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Microsoft Azure Architect Technologies (beta)

Question Set 1

QUESTION 1

You have two subscriptions named Subscription1 and Subscription2. Each subscription is associated to a different Azure AD tenant.

Subscription1 contains a virtual network named VNet1. VNet1 contains an Azure virtual machine named VM1 and has an IP address space of 10.0.0.0/16.

Subscription2 contains a virtual network named VNet2. Vnet2 contains an Azure virtual machine named VM2 and has an IP address space of 10.10.0.0/24.

You need to connect VNet1 to VNet2.

What should you do first?

- A. Modify the IP address space of VNet2.
- B. Move VM1 to Subscription2.
- C. Provision virtual network gateways.
- D. Move VNet1 to Subscription2.

Correct Answer: C

Section: [none]

Explanation

Explanation/Reference:



QUESTION 2

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?

- A. From the Azure portal, modify session control of Policy1.
- B. From multi-factor authentication page, modify the user settings.
- C. From multi-factor authentication page, modify the service settings.
- D. From the Azure portal, modify grant control of Policy1.

Correct Answer: D

Section: [none]

Explanation

Explanation/Reference:

QUESTION 3

You have an Azure subscription named Subscription1 that contains an Azure virtual machine named VM1. VM1 is in a resource group named RG1.

VM1 runs services that will be used to deploy resources to RG1.

You need to ensure that a service running on VM1 can manage the resources in RG1 by using the identity of VM1.



you do first?

- A. From the Azure portal, modify the Access control (IAM) settings of RG1.
- B. From the Azure portal, modify the Policies settings of RG1.
- C. From the Azure portal, modify the Access control (IAM) settings of VM1.
- D. From the Azure portal, modify the value of the Managed Service Identity option for VM1.

Correct Answer: D

Section: [none]

Explanation

Explanation/Reference: References: <https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/overview>

QUESTION 4

HOTSPOT

You have an Azure subscription named Subscription1. Subscription1 contains the virtual networks in the following table:

Name	Address space	Subnet name	Subnet address range
VNet1	10.1.0.0/16	Subnet1	10.1.1.0/24
VNet2	10.10.0.0/16	Subnet2	10.10.1.0/24
VNet3	172.16.0.0/16	Subnet3	172.16.1.0/24

Subscription1 contains the virtual machines in the following table:

Name	Network	Subnet	IP address
VM1	VNet1	Subnet1	10.1.1.4
VM2	VNet2	Subnet2	10.10.1.4
VM3	VNet3	Subnet3	172.16.1.4

The firewalls on all the virtual machines are configured to allow all ICMP traffic.

You add the peerings in the following table:

Virtual network	Peering network
VNet1	VNet3
VNet2	VNet3
VNet3	VNet1

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
VM1 can ping VM3.	<input type="radio"/>	<input type="radio"/>
VM2 can ping VM3.	<input type="radio"/>	<input type="radio"/>
VM2 can ping VM1.	<input type="radio"/>	<input type="radio"/>

Correct Answer:

Answer Area

Statements	Yes	No
VM1 can ping VM3.	<input checked="" type="radio"/>	<input type="radio"/>
VM2 can ping VM3.	<input checked="" type="radio"/>	<input type="radio"/>
VM2 can ping VM1.	<input type="radio"/>	<input checked="" type="radio"/>

Section: [none]

Explanation**Explanation/Reference:**

References:

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

QUESTION 5

You configure 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?

- A. From on-premises network, deploy Active Directory Federation Services (AD FS).
- B. From Azure AD, add and verify a custom domain name.
- C. From on-premises network, request a new certificate that contains the Active Directory domain name.
- D. From the server that runs Azure AD Connect, modify the filtering options.

Correct Answer: B

Section: [none]

Explanation**Explanation/Reference:****QUESTION 6**

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. Staging mode is enabled.

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?

- A. From Azure PowerShell, run **Start-AdSyncSyncCycle –PolicyType Initial**.
- B. Run Azure AD Connect and set the SSO method to Pass-through Authentication.
- C. From Synchronization Service Manager, run a full import.
- D. Run Azure AD Connect and disable staging mode.

Correct Answer: D

Section: [none]

Explanation

Explanation/Reference:

References: <https://docs.microsoft.com/en-us/azure/active-directory/hybrid/how-to-connect-sync-operations>

QUESTION 7

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?



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

Correct Answer: D

Section: [none]

Explanation

Explanation/Reference:

QUESTION 8

You have an Azure subscription that contains 10 virtual machines.

You need to ensure that you receive an email message when any virtual machines are powered off, restarted, or deallocated.

What is the minimum number of rules and action groups that you require?

- A. three rules and three action groups
- B. one rule and one action group
- C. three rules and one action group
- D. one rule and three action groups

Correct Answer: C

Section: [none]

Explanation

Explanation/Reference:

QUESTION 9

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? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Upload a configuration script.
- B. Create an automation account.
- C. Create a new virtual machine scale set in the Azure portal.
- D. Create an Azure policy.
- E. Modify the `extensionProfile` section of the Azure Resource Manager template.

Correct Answer: CE

Section: [none]

Explanation

Explanation/Reference: References: <https://docs.microsoft.com/en-us/azure/virtual-machine-scale-sets/tutorial-install-apps-template>

QUESTION 10

You manage a solution in Azure that consists of a single application which runs on a virtual machine (VM). Traffic to the application has increased dramatically.

The application must not experience any downtime and scaling must be dynamically defined.

You need to define an auto-scale strategy to ensure that the VM can handle the workload.

Which three options should you recommend? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Deploy application automatic vertical scaling.
- B. Create a VM availability set.
- C. Create a VM scale set.
- D. Deploy application automatic horizontal scaling.
- E. Deploy a custom auto-scale implementation.

Correct Answer: CDE

Section: [none]

Explanation

Explanation/Reference:



Question Set 1

QUESTION 1

Note: This question is part of series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have an Azure Active Directory (Azure AD) tenant named Adatum and an Azure Subscription named Subscription1. Adatum contains a group named Developers. Subscription1 contains a resource group named Dev.

You need to provide the Developers group with the ability to create Azure logic apps in the Dev resource group.

Solution: On Subscription1, you assign the DevTest Labs User role to the Developers group.

Does this meet the goal?

- A. Yes
- B. No

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

Explanation:

The DevTest Labs User role lets you connect, start, restart, and shutdown your virtual machines in your Azure DevTest Labs.

References: <https://docs.microsoft.com/en-us/azure/role-based-access-control/built-in-roles#devtest-labs-user>

QUESTION 2

Note: This question is part of series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

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You have an Azure Active Directory (Azure AD) tenant named Adatum and an Azure Subscription named Subscription1. Adatum contains a group named Developers. Subscription1 contains a resource group named Dev.

You need to provide the Developers group with the ability to create Azure logic apps in the Dev resource group.

Solution: On Dev, you assign the Logic App Contributor role to the Developers group.

Does this meet the goal?

- A. Yes
- B. No

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

Explanation:

The Logic App Contributor role lets you read, enable and disable logic app.

References: <https://docs.microsoft.com/en-us/azure/role-based-access-control/built-in-roles#logic-app-contributor>

QUESTION 3

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You need to provide the Developers group with the ability to create Azure logic apps in the Dev resource group.

Solution: On Dev, you assign the Contributor role to the Developers group.

Does this meet the goal?

- A. Yes
- B. No

Correct Answer: A

Section: [none]

Explanation

Explanation/Reference:

Explanation:

The Contributor role lets you manage everything except access to resources. It allows you to create and manage resources of all types, including creating Azure logic apps.

References: <https://docs.microsoft.com/en-us/azure/role-based-access-control/built-in-roles#contributor>

QUESTION 4

Note: This question is part of series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

A company backs up data to on-premises servers at their main facility. The company currently has 30 TB of archived data that infrequently used. The facility has download speeds of 100 Mbps and upload speeds of 20 Mbps.

You need to securely transfer all backups to Azure Blob Storage for long-term archival. All backup data must be sent within seven days.

Solution: Backup data to local disks and use the Azure Import/Export service to send backups to Azure Blob Storage.

Does this meet the goal?

- A. Yes
- B. No

Correct Answer: A

Section: [none]

Explanation

Explanation/Reference:

QUESTION 5

Note: This question is part of series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

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You need to securely transfer all backups to Azure Blob Storage for long-term archival. All backup data must be sent within seven days.

Solution: Create a file share in Azure Files. Mount the file share to the server and upload the files to the file share. Transfer the files to Azure Blob Storage.

Does this meet the goal?

- A. Yes
- B. No

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

QUESTION 6

Note: This question is part of series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

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You need to securely transfer all backups to Azure Blob Storage for long-term archival. All backup data must be sent within seven days.

Solution: Use the **Set-AzureStorageBlobContent** Azure PowerShell command to copy all backups asynchronously to Azure Blob Storage.

Does this meet the goal?

- A. Yes
- B. No

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

QUESTION 7

HOTSPOT

You are developing a back-end Azure App Service that scales based on the number of messages contained in a Service Bus queue.

A rule already exists to scale up the App Service when the average queue length of unprocessed and valid queue messages is greater than 1000.

You need to add a new rule that will continuously scale down the App Service as long as the scale up condition is not met.

How should you configure the Scale rule? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:



Answer Area

Scale Rule X

Metric source

Storage queue
Service Bus queue
Current resource
Storage queue(classic)

Resource type

Service Bus Namespaces v

Resource

MessageQueue1103 v

*Queues

itemqueue v

Criteria

*Metric name

Message Count
Active Message Count

1 minute time grain

*Time grain statistic ⓘ

Total
Maximum
Average
Count

*Operator

Greater than

Correct Answer:



Answer Area

Scale Rule X

Metric source

Storage queue
Service Bus queue
Current resource
Storage queue(classic)

Resource type

Service Bus Namespaces v

Resource

MessageQueue1103 v

*Queues

itemqueue v

Criteria

*Metric name

Message Count
Active Message Count

1 minute time grain

*Time grain statistic ⓘ

Total
Maximum
Average
Count

*Operator

Greater than

Section: [none]
Explanation

Explanation/Reference:

QUESTION 8

You have an on-premises network that contains a Hyper-V host named Host1. Host1 runs Windows Server 2016 and hosts 10 virtual machines that run Windows Server 2016.

You plan to replicate the virtual machines to Azure by using Azure Site Recovery.

You create a Recovery Services vault named ASR1 and a Hyper-V site named Site1.

You need to add Host1 to ASR1.

What should you do?

- A.
 - Download the installation file for the Azure Site Recovery Provider.
 - Download the storage account key.
 - Install the Azure Site Recovery Provider on each virtual machine and register the virtual machines.
- B.
 - Download the installation file for the Azure Site Recovery Provider.
 - Download the vault registration key.
 - Install the Azure Site Recovery Provider on Host1 and register the server.
- C.
 - Download the installation file for the Azure Site Recovery Provider.
 - Download the storage account key.
 - Install the Azure Site Recovery Provider on Host1 and register the server.
- D.
 - Download the installation file for the Azure Site Recovery Provider.
 - Download the vault registration key.
 - Install the Azure Site Recovery Provider on each virtual machine and register the virtual machines.

Correct Answer: B

Section: [none]
Explanation

Explanation/Reference:

References: <https://docs.microsoft.com/en-us/azure/site-recovery/hyper-v-azure-tutorial>

QUESTION 9

You plan to migrate an on-premises Hyper-V environment to Azure by using Azure Site Recovery. The Hyper-V environment is managed by using Microsoft System Center Virtual Machine Manager (VMM).

The Hyper-V environment contains the virtual machines in the following table:

Name	Operating system (OS)	OS disk size	BitLocker Drive Encryption (BitLocker) enabled on OS disks.	Generation
DC1	Windows Server 2016	500 GB	No	2
FS1	Ubuntu 16.04 LTS	200 GB	No	2
CA1	Windows Server 2012 R2	1 TB	Yes	1
SQL1	Windows Server 2016	200 GB	No	1

Which virtual machine can be migrated by using Azure Site Recovery?

- A. FS1
- B. CA1
- C. DC1
- D. SQL1

Correct Answer: D

Section: [none]

Explanation

Explanation/Reference:

References: <https://docs.microsoft.com/en-us/azure/site-recovery/hyper-v-azure-support-matrix#azure-vm-requirements>

QUESTION 10

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?

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



Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

References: <https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-about-point-to-site-routing>

QUESTION 11

You set the multi-factor authentication status for a user named admin1@contoso.com to **Enabled**.

Admin1 accesses the Azure portal by using a web browser.

Which additional security verifications can Admin1 use when accessing the Azure portal?

- A. an app password, a text message that contains a verification code, and a verification code sent from the Microsoft Authenticator app
- B. a phone call, a text message that contains a verification code, and a notification or a verification code sent from the Microsoft Authenticator app
- C. a phone call, an email message that contains a verification code, and a text message that contains an app password

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

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

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

QUESTION 12

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 only from your on-premises network.

What should you configure?

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



Correct Answer: D

Section: [none]

Explanation

Explanation/Reference:

References: <https://docs.microsoft.com/en-us/azure/active-directory/authentication/howto-mfa-mfasettings>

QUESTION 13

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?

- A. Assign User1 the Owner role for VNet1.
- B. Assign User1 the Network Contributor role for VNet1.
- C. Remove User1 from the Security Reader and Reader roles for Subscription1. Assign User1 the Contributor role for Subscription1.
- D. Remove User1 from the Security Reader and Reader roles for Subscription1.

Correct Answer: A

Section: [none]

Explanation

Explanation/Reference:

QUESTION 14

You have an Azure Service Bus.

You need to implement a Service Bus queue that guarantees first-in-first-out (FIFO) delivery of messages.

What should you do?

- A. Enable partitioning
- B. Enable duplicate detection
- C. Set the Lock Duration setting to **10 seconds**
- D. Enable sessions
- E. Set the Max Size setting of the queue to **5 GB**

Correct Answer: D

Section: [none]

Explanation

Explanation/Reference: References: <https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted>

QUESTION 15

You have an Azure subscription that contains a policy-based virtual network gateway named GW1 and a virtual network named VNet1.

You need to ensure that you can configure a point-to-site connection from VNet1 to an on-premises computer.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Add a service endpoint to VNet1.
- B. Add a public IP address space to VNet1.
- C. Create a route-based virtual network gateway.
- D. Reset GW1.
- E. Delete GW1.
- F. Add a connection to GW1.

Correct Answer: CE

Section: [none]

Explanation

Explanation/Reference:

**QUESTION 16**

DRAG DROP

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 in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions

From an Azure virtual machine, install an on-premises data gateway.

From the Azure portal, create an on-premises data gateway.

Create an Azure virtual machine that runs Windows Server 2016.

From an on-premises computer, install an on-premises data gateway.

From the Logic App Designer in the Azure portal, add a connector.

Answer Area



Correct Answer:

Actions

From an Azure virtual machine, install an on-premises data gateway.

Create an Azure virtual machine that runs Windows Server 2016.

Answer Area

From an on-premises computer, install an on-premises data gateway.

From the Azure portal, create an on-premises data gateway.

From the Logic App Designer in the Azure portal, add a connector.



Section: [none]

Explanation

Explanation/Reference:

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

QUESTION 17

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

Name	Type	Address space
VNET1	Virtual network	10.1.1.0/24
Subnet1	Subnet	10.1.1.0/24
VM1	Virtual machine	<i>Not applicable</i>

Subnet1 is on VNET1. VM1 connects to Subnet1.

You plan to create a virtual network gateway on VNET1.

You need to prepare the environment for the planned virtual network gateway.

What are two ways to achieve this goal? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Modify the address space used by VNET1.
- B. Modify the address space used by Subnet1.
- C. Create a subnet named GatewaySubnet on VNET1.
- D. Create a local network gateway.
- E. Delete Subnet1.



Correct Answer: AE

Section: [none]

Explanation

Explanation/Reference:

QUESTION 18

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?

- A. Scale up Plan1.
- B. Modify the connection strings for WebApp1.

- C. Scale out Plan1.
- D. Disable anonymous access to WebApp1.

Correct Answer: A

Section: [none]

Explanation

Explanation/Reference:

Explanation:

The D1 (Shared) pricing tier does not support HTTPS.

QUESTION 19

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.

Solution: Create a Service Fabric Cluster with a stateful Reliable Service for each component.

Does the solution meet the goal?

- A. Yes
- B. No

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

QUESTION 20

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.

Solution: Create a Service Fabric Cluster with a stateful Reliable Service for Routing Service. Deploy a Guest Executable to Service Fabric for each component.

Does the solution meet the goal?

- A. Yes
- B. No



Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

Testlet 2

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:
1. http://corporate.adatum.com/video/* will be load balanced across Pool11
 2. http://corporate.adatum.com/images/* will be load balanced across Pool12 ▪ AG2 must load balance incoming traffic in the following manner:
 1. <http://www.adatum.com> will be load balanced across Pool21
 2. <http://www.fabrikam.com> will be load balanced across Pool22
- ER1 must route traffic between the New York office and the 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 able 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.



QUESTION 1

You need to configure AG1.

What should you create?

- A. a multi-site listener
- B. a basic routing rule
- C. a URL path-based routing rule
- D. a basic listener

Correct Answer: C

Section: [none]

Explanation

Explanation/Reference:

References:

<https://docs.microsoft.com/en-us/azure/application-gateway/application-gateway-create-url-route-portal>

QUESTION 2

DRAG DROP

You need to configure the Azure ExpressRoute circuits.



<https://vceplus.com/>

How should you configure Azure ExpressRoute routing? To answer, drag the appropriate configurations to the correct locations. Each configuration may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Configurations

Use BGP communities to configure BGP's Local Preference.

Use BGP to append the private AS numbers to the advertised prefixes.

Use BGP to append the public AS numbers to the advertised prefixes.

Answer Area

Routing from A.Datum to Azure:

Routing from Microsoft Online Services to A.Datum:



Correct Answer:

Configurations

Use BGP communities to configure BGP's Local Preference.

Answer Area

Routing from A.Datum to Azure:

Use BGP to append the private AS numbers to the advertised prefixes.

Routing from Microsoft Online Services to A.Datum:

Use BGP to append the public AS numbers to the advertised prefixes.



Section: [none]

Explanation

Explanation/Reference:

Explanation:

Azure compute services, namely virtual machines (IaaS) and cloud services (PaaS), that are deployed within a virtual network can be connected through the private peering domain. The private peering domain is considered to be a trusted extension of your core network into Microsoft Azure.

Services such as Azure Storage, SQL databases, and Websites are offered on public IP addresses. You can privately connect to services hosted on public IP addresses, including VIPs of your cloud services, through the public peering routing domain. You can connect the public peering domain to your DMZ and connect to all Azure services on their public IP addresses from your WAN without having to connect through the internet.

References:

<https://docs.microsoft.com/en-us/azure/expressroute/expressroute-circuit-peering>

Testlet 1

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.

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Application Requirements

App2 must be able 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.



QUESTION 1

HOTSPOT

You need to implement App2 to meet the application requirements. What should you include in the implementation? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

App Service plan pricing tier:

	V
Isolated	
Shared	
Standard	

Enabled feature:

	V
Always On	
Auto Swap	
Web Sockets	

Correct Answer:



Answer Area

App Service plan pricing tier:

	V
Isolated	
Shared	
Standard	

Enabled feature:

	V
Always On	
Auto Swap	
Web Sockets	

Section: [none]

Explanation

Explanation/Reference:

References:

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



Question Set 1

QUESTION 1

HOTSPOT

You are developing a solution that requires serverless code execution in Azure.

The solution has two functions that must run in a specific order.

You need to ensure that the second function can use the output from the first function.

How should you complete the code? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:



Answer Area

```
public static async Task<object> Run (
```

DurableOrchestrationContext
DurableActivityContext
DurableOrchestrationClient
DurableOrchestrationStatus

c)

```
{
  try
  {
```

```
var f1Result = await c. <object>("AzureFunction01", null);
```

CallActivityAsync
CallSuborchestratorAsync
WaitForExternalEvent



```
return await c.
}
```

CallActivityAsync
CallSubOrchestratorAsync
WaitForExternalEvent

```
<object>("AzureFunction02", f1Result);
```

```
catch (Exception e)
{
  ...
}
}
```

Correct Answer:

Answer Area

```
public static async Task<object> Run (
```

DurableOrchestrationContext
DurableActivityContext
DurableOrchestrationClient
DurableOrchestrationStatus

c)

```
{
  try
  {
```

```
var f1Result = await c. <object>("AzureFunction01", null);
```

CallActivityAsync
CallSuborchestratorAsync
WaitForExternalEvent



```
return await c.
}
```

CallActivityAsync
CallSubOrchestratorAsync
WaitForExternalEvent

```
<object>("AzureFunction02", f1Result);
```

```
catch (Exception e)
{
  ...
}
}
```

Section: [none]

Explanation

Explanation/Reference:

QUESTION 2

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?

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

Correct Answer: A

Section: [none]

Explanation

Explanation/Reference:

References: <https://docs.microsoft.com/mt-mt/azure/sql-database/sql-database-elastic-transactions-overview?view=azuremps-6.13.0>

QUESTION 3

HOTSPOT

You are creating a bot for a company by using QnA Maker.

You need to ensure that the company can update the bot without third-party assistance.

What should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Scenario

Add customer question/answer content.

Use an Azure Application Insights resource for analytics.

Update and train a knowledge base.

Component

	V
QnA Maker runtime	
QnA Maker management service.	
	V
QnA Maker runtime	
QnA Maker management service.	
	V
QnA Maker runtime	
QnA Maker management service.	

Correct Answer:

Answer Area

Scenario	Component						
Add customer question/answer content.	<table border="1"> <tr> <td></td> <td>V</td> </tr> <tr> <td>QnA Maker runtime</td> <td></td> </tr> <tr> <td>QnA Maker management service.</td> <td></td> </tr> </table>		V	QnA Maker runtime		QnA Maker management service.	
	V						
QnA Maker runtime							
QnA Maker management service.							
Use an Azure Application Insights resource for analytics.	<table border="1"> <tr> <td></td> <td>V</td> </tr> <tr> <td>QnA Maker runtime</td> <td></td> </tr> <tr> <td>QnA Maker management service.</td> <td></td> </tr> </table>		V	QnA Maker runtime		QnA Maker management service.	
	V						
QnA Maker runtime							
QnA Maker management service.							
Update and train a knowledge base.	<table border="1"> <tr> <td></td> <td>V</td> </tr> <tr> <td>QnA Maker runtime</td> <td></td> </tr> <tr> <td>QnA Maker management service.</td> <td></td> </tr> </table>		V	QnA Maker runtime		QnA Maker management service.	
	V						
QnA Maker runtime							
QnA Maker management service.							

Section: [none]

Explanation

Explanation/Reference:

References: <https://docs.microsoft.com/en-us/azure/cognitive-services/qnamaker/overview/overview>

QUESTION 4

You are developing a speech-enabled home automation control bot.

The bot interprets some spoken words incorrectly.

You need to improve the spoken word recognition for the bot.

What should you implement?

- A. The Skype for Business Channel and use scorable dialogs for improving conversation flow.
- B. The Web Chat Channel and Speech priming using a Bing Speech Service and LUIS app.
- C. The Skype Channel and use scorable dialogs for improving conversation flow.
- D. The Cortana Channel and use scorable dialogs for improving conversation flow.

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:



Testlet 2

Case Study

Background

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 Marsala

Order Pickup Order Delivery

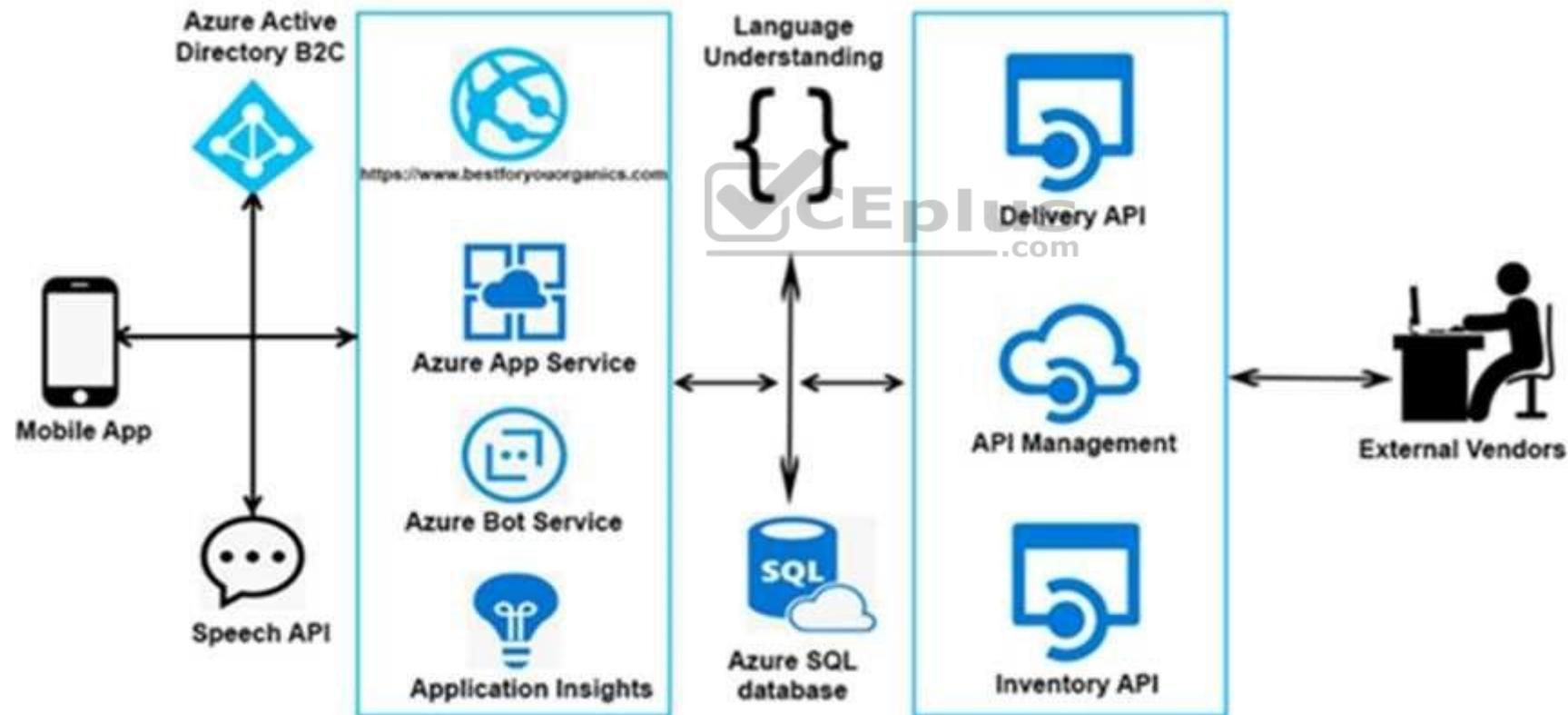
Vendor API

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 ConfigureServices(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         }
```

QUESTION 1

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution. Determine whether the solution meets the stated goals.

You need to meet the vendor notification requirement.

Solution: Configure notifications in the Azure API Management instance.

Does the solution meet the goal?

- A. Yes
- B. No

Correct Answer: A

Section: [none]

Explanation

Explanation/Reference: References: <https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-configure-notifications>

QUESTION 2

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution. Determine whether the solution meets the stated goals.

You need to meet the vendor notification requirement.

Solution: Update the Delivery API to send emails by using a cloud-based email service.

Does the solution meet the goal?

- A. Yes
- B. No

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

References: <https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-configure-notifications>

QUESTION 3

You need to meet the vendor notification requirement.

Solution: Create and apply a custom outbound Azure API Management policy.

Does the solution meet the goal?

- A. Yes
- B. No

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

References: <https://docs.microsoft.com/en-us/azure/api-management/api-management-howto-configure-notifications>

QUESTION 4

You need to resolve the delivery API error.

What should you do?

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

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

References:

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-develop-error-messages>





<https://vceplus.com/>

