-services-custom-domain-name-portal

45. Question

You have an Azure subscription named Subscription1. Subscription1 contains a resource group named RG1. RG1 contains resources that were deployed by using templates. You need to view the date and time

when the resources were created in RG1. From the RG1 blade, you click Deployments. Does this meet the goal?

- No
- Yes

Correct

From the RG1 blade, click Deployments. You see a history of deployment for the resource group.
https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/template-tutorial-create-first-template?tabs=azure-powershell

46. Question

Case Study

Overview

ADatum Corporation is a financial company that has two main offices in New York and Los Angeles.

ADatum has a subsidiary named Fabrikam, Inc. that shares the Los Angeles office.

ADatum is conducting an initial deployment of Azure services to host new line-of-business applications and is preparing to migrate its existing on-premises workloads to Azure.

ADatum uses Microsoft Exchange Online for email.

Existing Environment

On-Premises Environment

The on-premises workloads run on virtual machines hosted in a VMware vSphere 6 infrastructure. All the virtual machines are members of an Active Directory forest named adatum.com and run Windows Server 2016.

The New York office uses an IP address space of 10.0.0.0/16. The Los Angeles office uses an IP address space of 10.10.0.0/16.

The offices connect by using a VPN provided by an ISP. Each office has one Azure ExpressRoute circuit that provides access to Azure services and Microsoft Online Services. Routing is implemented by using Microsoft peering.

The New York office has a virtual machine named VM1 that has the vSphere console installed.

Azure Environment

You provision the Azure infrastructure by using the Azure portal. The infrastructure contains the resources

shown in the following table.

Name	Type	Azure Region
ASRV1	Azure Site Recovery vault	East US
ASRV2	Azure Site Recovery vault	West US
ASE1	Azure App Service Environment	East US
AG1	Azure Application Gateway (internal)	East US
AG2	Azure Application Gateway (Internet-facing)	West US
ER1	ExpressRoute circuit	East US
ER2	ExpressRoute circuit	West US

AG1 has two backend pools named Pool11 and Pool12. AG2 has two backend pools named Pool21 and Pool22.

Requirements

Planned Changes

ADatum plans to migrate the virtual machines from the New York office to the East US Azure region by using Azure Site Recovery.

Infrastructure Requirements

ADatum identifies the following infrastructure requirements:

– A new web app named App1 that will access third-parties for credit card processing must be deployed.

– A newly developed API must be implemented as an Azure function named App2. App2 will use a blob storage trigger. App2 must process new blobs immediately.

– The Azure infrastructure and the on-premises infrastructure must be prepared for the migration of the VMware virtual machines to Azure.

– The sizes of the Azure virtual machines that will be used to migrate the on-premises workloads must be identified.

– All migrated and newly deployed Azure virtual machines must be joined to the adatum.com domain.

– AG1 must load balance incoming traffic in the following manner:

– http://corporate.adatum.com/video/* will be load balanced across Pool11.

– http://corporate.adatum.com/images/* will be load balanced across Pool12.

– AG2 must load balance incoming traffic in the following manner:

– http://www.adatum.com will be load balanced across Pool21.

– http://fabrikam.com will be load balanced across Pool22.

– ER1 must route traffic between the New York office and platform as a service (PaaS) services in the East US Azure region, as long as ER1 is available.

– ER2 must route traffic between the Los Angeles office and the PaaS services in the West US region,

as long as ER2 is available.

– ER1 and ER2 must be configured to fail over automatically.

Application Requirements

App2 must be available to connect directly to the private IP addresses of the Azure virtual machines. App2 will be deployed directly to an Azure virtual network.

Inbound and outbound communications to App1 must be controlled by using NSGs.

Pricing Requirements

ADatum identifies the following pricing requirements:

– The cost of App1 and App2 must be minimized

– The transactional charges of Azure Storage accounts must be minimized

You need to provision the resources in Azure to support the virtual machine that will be migrated from the New York office.

What should be the kind of storage account?

- Storage (general purpose V1)
- StorageV2 (general purpose V2)
- Blob Storage

Incorrect

General Purpose v1 enables access to Block Blobs, Page Blobs, Files, Queues, and Tables. This would suffice the requirement, meanwhile V1 is found legacy and nowadays going to V2 would be more meaningful when you would need in newer general purpose requirements.

47. Question

frezecontrol company is developing a solution that allows smart refrigerators to send temperature details to centralized location. The solution must receive and store messages until they can be processed. You create an Azure Service Bus instance by providing a name, pricing tier, subscription, resource group, and location. You need to complete the configuration. Which Azure CLI or PowerShell command should you run?

- New-AzureRmResourceGroup -Name fridge-rg -Location fridge-loc
- connectionString=$(az servicebus namespace authorization-rule keys list –resource-group fridge-rg –namespace-name fridge-ns –name RootManageSharedAccessKey –query primaryConnectionString –output tsv)

New-AzureRmServiceBusQueue -ResourceGroup fridge-rg -NamespaceName fridge-ns -Name fridge-q -EnablePartitioning $False

az group create --name fridge-rg --location fridge-loc

Incorrect

Get the connection string for the namespace after resource group, Service bus queue & namespaces are created https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-quickstart-cli#use-the-azure-cli-to-create-resources

48. Question

Case Study

Overview

LabelMaker app – Coho Winery produces bottles, and distributes a variety of wines globally. You are developer implementing highly scalable and resilient applications to support online order processing by using Azure solutions.

Coho Winery has a LabelMaker application that prints labels for wine bottles. The application sends data to several printers. The application consists of five modules that run independently on virtual machines (VMs). Coho Winery plans to move the application to Azure and continue to support label creation.

External partners send data to the LabelMaker application to include artwork and text for custom label designs.

Data –

You identify the following requirements for data management and manipulation:

Order data is stored as nonrelational JSON and must be queried using Structured Query Language (SQL).

Changes to the Order data must reflect immediately across all partitions. All reads to the Order data must fetch the most recent writes.

You have the following security requirements:

– Users of Coho Winery applications must be able to provide access to documents, resources, and applications to external partners.

– External partners must use their own credentials and authenticate with their organization's identity management solution.

– External partner logins must be audited monthly for application use by a user account administrator to maintain company compliance.

– Storage of e-commerce application settings must be maintained in Azure Key Vault.

– E-commerce application sign-ins must be secured by using Azure App Service authentication and Azure Active Directory (AAD).

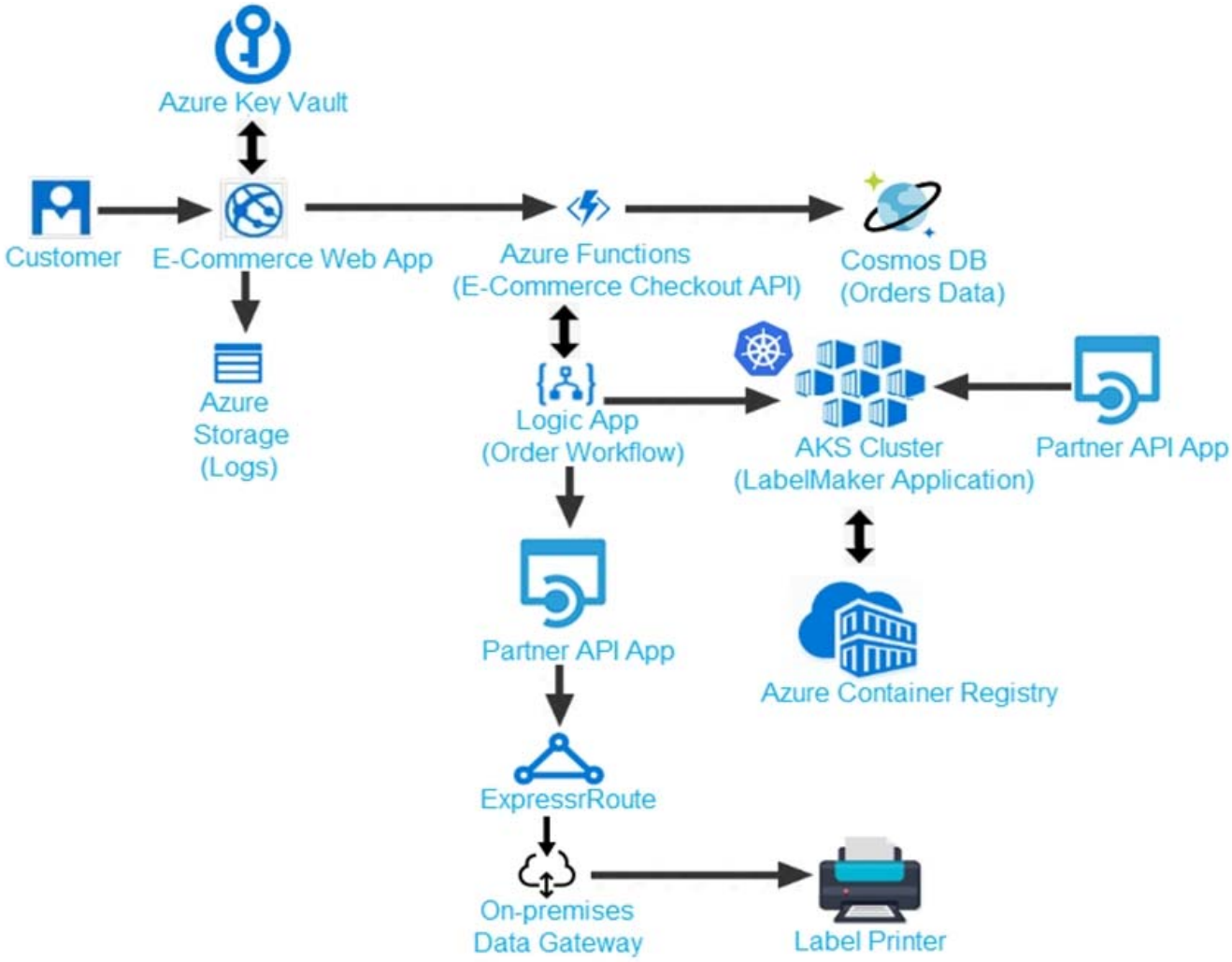
– Conditional access policies must be applied at the application level to protect company content

– The LabelMaker applications must be secured by using an AAD account that has full access to all namespaces of the Azure Kubernetes Service (AKS) cluster.

LabelMaker app –

Azure Monitor Container Health must be used to monitor the performance of workloads that are deployed to Kubernetes environments and hosted on Azure Kubernetes Service (AKS).

You must use Azure Container Registry to publish images that support the AKS deployment.



Calls to the Printer API App fail periodically due to printer communication timeouts.

Printer communications timeouts occur after 10 seconds. The label printer must only receive up to 5 attempts within one minute.

The order workflow fails to run upon initial deployment to Azure.

Order json. Relevant portions of the app files are shown below. Line numbers are included for reference only. This JSON file contains a representation of the data for an order that includes a single item.

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02  "id : 1,
03  "customers" : [
04  {
05    "familyName" : "Doe",
06    "givenName" :  "John",
07    "customerid" :  5
08  }
09  ],
10  "line"_items" : [
11 {
12   "fulfillable_quantity" : 1,
13  "id" : 6,
14  "price" : "199.99",
15  "product_id" : 7513594,
16  "quantity": 1,
17  "requires_shipping" : true,
18  "sku" : "SFC-342-N" ,
19 "title" : "Surface Go",
```

```
23  "tax"_lines" : [
24  {
25   "title" : "State Tax",
26  "price" : "3.98",
27  "rate" : 0.06
28  }
29 ],
30  "total_discount" : "5.00"
31  "discount_allocations" : [
32  {
33   "amount" : "5.00",
34   "discount_application_index" : 2
35     }
36    ]
37   }
38  ],
39 "address" : {
40 "state" : "NY",
41 "country" : "Manhattan",
42  "city" : "NY"
43    }
44   }
```

You need to meet the LabelMaker application security requirement.

You recommend to Create a RoleBinding and assign it to the Azure AD account.

Does the solution meet the goal?

- (●) No
- ( ) Yes

Correct

Scenario: The LabelMaker applications must be secured by using an AAD account that has full access to all namespaces of the Azure Kubernetes Service (AKS) cluster. Permissions can be granted within a namespace with a RoleBinding, or cluster-wide with a ClusterRoleBinding.
https://kubernetes.io/docs/reference/access-authn-authz/rbac/

49. Question

You have an Azure subscription that contains the resource groups shown in the following table.

Name	Region
RG1	West US
RG2	West US
RG3	East US

You have the Azure SQL servers shown below

Name	Region	In resource Group
Sql1	West US	RG1
Sql2	East US	RG2
Sql3	West US	RG3
Sql4	West US	RG1

You create an Azure SQL database named DB1 on Sql1 in an elastic pool named Pool1. You need to create an Azure SQL database named DB2 in Pool1. Where should you deploy DB2?

- Sql2
- Sql1
- Sql4
- Sql3

Incorrect

The databases in an elastic pool are on a single Azure SQL Database server and share a set number of resources at a set price. https://docs.microsoft.com/en-us/azure/sql-database/sql-database-elastic-pool

50. Question

Case Study

Overview

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– External partner logins must be audited monthly for application use by a user account administrator to maintain company compliance.
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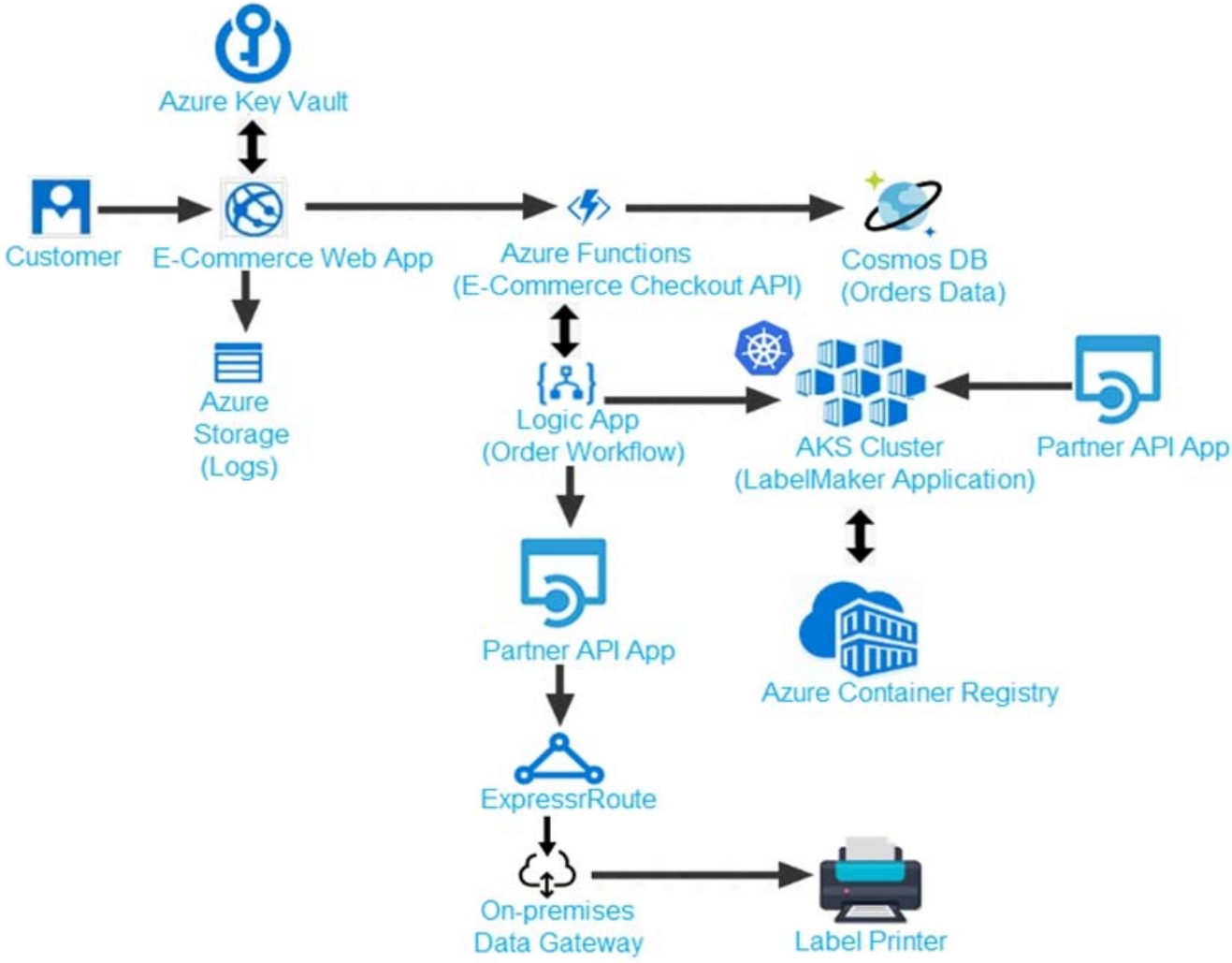
LabelMaker app –
Azure Monitor Container Health must be used to monitor the performance of workloads that are deployed to Kubernetes environments and hosted on Azure Kubernetes Service (AKS).
You must use Azure Container Registry to publish images that support the AKS deployment.



Calls to the Printer API App fail periodically due to printer communication timeouts.

Printer communications timeouts occur after 10 seconds. The label printer must only receive up to 5 attempts within one minute.

The order workflow fails to run upon initial deployment to Azure.

Order json. Relevant portions of the app files are shown below. Line numbers are included for reference only. This JSON file contains a representation of the data for an order that includes a single item.

Order .json –

```
01 {
02  "id : 1,
03  "customers" : [
04  {
05    "familyName" : "Doe",
06    "givenName" :  "John",
07    "customerid" :  5
08  }
09  ],
10  "line"_items" : [
11 {
12   "fulfillable_quantity" : 1,
13  "id" : 6,
14  "price" : "199.99",
15  "product_id" : 7513594,
16  "quantity": 1,
17  "requires_shipping" : true,
18  "sku" : "SFC-342-N" ,
19 "title" : "Surface Go",
```

```
23  "tax"_lines" : [
24  {
25   "title" : "State Tax",
26  "price" : "3.98",
27  "rate" : 0.06
28  }
29 ],
30  "total_discount" : "5.00"
31  "discount_allocations" : [
32  {
33   "amount" : "5.00",
34   "discount_application_index" : 2
35     }
36    ]
37   }
38  ],
39 "address" : {
40 "state" : "NY",
41 "country" : "Manhattan",
42  "city" : "NY"
43    }
44   }
```

You need to troubleshoot the order workflow. Which two actions would help you troubleshoot?

- [ ] Review the activity log.
- [x] Review the trigger history.
- [x] Review the API connections.
- [ ] Review the run history.

Incorrect

Scenario: The order workflow fails to run upon initial deployment to Azure.

Deployment errors arise from conditions that occur during the deployment process. They appear in the activity log.

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

51. Question

You have an Azure subscription named Subscription1 that is used by several departments at your company. Subscription1 contains the resources in the following table.

Name	Type
Storage1	Storage Account
RG1	Resource Group
Container1	Blob Container
Share1	File Share

Another administrator deploys a virtual machine named VM1 and an Azure Storage account named Storage2 by using a single Azure Resource Manager template. You need to view the template used for the deployment. From which blade can you view the template that was used for the deployment?

- Container
- RG1
- Storage2
- VM1

Correct

52. Question

You have an Azure Active Directory (Azure AD) tenant named fabrikam.onmicrosoft.com. Your company has a public DNS zone for contoso.com. You add contoso.com as a custom domain name to Azure AD. You need to ensure that Azure can verify the domain name. Which type of DNS record should you create?

- PTR
- TXT
- SOA
- NSEC3

Correct

Adding custom domain names helps you to create user names that are familiar to your users, such as arun@kloudviva.com. https://docs.microsoft.com/bs-latn-ba/azure/active-directory/fundamentals/add-custom-domain#add-your-custom-domain-name-to-azure-ad The propagation from your domain registrar to Azure AD can be instantaneous or it can take a few days, depending on your domain registrar. To verify your custom domain name, follow the steps mentioned in below article https://docs.microsoft.com/bs-latn-ba/azure/active-directory/fundamentals/add-custom-domain#verify-your-custom-domain-name

53. Question

You have an Azure subscription named Subscription1 that contains two Azure networks named VNet1 and VNet2. VNet1 contains a VPN gateway named VPNGW1 that uses static routing. There is a site-to-site VPN connection between your on-premises network and VNet1. On a computer named Client1 that runs Windows 10, you configure a point-to-site VPN connection to VNet1. You configure virtual network peering between VNet1 and VNet2. You verify that you can connect to VNet2 from the on-premises network. Client1 is unable to connect to VNet2. You need to ensure that you can connect Client1 to VNet2. What should you do?

- **Download and re-install the VPN client configuration package on Client1**
- Select Allow gateway transit on VNet1
- Select Allow gateway transit on VNet2.
- Enable BGP on VPNGW1.

Correct

If you make a change to the topology of your network and have Windows VPN clients, the VPN client package for Windows clients must be downloaded and installed again in order for the changes to be applied to the client. https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-about-point-to-site-routing

54. Question

Case Study

Overview

ADatum Corporation is a financial company that has two main offices in New York and Los Angeles.

ADatum has a subsidiary named Fabrikam, Inc. that shares the Los Angeles office.

ADatum is conducting an initial deployment of Azure services to host new line-of-business applications and is preparing to migrate its existing on-premises workloads to Azure.

ADatum uses Microsoft Exchange Online for email.

Existing Environment

On-Premises Environment

The on-premises workloads run on virtual machines hosted in a VMware vSphere 6 infrastructure. All the virtual machines are members of an Active Directory forest named adatum.com and run Windows Server 2016.

The New York office uses an IP address space of 10.0.0.0/16. The Los Angeles office uses an IP address space of 10.10.0.0/16.

The offices connect by using a VPN provided by an ISP. Each office has one Azure ExpressRoute circuit that provides access to Azure services and Microsoft Online Services. Routing is implemented by using Microsoft peering.

The New York office has a virtual machine named VM1 that has the vSphere console installed.

Azure Environment

You provision the Azure infrastructure by using the Azure portal. The infrastructure contains the resources shown in the following table.

Name	Type	Azure Region
ASRV1	Azure Site Recovery vault	East US
ASRV2	Azure Site Recovery vault	West US
ASE1	Azure App Service Environment	East US
AG1	Azure Application Gateway (internal)	East US
AG2	Azure Application Gateway (Internet-facing)	West US
ER1	ExpressRoute circuit	East US
ER2	ExpressRoute circuit	West US

AG1 has two backend pools named Pool11 and Pool12. AG2 has two backend pools named Pool21 and Pool22.

Requirements

Planned Changes

ADatum plans to migrate the virtual machines from the New York office to the East US Azure region by using Azure Site Recovery.

Infrastructure Requirements

ADatum identifies the following infrastructure requirements:

– A new web app named App1 that will access third-parties for credit card processing must be deployed.

– A newly developed API must be implemented as an Azure function named App2. App2 will use a blob storage trigger. App2 must process new blobs immediately.

– The Azure infrastructure and the on-premises infrastructure must be prepared for the migration of the VMware virtual machines to Azure.

– The sizes of the Azure virtual machines that will be used to migrate the on-premises workloads must be identified.

– All migrated and newly deployed Azure virtual machines must be joined to the adatum.com domain.

– AG1 must load balance incoming traffic in the following manner:

– http://corporate.adatum.com/video/* will be load balanced across Pool11.

– http://corporate.adatum.com/images/* will be load balanced across Pool12.

– AG2 must load balance incoming traffic in the following manner:

– http://www.adatum.com will be load balanced across Pool21.

– http://fabrikam.com will be load balanced across Pool22.

– ER1 must route traffic between the New York office and platform as a service (PaaS) services in the East US Azure region, as long as ER1 is available.

– ER2 must route traffic between the Los Angeles office and the PaaS services in the West US region, as long as ER2 is available.

– ER1 and ER2 must be configured to fail over automatically.

Application Requirements

App2 must be available to connect directly to the private IP addresses of the Azure virtual machines. App2 will be deployed directly to an Azure virtual network.

Inbound and outbound communications to App1 must be controlled by using NSGs.

Pricing Requirements

ADatum identifies the following pricing requirements:

– The cost of App1 and App2 must be minimized

– The transactional charges of Azure Storage accounts must be minimized

You need to identify the appropriate sizes for the Azure virtual machines.

Which five actions should you perform in sequence?

- [x] From VM1, connect to the collector virtual machine and run the Azure Migrate Collector.
- [x] From the Azure portal, create an Azure Migrate assessment.
- [x] From the Azure portal, download an OVA file.
- [x] From VM1, connect to the collector virtual machine and run the Azure Site Recovery deployment planner.
- [ ] From VM1, run the Deploy OVF Template wizard.
- [x] From the Azure portal, create an Azure Migrate project.

Incorrect

55. Question

You have an Azure Active Directory (Azure AD) tenant. You are the global administrator. You need to ensure that users accessing azure portal are only required to pass additional authentications after 14 days of their additional authentication from the devices they trust. How can you achieve this?

- Configure Azure AD Identity Protection sign-in risk policy
- **Define remember Multi-factor authentication from MFA Service Settings**
- Define trusted IP from MFA Service settings
- Define user risk policy on Azure AD Identity Protection

Correct

Defining remember Multi-factor authentication from MFA Service Settings will help you to achieve this.
https://docs.microsoft.com/en-us/azure/active-directory/authentication/howto-mfa-mfasettings#remember-multi-factor-authentication

56. Question

You are developing an Azure web application to store and archive patient medical records in Azure. You need to configure data storage to meet the following policies: – Ensure that you can configure a retention period for patient records. – Archived data must be readable. – Archived data must not be modified or deleted. Which Azure storage service should you use?

- Azure Tables
- Azure files
- **Azure Blobs**
- Azure Queues

Correct

https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-immutable-storage#about-immutable-blob-storage

57. Question

Case Study

Background –

You are a developer for Proseware, Inc. You are developing an application that applies a set of governance policies for Proseware's internal services, external services, and applications. The application will also provide a shared library for common functionality.

Requirements –
Policy service –
You develop and deploy a stateful ASP.NET Core 2.1 web application named Policy service to an Azure App Service Web App. The application reacts to events from Azure Event Grid and performs policy actions based on those events.
The application must include the Event Grid Event ID field in all Application Insights telemetry.
Policy service must use Application Insights to automatically scale with the number of policy actions that it is performing.

Policies –
Log Policy –
All Azure App Service Web Apps must write logs to Azure Blob storage. All log files should be saved to a container named logdrop. Logs must remain in the container for 15 days.

Authentication events –
Authentication events are used to monitor users signing in and signing out. All authentication events must be processed by Policy service. Sign outs must be processed as quickly as possible.

PolicyLib –
You have a shared library named PolicyLib that contains functionality common to all ASP.NET Core web services and applications. The PolicyLib library must:
Exclude non-user actions from Application Insights telemetry.
Provide methods that allow a web service to scale itself
Ensure that scaling actions do not disrupt application usage

Anomaly detection service –
You have an anomaly detection service that analyzes log information for anomalies. It is implemented as an Azure Machine Learning model. The model is deployed as a web service.
If an anomaly is detected, an Azure Function that emails administrators is called by using an HTTP WebHook.

Health monitoring –
All web applications and services have health monitoring at the /health service endpoint.

Policy loss –
When you deploy Policy service, policies may not be applied if they were in the process of being applied during the deployment.

Performance issue –

When under heavy load, the anomaly detection service undergoes slowdowns and rejects connections.

Notification latency –

Users report that anomaly detection emails can sometimes arrive several minutes after an anomaly is detected.

Relevant portions of the app files are shown below. Line numbers are included for reference only and include a two-character prefix that denotes the specific file to which they belong.

```
EventGridController.cs
EG01  public class EventGridController : Controller
EG02  {
EG03    public static AsyncLocal<string> EventId = new AsyncLocal<string>();
EG04    public IActionResult Process([FromBody]) string eventsJson
EG05   {
EG06     var events = JArray.Parse(eventsJson);
EG07
EG08     foreach (var @event in events)
EG09     {
EG10       EventId.Value = @event ["id"].ToString();
EG11       if (@event["topic"].ToString().Contains("providers/Microsoft.Storage"))
EG12       {
EG13         SendToAnomalyDetectionService(@event["data"]["url"].ToString());
EG14        }
EG15
EG16        {
EG17          EnsureLogging(@event["subject"].ToString());
EG18         }
EG19       }
EG20        return null;
EG21   }
EG22   private void EnsureLogging(string resource)
EG23   {
EG24     . . .
EG25   }
EG26   private async Task SendToAnomalyDetectionService(string uri)
EG27   {
EG28     var content = GetLogData(uri);
EG29     var scoreRequest = new
EG30     {
EG31       Inputs = new Dictionary<string, List<Dictionary<string, string>>>()
EG32       {
EG33          {
EG34            "input1",
```

```
EG35            new List<Dictionary<string, string>>()
EG36            {
EG37               new Dictionary<string, string>()
EG38               {
EG39             {
EG40               "logcontent", content
EG41              }
EG42             }
EG43           }
EG44         },
EG45       },
EG46       GlobalParameters = new Dictionary<string, string>() { }
EG47      };
EG48      var result = await (new HttpClient()).PostAsJsonAsync(". . .", scoreRequest);
EG49      var rawModelResult = await result.Content.ReadAsStringAsync();
EG50      var modelResult = JObject.Parse(rawModelResult);
EG51      if (modelResult["notify"].HasValues)
EG52      {
EG53        . . .
EG54       }
EG55    }
EG56    private (string name, string resourceGroup) ParseResourceId(string
resourceId)
EG57    {
EG58      . . .
EG59     }
EG60     private string GetLogData(string uri)
EG61    {
EG62      . . .
EG63    }
EG64    static string BlobStoreAccountSAS(string containerName)
EG65    {
EG66      . . .
EG67     ]
EG68  }
```

Relevant portions of the app files are shown below. Line numbers are included for reference only and include a two-character prefix that denotes the specific file to which they belong.

```
LoginEvent.cs
LE01  public class LoginEvent
LE02  {
LE03
LE04  public string subject { get; set; }
LE05  public DateTime eventTime { get; set; }
LE06  public Dictionary<string, string> data { get; set; }
LE07  public string Serialize()
LE08  {
LE09    return JsonConvert.SerializeObject(this);
LE10   }
LE11 }
```

You need to ensure that the solution can meet the scaling requirements for Policy Service. Which Azure Application Insights data model should you use?

- an Application Insights event

an Application Insights trace

an Application Insights dependency

an Application Insights metric

Incorrect

There are two types of metric telemetry supported by Application Insights: single measurement and pre-aggregated metric. Single measurement is just a name and value. Pre-aggregated metric specifies minimum and maximum value of the metric in the aggregation interval and standard deviation of it.

Pre-aggregated metric telemetry assumes that aggregation period was one minute.
There are several well-known metric names supported by Application Insights. These metrics placed into performanceCounters table.
https://docs.microsoft.com/en-us/azure/azure-monitor/app/data-model-metric-telemetry

58. Question

You have an Azure Active Directory (Azure AD) tenant. You have an existing Azure AD conditional access policy named Policy1. Policy1 enforces the use of Azure AD-joined devices when members of the Global Administrators group authenticate to Azure AD from untrusted locations. You need to ensure that members of the Global Administrators group will also be forced to use multi-factor authentication when authenticating from untrusted locations. What should you do?

From the Azure portal, modify grant control of Policy1.

From multi-factor authentication page, modify the service settings.

From multi-factor authentication page, modify the user settings.

From the Azure portal, modify session control of Policy1.

Incorrect

59. Question

Case Study

Overview

Contoso, Ltd. is a consulting company that has a main office in Montreal and two branch offices in Seattle and New York.

The Montreal office has 2,000 employees. The Seattle office has 1,000 employees. The New York office has 200 employees.

All the resources used by Contoso are hosted on-premises.

Contoso creates a new Azure subscription. The Azure Active Directory (Azure AD) tenant uses a domain named contoso.onmicrosoft.com. The tenant uses the P1 pricing tier.

Existing Environment

The network contains an Active Directory forest named contoso.com. All domain controllers are configured as DNS servers and host the contoso.com DNS zone.

Contoso has finance, human resources, sales, research, and information technology departments. Each department has an organizational unit (OU) that contains all the accounts of that respective department. All the user accounts have the department attribute set to their respective department. New users are added frequently.

Contoso.com contains a user named User1.

All the offices connect by using private links.

Contoso has data centers in the Montreal and Seattle offices. Each data center has a firewall that can be configured as a VPN device.

All infrastructure servers are virtualized. The virtualization environment contains the servers in the following table.

Name	Role	Contains Virtual Machine
Server1	VMWare vCenter Server	VM1
Server2	Hyper-V Host	VM2

Contoso uses two web applications named App1 and App2. Each instance on each web application requires 1GB of memory.

The Azure subscription contains the resources in the following table.

Name	Type
VNet1	Virtual Network
VM3	Virtual Machine
VM4	Virtual Machine

The network security team implements several network security groups (NSGs).

Planned Changes

Contoso plans to implement the following changes:

– Deploy Azure ExpressRoute to the Montreal office.

– Migrate the virtual machines hosted on Server1 and Server2 to Azure.

– Synchronize on-premises Active Directory to Azure Active Directory (Azure AD).
– Migrate App1 and App2 to two Azure web apps named WebApp1 and WebApp2.

Technical Requirements

Contoso must meet the following technical requirements:

– Ensure that WebApp1 can adjust the number of instances automatically based on the load and can scale up to five instances.
– Ensure that VM3 can establish outbound connections over TCP port 8080 to the applications servers in the Montreal office.
– Ensure that routing information is exchanged automatically between Azure and the routers in the Montreal office.
– Enable Azure Multi-Factor Authentication (MFA) for the users in the finance department only.
– Ensure that webapp2.azurewebsites.net can be accessed by using the name app2.contoso.com
– Connect the New York office to VNet1 over the Internet by using an encrypted connection.
– Create a workflow to send an email message when the settings of VM4 are modified.
– Create a custom Azure role named Role1 that is based on the Reader role.
– Minimize costs whenever possible. You need to implement Role1. Which command should you run before you create Role1?

- Get-AzureRmRoleAssignment -Name "Reader" | ConvertTo-Json
- Get-AzureADDirectoryRole - Name "Reader" | ConvertFrom-String
- Find-RoleCapability -Name "Reader" | ConvertFrom-Json
- **Get-AzureRmRoleDefinition -Name "Reader" | ConvertTo-Xml**

Correct

Techncal Requirements : Create a custom Azure role named Role1 that is based on the Reader role.

https://docs.microsoft.com/en-us/powershell/module/azurerm.resources/get-azurermroledefinition?view=azurermps-6.13.0#examples

60. Question

Case Study

Overview

ProtectLives Insurance is an insurance company that has three offices in Berlin, Tokyo and Bangkok. Each office has 5.000 users.

Existing Environment

Active Directory Environment

ProtectLives Insurance has a single-domain Active Directory forest named

ProtectLivesinsurance.com. The functional level of the forest is Windows Server 2012.

You recently provisioned an Azure Active Directory (Azure AD) tenant.

Network Infrastructure

Each office has a local data center that contains all the servers for that office. Each office has a dedicated connection to the Internet.

Each office has several link load balancers that provide access to the servers.

Active Directory Issue

Several users in ProtectLivesinsurance.com have UPNs that contain special characters.

You suspect that some of the characters are unsupported in Azure AD.

Licensing Issue

You attempt to assign a license in Azure to several users and receive the following error message: "Licenses not assigned. License agreement failed for one user."

You verify that the Azure subscription has the available licenses.

Requirements

Planned Changes

ProtectLives Insurance plans to open a new office in Paris. The Paris office will contain 1,000 users who will be hired during the next 12 months. All the resources used by the Paris office users will be hosted in Azure.

Planned Azure AD Infrastructure

The on-premises Active Directory domain will be synchronized to Azure AD.

All client computers in the Paris office will be joined to an Azure AD domain.

Planned Azure Networking Infrastructure

You plan to create the following networking resources in a resource group named All_Resources:

- Default Azure system routes that will be the only routes used to route traffic
- A virtual network named Paris-VNet that will contain two subnets named Subnet1 and Subnet2
- A virtual network named ClientResources-VNet that will contain one subnet named ClientSubnet
- A virtual network named AllOffices-VNet that will contain two subnets named Subnet3 and Subnet4

You plan to enable peering between Paris-VNet and AllOffices-VNet. You will enable the Use remote gateways setting for the Paris-VNet peerings.

You plan to create a private DNS zone named ProtectLivesinsurance.local and set the registration network to the ClientResources-VNet virtual network.

Planned Azure Computer Infrastructure

Each subnet will contain several virtual machines that will run either Windows Server 2012 R2, Windows Server 2016, or Red Hat Linux.

Department Requirements

ProtectLives Insurance identifies the following requirements for the company's departments:

– Web administrators will deploy Azure web apps for the marketing department. Each web app will be added to a separate resource group. The initial configuration of the web apps will be identical. The web administrators have permission to deploy web apps to resource groups.

– During the testing phase, auditors in the finance department must be able to review all Azure costs from the past week.

Authentication Requirements

Users in the Berlin office must use Azure Active Directory Seamless Single Sign-on (Azure AD Seamless SSO) when accessing resources in Azure.

Which blade should you instruct the finance department auditors to use?

- Resource providers
- Partner information
- **Invoices**
- Cost analysis

Incorrect

You can opt in and configure additional recipients to receive your Azure invoice in an email. This feature may not be available for certain subscriptions such as support offers, Enterprise Agreements, or Azure in Open. 1. Select your subscription from the Subscriptions page. Opt-in for each subscription you own. Click Invoices then Email my invoice. 2. Click Opt in and accept the terms. Scenario: During the testing phase, auditors in the finance department must be able to review all Azure costs from the past week. https://docs.microsoft.com/en-us/azure/billing/billing-download-azure-invoice-daily-usage-date

61. Question

You have an Azure subscription that contains 100 virtual machines. You regularly create and delete virtual machines. You need to identify unattached disks that can be deleted. What should you do?

- From Microsoft Azure Storage Explorer, view the Account Management properties.
- From the Azure portal, configure the Advisor recommendations.
- **From Azure Cost Management, open the Optimizer tab and create a report.**

From Azure Cost Management, create a Cost Management report.

Incorrect

You can find unused disks in the Azure Storage Explorer console. Once you drill down to the Blob containers under a storage account, you can see the lease state of the residing VHD (the lease state determines if the VHD is being used by any resource) and the VM to which it is leased out. If you find that the lease state and the VM fields are blank, it means that the VHD in question is unused. Note: The ManagedBy property stores the Id of the VM to which Managed Disk is attached to. If the ManagedBy property is $null then it means that the Managed Disk is not attached to a VM
https://cloud.netapp.com/blog/reduce-azure-storage-costs

62. Question

You have an Azure subscription named Subscription1 that contains a virtual network named VNet1. VNet1 is in a resource group named RG1. Subscription1 has a user named User1. User1 has the following roles: Reader Security Admin Security Reader You need to ensure that User1 can assign the Reader role for VNet1 to other users. What should you do?

Assign User1 the Owner role for VNet1.

Remove User1 from the Security Reader and Reader roles for Subscription1. Assign User1 the Contributor role for Subscription1.

Remove User1 from the Security Reader and Reader roles for Subscription1

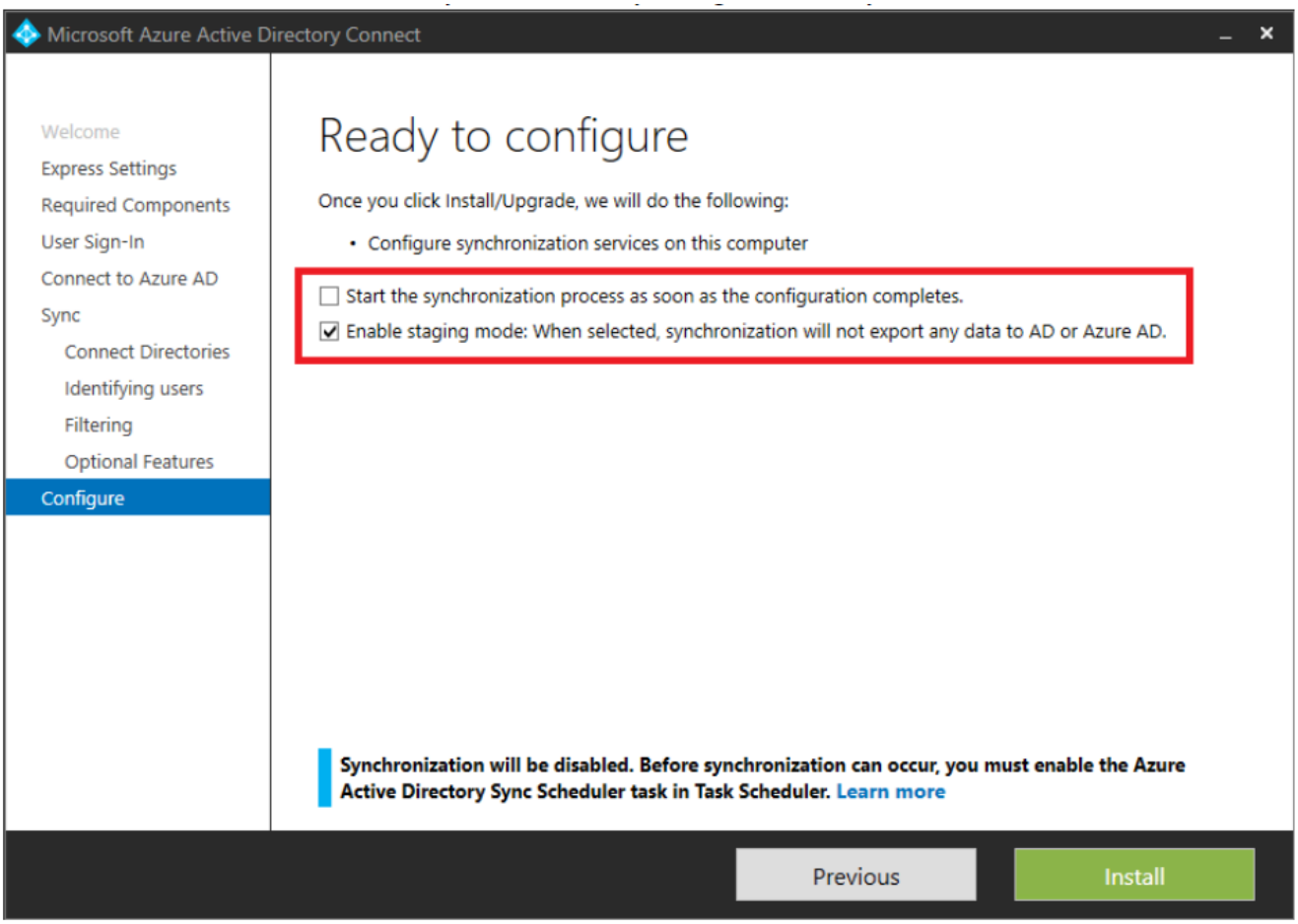
Assign User1 the Network Contributor role for VNet1.

Correct

Owner role lets you manage everything, including providing access to resources
https://docs.microsoft.com/en-us/azure/role-based-access-control/built-in-roles#owner

63. Question

You have an Active Directory forest named contoso.com. You install and configure AD Connect to use password hash synchronization as the single sign-on(SSO) method. Azure Ad Connect configuration shows below configs.



You review the synchronization results and discover that the Synchronization Service Manager does not display any sync jobs. You need to ensure that the synchronization completes successfully. What should you do?

- From Synchronization Service Manager, run a full import.
- **Run Azure AD Connect and disable staging mode.**
- From Azure PowerShell, run Start-AdSyncSycnCycle -policyType Initial.
- Run Azure AD Connect and set the SSO method to Pass-through Authentication

Correct

Run the installation wizard on the server in staging mode and disable staging mode.

https://docs.microsoft.com/en-us/azure/active-directory/hybrid/how-to-connect-sync-staging-server#switch-active-server

64. Question

Case Study

Background –

You are a developer for Proseware, Inc. You are developing an application that applies a set of governance policies for Proseware's internal services, external services, and applications. The application will also provide a shared library for common functionality.

Requirements –

Policy service –

You develop and deploy a stateful ASP.NET Core 2.1 web application named Policy service to an Azure App Service Web App. The application reacts to events from Azure Event Grid and performs policy actions based on those events.

The application must include the Event Grid Event ID field in all Application Insights telemetry.

Policy service must use Application Insights to automatically scale with the number of policy actions that it is performing.

Policies –

Log Policy –

All Azure App Service Web Apps must write logs to Azure Blob storage. All log files should be saved to a container named logdrop. Logs must remain in the container for 15 days.

Authentication events –

Authentication events are used to monitor users signing in and signing out. All authentication events must be processed by Policy service. Sign outs must be processed as quickly as possible.

PolicyLib –

You have a shared library named PolicyLib that contains functionality common to all ASP.NET Core web services and applications. The PolicyLib library must:

Exclude non-user actions from Application Insights telemetry.

Provide methods that allow a web service to scale itself

Ensure that scaling actions do not disrupt application usage

Anomaly detection service –

You have an anomaly detection service that analyzes log information for anomalies. It is implemented as an Azure Machine Learning model. The model is deployed as a web service.

If an anomaly is detected, an Azure Function that emails administrators is called by using an HTTP WebHook.

Health monitoring –

All web applications and services have health monitoring at the /health service endpoint.

Policy loss –

When you deploy Policy service, policies may not be applied if they were in the process of being applied during the deployment.

Performance issue –

When under heavy load, the anomaly detection service undergoes slowdowns and rejects connections.

Notification latency –

Users report that anomaly detection emails can sometimes arrive several minutes after an anomaly is detected.

Relevant portions of the app files are shown below. Line numbers are included for reference only and include a two-character prefix that denotes the specific file to which they belong.

```
EventGridController.cs
EG01  public class EventGridController : Controller
EG02  {
EG03    public static AsyncLocal<string> EventId = new AsyncLocal<string>();
EG04    public IActionResult Process([FromBody]) string eventsJson
EG05   {
EG06     var events = JArray.Parse(eventsJson);
EG07
EG08     foreach (var @event in events)
EG09     {
EG10       EventId.Value = @event ["id"].ToString();
EG11       if (@event["topic"].ToString().Contains("providers/Microsoft.Storage"))
EG12       {
EG13         SendToAnomalyDetectionService(@event["data"]["url"].ToString());
EG14        }
EG15
EG16        {
EG17          EnsureLogging(@event["subject"].ToString());
EG18         }
EG19       }
EG20        return null;
EG21   }
EG22   private void EnsureLogging(string resource)
EG23   {
EG24     . . .
EG25   }
EG26   private async Task SendToAnomalyDetectionService(string uri)
EG27   {
EG28     var content = GetLogData(uri);
EG29     var scoreRequest = new
EG30     {
EG31       Inputs = new Dictionary<string, List<Dictionary<string, string>>>()
EG32       {
EG33          {
EG34            "input1",
```

```
EG35            new List<Dictionary<string, string>>()
EG36            {
EG37               new Dictionary<string, string>()
EG38               {
EG39             {
EG40               "logcontent", content
EG41             }
EG42            }
EG43          }
EG44        },
EG45       },
EG46       GlobalParameters = new Dictionary<string, string>() { }
EG47      };
EG48      var result = await (new HttpClient()).PostAsJsonAsync(". . .", scoreRequest);
EG49      var rawModelResult = await result.Content.ReadAsStringAsync();
EG50      var modelResult = JObject.Parse(rawModelResult);
EG51      if (modelResult["notify"].HasValues)
EG52      {
EG53        . . .
EG54       }
EG55    }
EG56    private (string name, string resourceGroup) ParseResourceId(string
resourceId)
EG57    {
EG58      . . .
EG59     }
EG60     private string GetLogData(string uri)
EG61    {
EG62      . . .
EG63    }
EG64    static string BlobStoreAccountSAS(string containerName)
EG65    {
EG66      . . .
EG67     ]
EG68  }
```

Relevant portions of the app files are shown below. Line numbers are included for reference only and include a two-character prefix that denotes the specific file to which they belong.

```
LoginEvent.cs
LE01  public class LoginEvent
LE02  {
LE03
LE04  public string subject { get; set; }
LE05  public DateTime eventTime { get; set; }
LE06  public Dictionary<string, string> data { get; set; }
LE07  public string Serialize()
LE08  {
LE09    return JsonConvert.SerializeObject(this);
LE10   }
LE11 }
```

You need to ensure that authentication events are triggered and processed according to the policy.
You recommend to Create a new Azure Event Grid topic and add a subscription for the events. Does the solution meet the goal?

- No

Yes

Incorrect

Use a separate Azure Event Grid topics and subscriptions for sign-in and sign-out events. Scenario: Authentication events are used to monitor users signing in and signing out. All authentication events must be processed by Policy service. Sign outs must be processed as quickly as possible.

65. Question

Case Study

Overview

ADatum Corporation is a financial company that has two main offices in New York and Los Angeles.

ADatum has a subsidiary named Fabrikam, Inc. that shares the Los Angeles office.

ADatum is conducting an initial deployment of Azure services to host new line-of-business applications and is preparing to migrate its existing on-premises workloads to Azure.

ADatum uses Microsoft Exchange Online for email.

Existing Environment

On-Premises Environment

The on-premises workloads run on virtual machines hosted in a VMware vSphere 6 infrastructure. All the virtual machines are members of an Active Directory forest named adatum.com and run Windows Server 2016.

The New York office uses an IP address space of 10.0.0.0/16. The Los Angeles office uses an IP address space of 10.10.0.0/16.

The offices connect by using a VPN provided by an ISP. Each office has one Azure ExpressRoute circuit that provides access to Azure services and Microsoft Online Services. Routing is implemented by using Microsoft peering.

The New York office has a virtual machine named VM1 that has the vSphere console installed.

Azure Environment

You provision the Azure infrastructure by using the Azure portal. The infrastructure contains the resources

shown in the following table.

Name	Type	Azure Region
ASRV1	Azure Site Recovery vault	East US
ASRV2	Azure Site Recovery vault	West US
ASE1	Azure App Service Environment	East US
AG1	Azure Application Gateway (internal)	East US
AG2	Azure Application Gateway (Internet-facing)	West US
ER1	ExpressRoute circuit	East US
ER2	ExpressRoute circuit	West US

AG1 has two backend pools named Pool11 and Pool12. AG2 has two backend pools named Pool21 and Pool22.

Requirements

Planned Changes

ADatum plans to migrate the virtual machines from the New York office to the East US Azure region by using Azure Site Recovery.

Infrastructure Requirements

ADatum identifies the following infrastructure requirements:

– A new web app named App1 that will access third-parties for credit card processing must be deployed.

– A newly developed API must be implemented as an Azure function named App2. App2 will use a blob storage trigger. App2 must process new blobs immediately.

– The Azure infrastructure and the on-premises infrastructure must be prepared for the migration of the VMware virtual machines to Azure.

– The sizes of the Azure virtual machines that will be used to migrate the on-premises workloads must be identified.

– All migrated and newly deployed Azure virtual machines must be joined to the adatum.com domain.

– AG1 must load balance incoming traffic in the following manner:

– http://corporate.adatum.com/video/* will be load balanced across Pool11.

– http://corporate.adatum.com/images/* will be load balanced across Pool12.

– AG2 must load balance incoming traffic in the following manner:

– http://www.adatum.com will be load balanced across Pool21.

– http://fabrikam.com will be load balanced across Pool22.

– ER1 must route traffic between the New York office and platform as a service (PaaS) services in the East US Azure region, as long as ER1 is available.

– ER2 must route traffic between the Los Angeles office and the PaaS services in the West US region,

as long as ER2 is available.

– ER1 and ER2 must be configured to fail over automatically.

Application Requirements

App2 must be available to connect directly to the private IP addresses of the Azure virtual machines. App2 will be deployed directly to an Azure virtual network.

Inbound and outbound communications to App1 must be controlled by using NSGs.

Pricing Requirements

ADatum identifies the following pricing requirements:

– The cost of App1 and App2 must be minimized

– The transactional charges of Azure Storage accounts must be minimized What should you create to configure AG2?

- An additional public IP address
- URL path-based routing rules
- **Multi-site listeners**
- Basic listeners
- Basic routing rules

Correct

AG2 must load balance incoming traffic in the following manner: – http://www.adatum.com will be load balanced across Pool21. – http://fabrikam.com will be load balanced across Pool22. You need to configure an Azure Application Gateway with multi-site listeners to direct different URLs to different pools. https://docs.microsoft.com/en-us/azure/application-gateway/multiple-site-overview

66. Question

You have an Azure subscription that contains 10 virtual networks. The virtual networks are hosted in separate resource groups. Another administrator plans to create several network security groups (NSGs) in the subscription. You need to ensure that when an NSG is created, it automatically blocks TCP port 8080 between the virtual networks. You create a resource lock, and then you assign the lock to the subscription. Does this meet the goal?

- **No**
- Yes

Correct

There is way to do this with both ASM and ARM resources using Azure resource lock. https://blogs.msdn.microsoft.com/azureedu/2016/04/27/using-azure-resource-manager-policy-and-azure-lock-to-control-your-azure-resources/

67. Question

Kloudviva Azure Subscription has a virtual Network named VNet1 with two subnets Subnet1 & Subnet2 respectively. The subscription has below VM's. You need to deploy an application gateway named AppGW1 to VNet1, what should you do first?

- (●) Add a subnet
- ( ) Add a load balancer in a separate region.
- ( ) Add a new virtual Network (VNet2)
- ( ) Create a Network Security Group (NSG1)

Correct

For Azure to communicate between the resources that you create, it needs a virtual network. Application Gateway instances are created in separate subnets (One for Application Gateway & other for Backend Servers) In this scenario we only observe subnets for backend servers, but not for Application gateway, so you will need to create a subnet first. https://docs.microsoft.com/en-us/azure/application-gateway/create-multiple-sites-portal#create-an-application-gateway

68. Question

You have an Azure subscription named Subscription1. Subscription1 contains a resource group named RG1. RG1 contains resources that were deployed by using templates. You need to view the date and time when the resources were created in RG1. You recommend to go From the RG1 blade, you click Deployments. Does this meet the goal?

- ( ) No
- (●) Yes

Correct

69. Question

A company is creating an availability set with the following details

10 virtual machines have been deployed to the availability set.

During a planned maintenance, how many virtual machines would be available in the availability set?

- A. 3
- B. 6
- C. 8
- D. 10

Correct

Since there are 3 update domains, that means we can expect the following placement of the virtual machines

If Update Domain 1 goes down, then we can expect a total of 6 virtual machines to be up and running, 3 from Update Domain 2 and 3 from Update Domain 3.

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

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

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

70. Question

A team needs to create an Azure Event Hub. An application would then send and receive messages from the Event Hub.

You need to complete the following Azure Command Line interface script which would be used to create the Event Hub instance

Which of the following would go into Slot1?

- A. namespace
- B. hub
- C. eventhub
- D. message

Correct

The first step is to create an event hub namespace. An example of this is given in the Microsoft documentation

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

For more information on creating an Event Hub via the CLI, one can go to the below link

https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-quickstart-cli

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