

## Exam Questions az-500

Microsoft Azure Security Technologies

<https://www.2passeasy.com/dumps/az-500/>



### NEW 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 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 Subscription named Sub1.

You have an Azure Storage account named Sa1 in a resource group named RG1.

Users and applications access the blob service and the file service in Sa1 by using several shared access signatures (SASs) and stored access policies. You discover that unauthorized users accessed both the file service and the blob service.

You need to revoke all access to Sa1. Solution: You generate new SASs. Does this meet the goal?

A. Yes

B. No

**Answer: B**

**Explanation:** Instead you should create a new stored access policy.

To revoke a stored access policy, you can either delete it, or rename it by changing the signed identifier. Changing the signed identifier breaks the associations between any existing signatures and the stored access policy. Deleting or renaming the stored access policy immediately affects all of the shared access signatures associated with it.

References:

<https://docs.microsoft.com/en-us/rest/api/storageservices/Establishing-a-Stored-Access-Policy>

### NEW QUESTION 2

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You have an Azure Storage account named Sa1 in a resource group named RG1.

Users and applications access the blob service and the file service in Sa1 by using several shared access signatures (SASs) and stored access policies. You discover that unauthorized users accessed both the file service and the blob service.

You need to revoke all access to Sa1.

Solution: You create a new stored access policy. Does this meet the goal?

A. Yes

B. No

**Answer: A**

**Explanation:** To revoke a stored access policy, you can either delete it, or rename it by changing the signed identifier. Changing the signed identifier breaks the associations between any existing signatures and the stored access policy. Deleting or renaming the stored access policy immediately effects all of the shared access signatures associated with it.

References:

<https://docs.microsoft.com/en-us/rest/api/storageservices/Establishing-a-Stored-Access-Policy>

### NEW QUESTION 3

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You have a hybrid configuration of Azure Active Directory (AzureAD). You have an Azure HDInsight cluster on a virtual network.

You plan to allow users to authenticate to the cluster by using their on-premises Active Directory credentials. You need to configure the environment to support the planned authentication.

Solution: You create a site-to-site VPN between the virtual network and the on-premises network. Does this meet the goal?

A. Yes

B. No

**Answer: A**

**Explanation:** You can connect HDInsight to your on-premises network by using Azure Virtual Networks and a VPN gateway.

- Note: To allow HDInsight and resources in the joined network to communicate by name, you must perform the following actions: Create Azure Virtual Network.

- Create a custom DNS server in the Azure Virtual Network.

- Configure the virtual network to use the custom DNS server instead of the default Azure Recursive Resolver. Configure forwarding between the custom DNS server and your on-premises DNS server.

References:

<https://docs.microsoft.com/en-us/azure/hdinsight/connect-on-premises-network>

### NEW QUESTION 4

Your network contains an Active Directory forest named contoso.com. The forest contains a single domain.

You have an Azure subscription named Sub1 that is associated to an Azure Active Directory (Azure AD) tenant named contoso.com. You plan to deploy Azure AD Connect and to integrate Active Directory and the Azure AD tenant.

You need to recommend an integration solution that meets the following requirements:

- Ensures that password policies and user logon restrictions apply to user accounts that are synced to the tenant Minimizes the number of servers required for the solution.

Which authentication method should you include in the recommendation?

- A. federated identity with Active Directory Federation Services (AD FS)
- B. password hash synchronization with seamless single sign-on (SSO)
- C. pass-through authentication with seamless single sign-on (SSO)

**Answer:** B

**Explanation:** Password hash synchronization requires the least effort regarding deployment, maintenance, and infrastructure. This level of effort typically applies to organizations that only need their users to sign in to Office 365, SaaS apps, and other Azure AD-based resources. When turned on, password hash synchronization is part of the Azure AD Connect sync process and runs every two minutes.

Incorrect Answers:

A: A federated authentication system relies on an external trusted system to authenticate users. Some companies want to reuse their existing federated system investment with their Azure AD hybrid identity solution. The maintenance and management of the federated system falls outside the control of Azure AD. It's up to the organization by using the federated system to make sure it's deployed securely and can handle the authentication load.

C: For pass-through authentication, you need one or more (we recommend three) lightweight agents installed on existing servers. These agents must have access to your on-premises Active Directory Domain Services, including your on-premises AD domain controllers. They need outbound access to the Internet and access to your domain controllers. For this reason, it's not supported to deploy the agents in a perimeter network.

Pass-through Authentication requires unconstrained network access to domain controllers. All network traffic is encrypted and limited to authentication requests.

References:

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

## NEW QUESTION 5

Your network contains an on-premises Active Directory domain named corp.contoso.com.

You have an Azure subscription named Sub1 that is associated to an Azure Active Directory (Azure AD) tenant named contoso.com. You sync all on-premises identities to Azure AD.

You need to prevent users who have a givenName attribute that starts with TEST from being synced to Azure AD. The solution must minimize administrative effort. What should you use?

- A. Synchronization Rules Editor
- B. Web Service Configuration Tool
- C. the Azure AD Connect wizard
- D. Active Directory Users and Computers

**Answer:** A

**Explanation:** Use the Synchronization Rules Editor and write attribute-based filtering rule.

References:

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

## NEW QUESTION 6

DRAG DROP

You are implementing conditional access policies.

You must evaluate the existing Azure Active Directory (Azure AD) risk events and risk levels to configure and implement the policies. You need to identify the risk level of the following risk events:

- Users with leaked credentials Impossible travel to atypical locations
- Sign ins from IP addresses with suspicious activity

Which level should you identify for each risk event? To answer, drag the appropriate levels to the correct risk events. Each level 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:

Levels	Answer Area
High	Impossible travel to atypical locations: <input type="text"/>
Low	Users with leaked credentials: <input type="text"/>
Medium	Sign ins from IP addresses with suspicious activity: <input type="text"/>

**Answer:**

**Explanation:** Azure AD Identity protection can detect six types of suspicious sign-in activities: Users with leaked credentials

- Sign-ins from anonymous IP addresses Impossible travel to atypical locations
- Sign-ins from infected devices
- Sign-ins from IP addresses with suspicious activity Sign-ins from unfamiliar locations

These six types of events are categorized in to 3 levels of risks – High, Medium & Low:

Sign-in Activity	Risk Level
Users with leaked credentials	High
Sign-ins from anonymous IP addresses	Medium
Impossible travel to atypical locations	Medium
Sign-ins from infected devices	Medium
Sign-ins from IP addresses with suspicious activity	Low
Sign-ins from unfamiliar locations	Medium

References:

<http://www.rebeladmin.com/2018/09/step-step-guide-configure-risk-based-azure-conditional-access-policies/>

### NEW QUESTION 7

DRAG DROP

You create an Azure subscription.

You need to ensure that you can use Azure Active Directory (Azure AD) Privileged Identity Management (PIM) to secure Azure AD roles.

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

Verify your identity by using multi-factor authentication (MFA).

Consent to PIM.

Sign up PIM for Azure AD roles.

Discover privileged roles.

Discover resources.

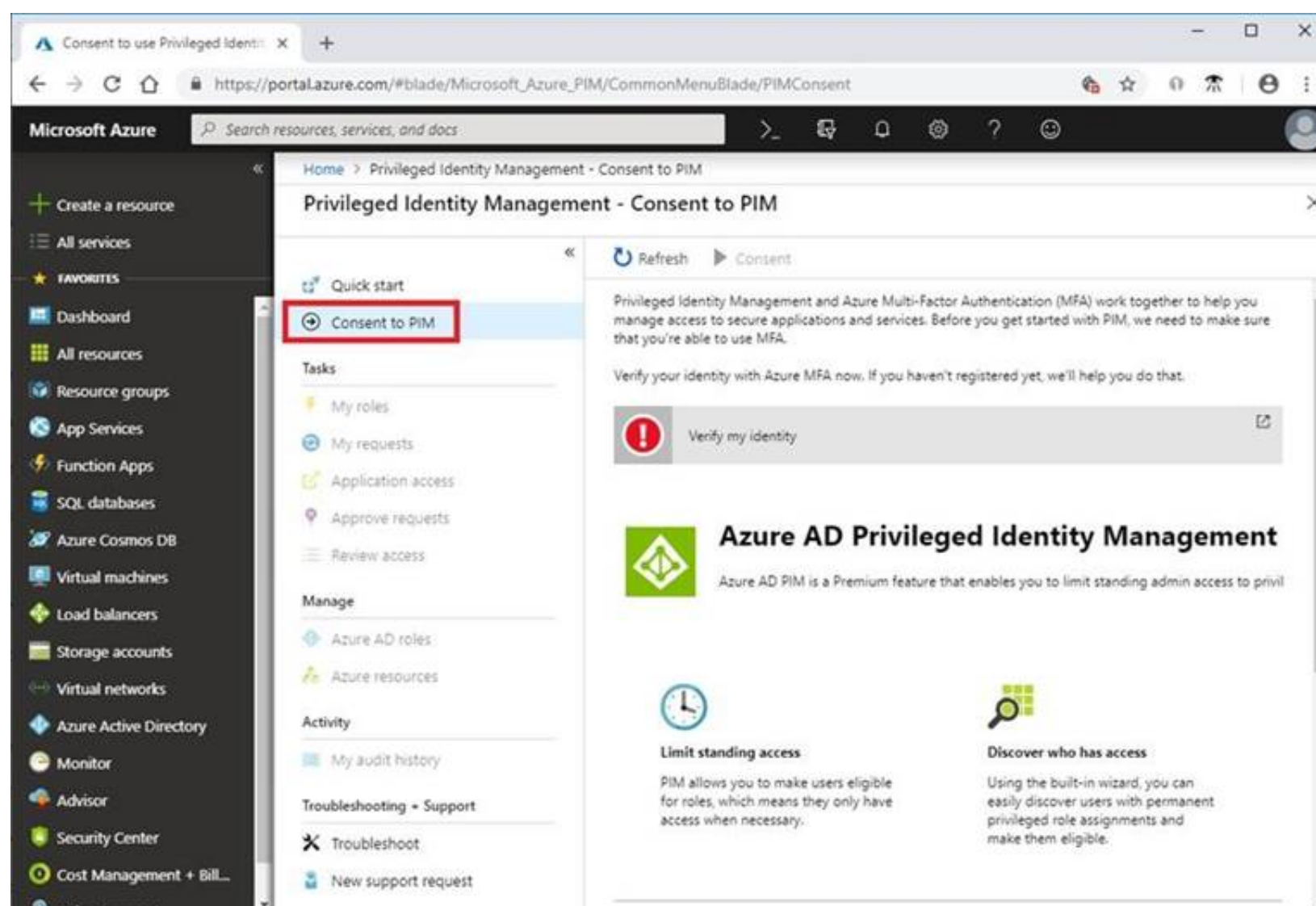
#### Answer Area



**Answer:**

**Explanation:** Step 1: Consent to PIM





Step: 2 Verify your identity by using multi-factor authentication (MFA)

Click Verify my identity to verify your identity with Azure MFA. You'll be asked to pick an account.

Step 3: Sign up PIM for Azure AD roles

Once you have enabled PIM for your directory, you'll need to sign up PIM to manage Azure AD roles.

References:

<https://docs.microsoft.com/en-us/azure/active-directory/privileged-identity-management/pim-getting-started>

## NEW QUESTION 8

### HOTSPOT

Your company has two offices in Seattle and New York. Each office connects to the Internet by using a NAT device. The offices use the IP addresses shown in the following table.

Location	IP address space	Public NAT segment
Seattle	10.10.0.0/16	190.15.1.0/24
New York	172.16.0.0/16	194.25.2.0/24

The company has an Azure Active Directory (Azure AD) tenant named contoso.com. The tenant contains the users shown in the following table.

Name	Multi-factor authentication (MFA) status
User1	Enabled
User2	Enforced

The MFA service settings are configured as shown in the exhibit. (Click the Exhibit tab.)

## trusted ips [\(learn more\)](#)

☒ Skip multi-factor authentication for requests from federated users on my intranet

Skip multi-factor authentication for requests from following range of IP address subnets

10.10.0.0/16  
 194.25.2.0/24

## verification options [\(learn more\)](#)

Methods available to users:

☒ Call to phone

☒ Text message to phone

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

	Yes	No
If User1 signs in to Azure from a device that uses an IP address of 134.18.14.10, User1 must be authenticated by using a phone.	<input type="radio"/>	<input type="radio"/>
If User2 signs in to Azure from a device in the Seattle office, User2 must be authenticated by using the Microsoft Authenticator app.	<input type="radio"/>	<input type="radio"/>
If User2 signs in to Azure from a device in the New York office, User1 must be authenticated by using a phone	<input type="radio"/>	<input type="radio"/>

**Answer:**

**Explanation:** Box 2: No

Use of Microsoft Authenticator is not required.

Note: Microsoft Authenticator is a multifactor app for mobile devices that generates time-based codes used during the Two-Step Verification process. Box 3: No

The New York IP address subnet is included in the "skip multi-factor authentication for request.

References:

<https://www.cayosoft.com/difference-enabling-enforcing-mfa/>

### NEW QUESTION 9

Your company plans to create separate subscriptions for each department. Each subscription will be associated to the same Azure Active Directory (Azure AD) tenant.

You need to configure each subscription to have the same role assignments. What should you use?

- A. Azure Security Center
- B. Azure Blueprints
- C. Azure AD Privileged Identity Management (PIM)
- D. Azure Policy

**Answer:** C

**Explanation:** The Azure AD Privileged Identity Management (PIM) service also allows Privileged Role Administrators to make permanent admin role assignments.

References:

<https://docs.microsoft.com/en-us/azure/active-directory/privileged-identity-management/pim-how-to-add-role-to-user>

### NEW QUESTION 10

HOTSPOT

You have an Azure Container Registry named Registry1.

You add role assignment for Registry1 as shown in the following table.

User	Role
User1	AcrPush
User2	AcrPull
User3	AcrImageSigner
User4	Contributor

Which users can upload images to Registry1 and download images from Registry1? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Upload images:

▼

User1 only

User1 and User4 only

User1, User3, and User4

User1, User2, User3, and User4

Download images:

▼

User2 only

User1 and User2 only

User2 ad User4 only

User1, User2, and User4

User1, User2, User3, and User4

Answer:

**Explanation:** Box 1: User1 and User4 only  
 Owner, Contributor and AcrPush can push images.  
 Box 2: User1, User2, and User4  
 All, except AcrImagineSigner, can download/pull images.

Role/Permission	Access Resource Manager	Create/delete registry	Push image	Pull image	Delete image data	Change policies	Sign images
Owner	X	X	X	X	X	X	
Contributor	X	X	X	X	X	X	
Reader	X			X			
AcrPush			X	X			
AcrPull				X			
AcrDelete					X		
AcrImageSigner							X

References:

<https://docs.microsoft.com/bs-latn-ba/azure/container-registry/container-registry-roles>

### NEW QUESTION 10

You have an Azure subscription.

You create an Azure web app named Contoso1812 that uses an S1 App service plan.

You create a DNS record for www.contoso.com that points to the IP address of Contoso1812.

You need to ensure that users can access Contoso1812 by using the https://www.contoso.com URL. Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Turn on the system-assigned managed identity for Contoso1812.
- B. Add a hostname to Contoso1812.
- C. Scale out the App Service plan of Contoso1812.
- D. Add a deployment slot to Contoso1812.
- E. Scale up the App Service plan of Contoso1812.

Answer: BE

**Explanation:** B: You can configure Azure DNS to host a custom domain for your web apps. For example, you can create an Azure web app and have your users access it using either www.contoso.com or contoso.com as a fully qualified domain name (FQDN).

To do this, you have to create three records:

A root "A" record pointing to contoso.com A root "TXT" record for verification



A "CNAME" record for the www name that points to the A record

E: To map a custom DNS name to a web app, the web app's App Service plan must be a paid tier (Shared, Basic, Standard, Premium or Consumption for Azure Functions). I

Scale up the App Service plan: Select any of the non-free tiers (D1, B1, B2, B3, or any tier in the Production category). References:

<https://docs.microsoft.com/en-us/azure/dns/dns-web-sites-custom-domain>

#### Testlet 1

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To start the case study

To display the first question on this case study, click the Next button. Use the buttons in the left pane to explore the content of the case study before you answer the questions. Clicking these buttons displays information such as business requirements, existing environment, and problem statements. If the case study has an All Information tab, note that the information displayed is identical to the information displayed on the subsequent tabs. When you are ready to answer a question, click the Question button to return to the question.

#### Overview

Litware, Inc. is a digital media company that has 500 employees in the Chicago area and 20 employees in the San Francisco area.

#### Existing Environment

Litware has an Azure subscription named Sub1 that has a subscription ID of 43894a43-17c2-4a39-8cfc-3540c2653ef4.

Sub1 is associated to an Azure Active Directory (Azure AD) tenant named litwareinc.com. The tenant contains the user objects and the device objects of all the Litware employees and their devices. Each user is assigned an Azure AD Premium P2 license. Azure AD Privileged Identity Management (PIM) is activated.

The tenant contains the groups shown in the following table.

Name	Type	Description
Group1	Security group	A group that has the Dynamic User membership type, contains all the San Francisco users, and provides access to many Azure AD applications and Azure resources.
Group2	Security group	A group that has the Dynamic User membership type and contains the Chicago IT team

The Azure subscription contains the objects shown in the following table.

Name	Type	Description
VNet1	Virtual network	VNet1 is a virtual network that contains security-sensitive IT resources. VNet1 contains three subnets named Subnet0, Subnet1, and AzureFirewallSubnet.
VM0	Virtual machine	VM0 is an Azure virtual machine that runs Windows Server 2016, connects to Subnet0, and has just in time (JIT) VM access configured.
VM1	Virtual machine	VM1 is an Azure virtual machine that runs Windows Server 2016 and connects to Subnet0.
SQLDB1	Azure SQL Database	SQLDB1 is an Azure SQL database on a SQL Database server named LitwareSQLServer1.
WebApp1	Web app	WebApp1 is an Azure web app that is accessible by using <a href="https://litwareinc.com">https://litwareinc.com</a> and <a href="http://www.litwareinc.com">http://www.litwareinc.com</a> .
Resource Group1	Resource group	Resource Group1 is a resource group that contains VNet1, VM0, and VM1.
Resource Group2	Resource group	Resource Group2 is a resource group that contains shared IT resources.

Azure Security Center is set to the Free tier.

#### Planned changes

Litware plans to deploy the Azure resources shown in the following table.

Name	Type	Description
Firewall1	Azure Firewall	An Azure firewall on VNet1.
RT1	Route table	A route table that will contain a route pointing to Firewall1 as the default gateway and will be assigned to Subnet0.
AKS1	Azure Kubernetes Service (AKS)	A managed AKS cluster



Litware identifies the following identity and access requirements:

- \_ All San Francisco users and their devices must be members of Group1.
- \_ The members of Group2 must be assigned the Contributor role to Resource Group2 by using a permanent eligible assignment.
- \_ Users must be prevented from registering applications in Azure AD and from consenting to applications that access company information on the users' behalf.

Platform Protection Requirements

Litware identifies the following platform protection requirements:

- \_ Microsoft Antimalware must be installed on the virtual machines in Resource Group1.
- \_ The members of Group2 must be assigned the Azure Kubernetes Service Cluster Admin Role. Azure AD users must be to authenticate to AKS1 by using their Azure AD credentials.
- \_ Following the implementation of the planned changes, the IT team must be able to connect to VM0 by using JIT VM access.
- \_ A new custom RBAC role named Role1 must be used to delegate the administration of the managed disks in Resource Group1. Role1 must be available only for Resource Group1.

Security Operations Requirements

Litware must be able to customize the operating system security configurations in Azure Security Center.

### NEW QUESTION 13

You need to ensure that users can access VM0. The solution must meet the platform protection requirements.

What should you do?

- A. Move VM0 to Subnet1.
- B. On Firewall, configure a network traffic filtering rule.
- C. Assign RT1 to AzureFirewallSubnet.
- D. On Firewall, configure a DNAT rule.

**Answer:** A

**Explanation:** Azure Firewall has the following known issue:

Conflict with Azure Security Center (ASC) Just-in-Time (JIT) feature.

If a virtual machine is accessed using JIT, and is in a subnet with a user-defined route that points to Azure Firewall as a default gateway, ASC JIT doesn't work. This is a result of asymmetric routing – a packet comes in via the virtual machine public IP (JIT opened the access), but the return path is via the firewall, which drops the packet because there is no established session on the firewall.

Solution: To work around this issue, place the JIT virtual machines on a separate subnet that doesn't have a user-defined route to the firewall. Scenario:

Resource	Configuration	Notes
VM0	Virtual machine	VM0 is an Azure virtual machine that runs Windows Server 2016, connects to Subnet0, and has just in time (JIT) VM access configured.

Following the implementation of the planned changes, the IT team must be able to connect to VM0 by using JIT VM access.

Name	Type	Description
Firewall1	Azure Firewall	An Azure firewall on VNet1.
RT1	Route table	A route table that will contain a route pointing to Firewall1 as the default gateway and will be assigned to Subnet0.

References:

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

### Testlet 2

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### Overview

Contoso, Ltd. is a consulting company that has a main office in Montreal and two branch offices in Seattle and New York. The company hosts its entire server infrastructure in Azure.

Contoso has two Azure subscriptions named Sub1 and Sub2. Both subscriptions are associated to an Azure Active Directory (Azure AD) tenant named contoso.com.

### Technical requirements

Contoso identifies the following technical requirements:

- \_ Deploy Azure Firewall to VNetWork1 in Sub2. Register an application named App2 in contoso.com.
- \_ Whenever possible, use the principle of least privilege.
- \_ Enable Azure AD Privileged Identity Management (PIM) for contoso.com

### Existing Environment Azure AD

Contoso.com contains the users shown in the following table.

Name	City	Role
User1	Montreal	Global administrator
User2	MONTREAL	Security administrator
User3	London	Privileged role administrator
User4	Ontario	Application administrator
User5	Seattle	Cloud application administrator
User6	Seattle	User administrator
User7	Sydney	Reports reader
User8	Sydney	None

Contoso.com contains the security groups shown in the following table.

Name	Membership type	Dynamic membership rule
Group1	Dynamic user	user.city -contains "ON"
Group2	Dynamic user	user.city -match "*on"

Sub1

Sub1 contains six resource groups named RG1, RG2, RG3, RG4, RG5, and RG6. User2 creates the virtual networks shown in the following table.

Name	Resource group
VNET1	RG1
VNET2	RG2
VNET3	RG3
VNET4	RG4

Sub1 contains the locks shown in the following table.

Name	Set on	Lock type
Lock1	RG1	Delete
Lock2	RG2	Read-only
Lock3	RG3	Delete
Lock4	RG3	Read-only

Sub1 contains the Azure policies shown in the following table.

Policy definition	Resource type	Scope
Allowed resource types	networkSecurityGroups	RG4
Not allowed resource types	virtualNetworks/subnets	RG5
Not allowed resource types	networksSecurityGroups	RG5
Not allowed resource types	virtualNetworks/virtualNetworkPeerings	RG6

Sub2

Sub2 contains the network security groups (NSGs) shown in the following table.

Name	Associated to
NSG1	NIC2
NSG2	Subnet1.1
NSG3	Subnet1.3
NSG4	Subnet2.1

NSG1 has the inbound security rules shown in the following table.

Priority	Port	Protocol	Source	Destination	Action
65000	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	Any	Any	AzureLoadBalancer	Any	Allow
65500	Any	Any	Any	Any	Deny

NSG2 has the inbound security rules shown in the following table.

Priority	Port	Protocol	Source	Destination	Action
100	80	TCP	Internet	VirtualNetwork	Allow
65000	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	Any	Any	AzureLoadBalancer	Any	Allow
65500	Any	Any	Any	Any	Deny

NSG3 has the inbound security rules shown in the following table.



Priority	Port	Protocol	Source	Destination	Action
100	Any	TCP	ASG1	ASG1	Allow
150	Any	Any	ASG2	VirtualNetwork	Allow
200	Any	Any	Any	Any	Deny
65000	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	Any	Any	AzureLoadBalancer	Any	Allow
65500	Any	Any	Any	Any	Deny

NSG4 has the inbound security rules shown in the following table.

Priority	Port	Protocol	Source	Destination	Action
100	Any	Any	Any	Any	Allow
65000	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	Any	Any	AzureLoadBalancer	Any	Allow
65500	Any	Any	Any	Any	Deny

NSG1, NSG2, NSG3, and NSG4 have the outbound security rules shown in the following table.

Priority	Port	Protocol	Source	Destination	Action
65000	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	Any	Any	Any	Internet	Allow
65500	Any	Any	Any	Any	Deny

Contoso identifies the following technical requirements:

- \_ Deploy Azure Firewall to VNetwork1 in Sub2. Register an application named App2 in contoso.com.
- \_ Whenever possible, use the principle of least privilege.
- \_ Enable Azure AD Privileged Identity Management (PIM) for contoso.com.

## NEW QUESTION 14

### HOTSPOT

What is the membership of Group1 and Group2? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Group1:

▼

No members

Only User2

Only User2 and User4

User1, User2, User3, and User4

Group2:

▼

No members

Only User3

Only User1 and User3

User1, User2, User3, and User4

Answer:

**Explanation:** Box 1: User1, User2, User3, User4

Contains "ON" is true for Montreal (User1), MONTREAL (User2), London (User 3), and Ontario (User4) as string and regex operations are not case sensitive.

Box 2: Only User3

Match "\*"on" is only true for London (User3).

Scenario:

Contoso.com contains the users shown in the following table.



Name	City	Role
User1	Montreal	Global administrator
User2	MONTREAL	Security administrator
User3	London	Privileged role administrator
User4	Ontario	Application administrator
User5	Seattle	Cloud application administrator
User6	Seattle	User administrator
User7	Sydney	Reports reader
User8	Sydney	None

Contoso.com contains the security groups shown in the following table.

Name	Membership type	Dynamic membership rule
Group1	Dynamic user	user.city -contains "ON"
Group2	Dynamic user	user.city -match "*on"

References:

<https://docs.microsoft.com/en-us/azure/active-directory/users-groups-roles/groups-dynamic-membership>

### NEW QUESTION 18

#### HOTSPOT

You are evaluating the security of the network communication between the virtual machines in Sub2. 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
From VM1, you can successfully ping the public IP address of VM2.	<input type="radio"/>	<input type="radio"/>
From VM1, you can successfully ping the private IP address of VM3.	<input type="radio"/>	<input type="radio"/>
From VM1, you can successfully ping the public IP address of VM5.	<input type="radio"/>	<input type="radio"/>

Answer:

Explanation: Box 1: Yes

NSG1 has the inbound security rules shown in the following table.

Priority	Port	Protocol	Source	Destination	Action
65000	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	Any	Any	AzureLoadBalancer	Any	Allow
65500	Any	Any	Any	Any	Deny

NSG2 has the inbound security rules shown in the following table.

Priority	Port	Protocol	Source	Destination	Action
100	80	TCP	Internet	VirtualNetwork	Allow
65000	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	Any	Any	AzureLoadBalancer	Any	Allow
65500	Any	Any	Any	Any	Deny

Box 2: Yes

Box 3: No Note:

Sub2 contains the virtual machines shown in the following table.

Name	Network interface	Application security group	Connected to
VM1	NIC1	ASG1	Subnet1.1
VM2	NIC2	ASG2	Subnet1.1
VM3	NIC3	None	Subnet1.2
VM4	NIC4	ASG1	Subnet1.3
VM5	NIC5	None	Subnet2.1

Name	Subnet
VNetwork1	Subnet1.1, Subnet1.2 and Subnet1.3
VNetwork2	Subnet2.1

Sub2 contains the network security groups (NSGs) shown in the following table.

Name	Associated to
NSG1	NIC2
NSG2	Subnet1.1
NSG3	Subnet1.3
NSG4	Subnet2.1

Question Set 3

#### NEW QUESTION 20

You have an Azure subscription named Sub1. Sub1 contains a virtual network named VNet1 that contains one subnet named Subnet1.

You create a service endpoint for Subnet1.

Subnet1 contains an Azure virtual machine named VM1 that runs Ubuntu Server 18.04.

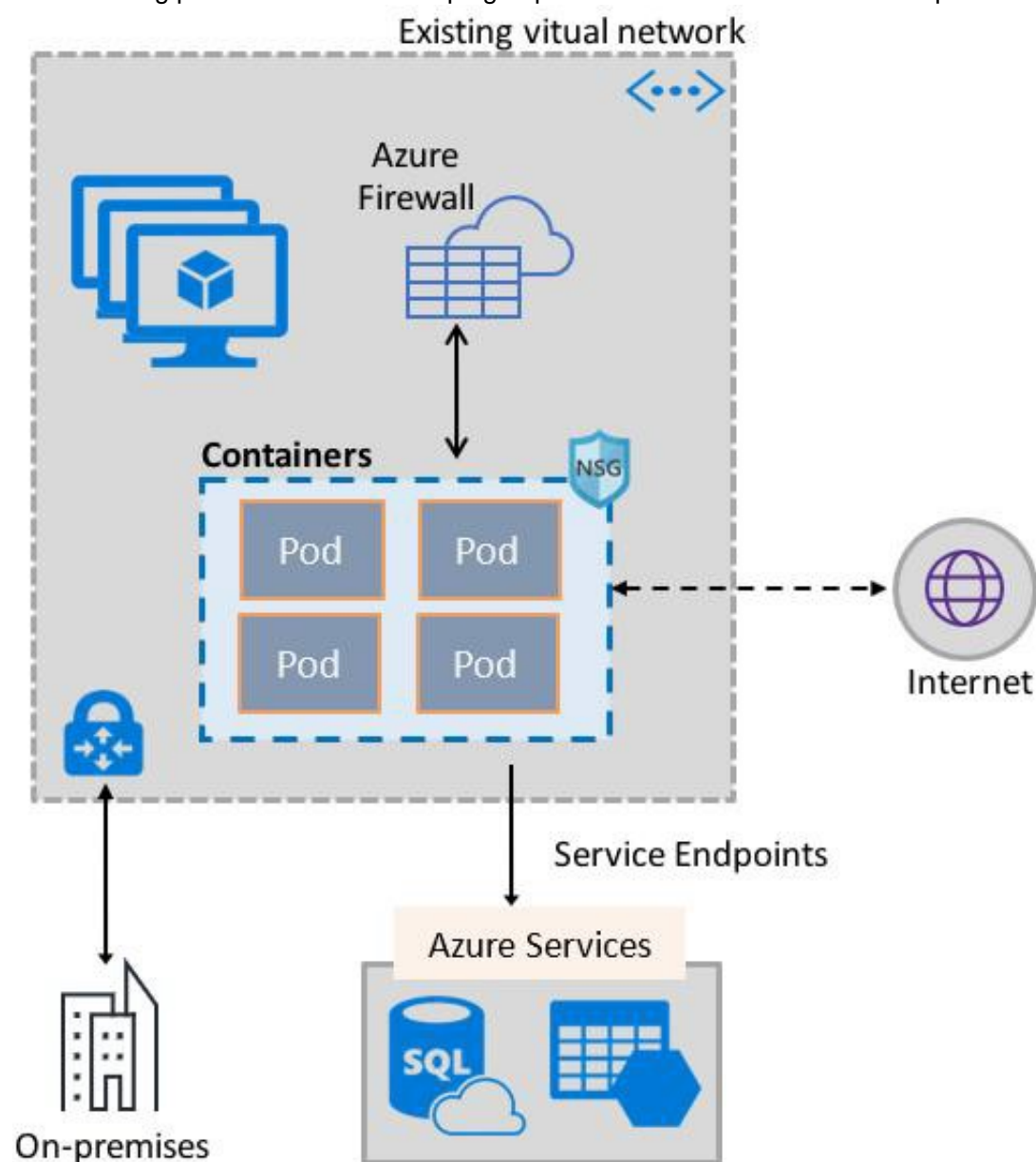
You need to deploy Docker containers to VM1. The containers must be able to access Azure Storage resources and Azure SQL databases by using the service endpoint.

- A. Create an application security group and a network security group (NSG).
- B. Edit the docker-compose.yml file.
- C. Install the container network interface (CNI) plug-in.

**Answer: C**

**Explanation:** The Azure Virtual Network container network interface (CNI) plug-in installs in an Azure Virtual Machine. The plug-in supports both Linux and Windows platform. The plug-in assigns IP addresses from a virtual network to containers brought up in the virtual machine, attaching them to the virtual network, and connecting them directly to other containers and virtual network resources. The plug-in doesn't rely on overlay networks, or routes, for connectivity, and provides the same performance as virtual machines.

The following picture shows how the plug-in provides Azure Virtual Network capabilities to Pods:



References:

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

#### NEW QUESTION 24

You have Azure Resource Manager templates that you use to deploy Azure virtual machines.

You need to disable unused Windows features automatically as instances of the virtual machines are provisioned. What should you use?

- A. device compliance policies in Microsoft Intune
- B. Azure Automation State Configuration
- C. application security groups
- D. Azure Advisor

**Answer: B**

**Explanation:** You can use Azure Automation State Configuration to manage Azure VMs (both Classic and Resource Manager), on-premises VMs, Linux



machines, AWS VMs, and on-premises physical machines.

Note: Azure Automation State Configuration provides a DSC pull server similar to the Windows Feature DSC-Service so that target nodes automatically receive configurations, conform to the desired state, and report back on their compliance. The built-in pull server in Azure Automation eliminates the need to set up and maintain your own pull server. Azure Automation can target virtual or physical Windows or Linux machines, in the cloud or on-premises.

References:

<https://docs.microsoft.com/en-us/azure/automation/automation-dsc-getting-started>

## NEW QUESTION 26

### HOTSPOT

You have an Azure subscription. The subscription contains Azure virtual machines that run Windows Server 2016.

You need to implement a policy to ensure that each virtual machine has a custom antimalware virtual machine extension installed. How should you complete the policy? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

#### Answer Area

```

{
  "if": {
    "allOf": [
      {
        "field": "type",
        "equals": "Microsoft.Compute/virtualMachines"
      },
      {
        "field": "Microsoft.Compute/imagesSKU",
        "equals": "2016-Datacenter",
      }
    ]
  },
  "then": {
    "effect": "
    Append
    Deny
    DeployIfNotExists
  ",
    "details": {
      "type": "Microsoft.GuestConfiguration/guestConfigurationAssignments",
      "roleDefinitionsIds": [
        "/providers/microsoft.authorization/roleDefinitions/12345678-1234-5678-abcd-012345678910"
      ],
      "name": "customExtension",
      "deployment": {
        "properties": {
          "mode": "incremental",
          "parameters": {
            "
            existenceCondition
            resources
            template
          "
        }
      }
    }
  }
}

```

Answer:

**Explanation:** Box 1: DeployIfNotExists

DeployIfNotExists executes a template deployment when the condition is met.

Box 2: Template

The details property of the DeployIfNotExists effects has all the subproperties that define the related resources to match and the template deployment to execute.

Deployment [required]

This property should include the full template deployment as it would be passed to the Microsoft.Resources/deployment References:

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

## NEW QUESTION 31

### HOTSPOT

You have an Azure subscription named Sub1.

You create a virtual network that contains one subnet. On the subnet, you provision the virtual machines shown in the following table.

Name	Network interface	Application security group assignment	IP address
VM1	NIC1	AppGroup12	10.0.0.10
VM2	NIC2	AppGroup12	10.0.0.11
VM3	NIC3	AppGroup3	10.0.0.100
VM4	NIC4	AppGroup4	10.0.0.200

Currently, you have not provisioned any network security groups (NSGs). You need to implement network security to meet the following requirements:

- Allow traffic to VM4 from VM3 only.
- Allow traffic from the Internet to VM1 and VM2 only. Minimize the number of NSGs and network security rules.

How many NSGs and network security rules should you create? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:



Answer Area

NSGs:

	▼
1	
2	
3	
4	

Network security rules:

	▼
1	
2	
3	
4	

Answer:

**Explanation:** NSGs: 2  
Network security rules: 3  
Not 2: You cannot specify multiple service tags or application groups) in a security rule.  
References:  
<https://docs.microsoft.com/en-us/azure/virtual-network/security-overview>

NEW QUESTION 35

HOTSPOT  
You have an Azure key vault.  
You need to delegate administrative access to the key vault to meet the following requirements:  
\_ Provide a user named User1 with the ability to set advanced access policies for the key vault. Provide a user named User2 with the ability to add and delete certificates in the key vault. Use the principle of least privilege.  
What should you use to assign access to each user? To answer, select the appropriate options in the answer area.  
NOTE: Each correct selection is worth one point.  
Hot Area:

Answer Area

User1:

	▼
A key vault access policy	
Azure Information Protection	
Azure Policy	
Managed identities for Azure resources	
RBAC	

User2:

	▼
A key vault access policy	
Azure Information Protection	
Azure Policy	
Managed identities for Azure resources	
RBAC	

Answer:

**Explanation:** User1: RBAC

\_ RBAC is used as the Key Vault access control mechanism for the management plane. It would allow a user with the proper identity to: set Key Vault access policies  
 \_ create, read, update, and delete key vaults set Key Vault tags  
 Note: Role-based access control (RBAC) is a system that provides fine-grained access management of Azure resources. Using RBAC, you can segregate duties within your team and grant only the amount of access to users that they need to perform their jobs.  
 User2: A key vault access policy  
 A key vault access policy is the access control mechanism to get access to the key vault data plane. Key Vault access policies grant permissions separately to keys, secrets, and certificates.  
 References:  
<https://docs.microsoft.com/en-us/azure/key-vault/key-vault-secure-your-key-vault>

#### NEW QUESTION 40

HOTSPOT

You have two Azure virtual machines in the East US2 region as shown in the following table.

Name	Operating system	Type	Tier
VM1	Windows Server 2008 R2	A3	Basic
VM2	Ubuntu 16.04-DAILY-LTS	L4s	Standard

You deploy and configure an Azure Key vault.  
 You need to ensure that you can enable Azure Disk Encryption on VM1 and VM2.  
 What should you modify on each virtual machine? To answer, select the appropriate options in the answer area.  
 NOTE: Each correct selection is worth one point.  
 Hot Area:

### Answer Area

VM1:

▼

The operating system version

The tier

The type

VM2:

▼

The operating system version

The tier

The type

Answer:

**Explanation:** VM1: The Tier

The Tier needs to be upgraded to standard.

Disk Encryption for Windows and Linux IaaS VMs is in General Availability in all Azure public regions and Azure Government regions for Standard VMs and VMs with Azure Premium Storage.

VM2: The type

Need to change the VMtype to any of A, D, DS, G, GS, F, and so on, series IaaS VMs.

Not the operating system version: Ubuntu 16.04 is supported. References:

<https://docs.microsoft.com/en-us/azure/security/azure-security-disk-encryption-overview>

[https://docs.microsoft.com/en-us/azure/security/azure-security-disk-encryption-faq#bkmk\\_LinuxOSSupport](https://docs.microsoft.com/en-us/azure/security/azure-security-disk-encryption-faq#bkmk_LinuxOSSupport)

#### NEW QUESTION 41

You have an Azure virtual machines shown in the following table.

Name	Operating system	Region	Resource group
VM1	Windows Server 2012	East US	RG1
VM2	Windows Server 2012 R2	West Europe	RG1
VM3	Windows Server 2016	West Europe	RG2
VM4	Red Hat Enterprise Linux 7.4	East US	RG2

You create an Azure Log Analytics workspace named Analytics1 in RG1 in the East US region. Which virtual machines can be enrolled in Analytics1?

- A. VM1 only
- B. VM1, VM2, and VM3 only
- C. VM1, VM2, VM3, and VM4
- D. VM1 and VM4 only

**Answer:** A

**Explanation:** Note: Create a workspace

\_ In the Azure portal, click All services. In the list of resources, type Log Analytics. As you begin typing, the list filters based on your input. Select Log Analytics. Click Create, and then select choices for the following items:

Provide a name for the new Log Analytics workspace, such as DefaultLAWorkspace. OMS workspaces are now referred to as Log Analytics workspaces. Select a Subscription to link to by selecting from the drop-down list if the default selected is not appropriate.

For Resource Group, select an existing resource group that contains one or more Azure virtual machines.

Select the Location your VMs are deployed to. For additional information, see which regions Log Analytics is available in. Incorrect Answers:

B, C: A Log Analytics workspace provides a geographic location for data storage. VM2 and VM3 are at a different location.

D: VM4 is a different resource group. References:

<https://docs.microsoft.com/en-us/azure/azure-monitor/platform/manage-access>

#### NEW QUESTION 46

You are testing an Azure Kubernetes Service (AKS) cluster. The cluster is configured as shown in the exhibit. (Click the Exhibit tab.)

##### BASICS

Subscription	Microsoft Azure Sponsorship
Resource group	AzureBackupRG_eastus2_1
Region	East US
Kubernetes cluster name	akscluster2
Kubernetes version	1.1 1.5
DNS name prefix	akscluster2
Node count	3
Node size	Standard_DS2_v2
Virtual nodes (preview)	Disabled

##### AUTHENTICATION

Enable RBAC	No
-------------	----

##### NETWORKING

HTTP application routing	Yes
Network configuration	Basic

##### MONITORING

Enable container monitoring	No
-----------------------------	----

##### TAGS

You plan to deploy the cluster to production. You disable HTTP application routing.

You need to implement application routing that will provide reverse proxy and TLS termination for AKS services by using a single IP address. What should you do?

- A. Create an AKS Ingress controller.
- B. Install the container network interface (CNI) plug-in.
- C. Create an Azure Standard Load Balancer.
- D. Create an Azure Basic Load Balancer.

**Answer:** A

**Explanation:** An ingress controller is a piece of software that provides reverse proxy, configurable traffic routing, and TLS termination for Kubernetes services.

References:

<https://docs.microsoft.com/en-us/azure/aks/ingress-tls>

Topic 3, Manage security operations

Testlet 1

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To start the case study

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Overview

Contoso, Ltd. is a consulting company that has a main office in Montreal and two branch offices in Seattle and New York. The company hosts its entire server infrastructure in Azure.

Contoso has two Azure subscriptions named Sub1 and Sub2. Both subscriptions are associated to an Azure Active Directory (Azure AD) tenant named contoso.com.

Technical requirements



Contoso identifies the following technical requirements:

- \_ Deploy Azure Firewall to VNetWork1 in Sub2. Register an application named App2 in contoso.com.
- \_ Whenever possible, use the principle of least privilege.
- \_ Enable Azure AD Privileged Identity Management (PIM) for contoso.com

Existing Environment Azure AD

Contoso.com contains the users shown in the following table.

Name	City	Role
User1	Montreal	Global administrator
User2	MONTREAL	Security administrator
User3	London	Privileged role administrator
User4	Ontario	Application administrator
User5	Seattle	Cloud application administrator
User6	Seattle	User administrator
User7	Sydney	Reports reader
User8	Sydney	None

Contoso.com contains the security groups shown in the following table.

Name	Membership type	Dynamic membership rule
Group1	Dynamic user	<code>user.city -contains "ON"</code>
Group2	Dynamic user	<code>user.city -match "*on"</code>

Sub1

Sub1 contains six resource groups named RG1, RG2, RG3, RG4, RG5, and RG6. User2 creates the virtual networks shown in the following table.

Name	Resource group
VNET1	RG1
VNET2	RG2
VNET3	RG3
VNET4	RG4

Sub1 contains the locks shown in the following table.

Name	Set on	Lock type
Lock1	RG1	Delete
Lock2	RG2	Read-only
Lock3	RG3	Delete
Lock4	RG3	Read-only

Sub1 contains the Azure policies shown in the following table.

Policy definition	Resource type	Scope
Allowed resource types	networkSecurityGroups	RG4
Not allowed resource types	virtualNetworks/subnets	RG5
Not allowed resource types	networksSecurityGroups	RG5
Not allowed resource types	virtualNetworks/virtualNetworkPeerings	RG6

Sub2

Sub2 contains the network security groups (NSGs) shown in the following table.

Name	Associated to
NSG1	NIC2
NSG2	Subnet1.1
NSG3	Subnet1.3
NSG4	Subnet2.1

NSG1 has the inbound security rules shown in the following table.

Priority	Port	Protocol	Source	Destination	Action
65000	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	Any	Any	AzureLoadBalancer	Any	Allow
65500	Any	Any	Any	Any	Deny

NSG2 has the inbound security rules shown in the following table.

Priority	Port	Protocol	Source	Destination	Action
100	80	TCP	Internet	VirtualNetwork	Allow
65000	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	Any	Any	AzureLoadBalancer	Any	Allow
65500	Any	Any	Any	Any	Deny

NSG3 has the inbound security rules shown in the following table.

Priority	Port	Protocol	Source	Destination	Action
100	Any	TCP	ASG1	ASG1	Allow
150	Any	Any	ASG2	VirtualNetwork	Allow
200	Any	Any	Any	Any	Deny
65000	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	Any	Any	AzureLoadBalancer	Any	Allow
65500	Any	Any	Any	Any	Deny

NSG4 has the inbound security rules shown in the following table.

Priority	Port	Protocol	Source	Destination	Action
100	Any	Any	Any	Any	Allow
65000	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	Any	Any	AzureLoadBalancer	Any	Allow
65500	Any	Any	Any	Any	Deny

NSG1, NSG2, NSG3, and NSG4 have the outbound security rules shown in the following table.

Priority	Port	Protocol	Source	Destination	Action
65000	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	Any	Any	Any	Internet	Allow
65500	Any	Any	Any	Any	Deny

Contoso identifies the following technical requirements:

- \_ Deploy Azure Firewall to VNetwork1 in Sub2. Register an application named App2 in contoso.com.
- \_ Whenever possible, use the principle of least privilege.
- \_ Enable Azure AD Privileged Identity Management (PIM) for contoso.com.

#### NEW QUESTION 48

You need to ensure that you can meet the security operations requirements.  
What should you do first?

- A. Turn on Auto Provisioning in Security Center.
- B. Integrate Security Center and Microsoft Cloud App Security.
- C. Upgrade the pricing tier of Security Center to Standard.
- D. Modify the Security Center workspace configuration.

**Answer:** C

**Explanation:** The Standard tier extends the capabilities of the Free tier to workloads running in private and other public clouds, providing unified security management and threat protection across your hybrid cloud workloads. The Standard tier also adds advanced threat detection capabilities, which uses built-in behavioral analytics and machine learning to identify attacks and zero-day exploits, access and application controls to reduce exposure to network attacks and malware, and more.

Scenario: Security Operations Requirements

Litware must be able to customize the operating system security configurations in Azure Security Center. References:

<https://docs.microsoft.com/en-us/azure/security-center/security-center-pricing>

Question Set 3

#### NEW QUESTION 52

You have an Azure subscription named Sub1 that is associated to an Azure Active Directory (Azure AD) tenant named contoso.com.  
You are assigned the Global administrator role for the tenant. You are responsible for managing Azure Security Center settings. You need to create a custom sensitivity label.  
What should you do first?

- A. Create a custom sensitive information type.
- B. Elevate access for global administrators in Azure AD.
- C. Upgrade the pricing tier of the Security Center to Standard.
- D. Enable integration with Microsoft Cloud App Security.

**Answer:** A

**Explanation:** First, you need to create a new sensitive information type because you can't directly modify the default rules.

References:

<https://docs.microsoft.com/en-us/office365/securitycompliance/customize-a-built-in-sensitive-information-type>

#### NEW QUESTION 53

HOTSPOT

You suspect that users are attempting to sign in to resources to which they have no access.

You need to create an Azure Log Analytics query to identify failed user sign-in attempts from the last three days. The results must only show users who had more than five failed sign-in attempts.

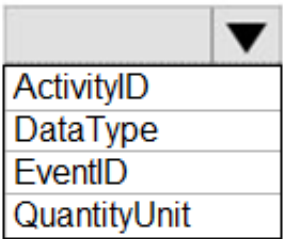
How should you configure the query? To answer, select the appropriate options in the answer area.

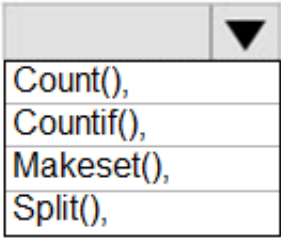
NOTE: Each correct selection is worth one point.

Hot Area:



## Answer Area

```
let timeframe = 3d;
SecurityEvent
| where TimeGenerated > ago(3d)
| where AccountType == 'User' and  ==4625

| Summarize failed_login_attempts=

latest_failed_login=arg_max(TimeGenerated by Account
| where failed_login_attempts > 5
```

### Answer:

**Explanation:** The following example identifies user accounts that failed to log in more than five times in the last day, and when they last attempted to log in. let timeframe = 1d;

```
SecurityEvent
| where TimeGenerated > ago(1d)
| where AccountType == 'User' and EventID == 4625 // 4625 - failed log in
| summarize failed_login_attempts=count(), latest_failed_login=arg_max(TimeGenerated, Account) by Account
| where failed_login_attempts > 5
| project-away Account1
```

References:

<https://docs.microsoft.com/en-us/azure/azure-monitor/log-query/examples>

### NEW QUESTION 54

You have an Azure subscription named Sub1.

In Azure Security Center, you have a security playbook named Play1. Play1 is configured to send an email message to a user named User1. You need to modify Play1 to send email messages to a distribution group named Alerts.

What should you use to modify Play1?

- A. Azure DevOps
- B. Azure Application Insights
- C. Azure Monitor
- D. Azure Logic Apps Designer

### Answer: D

**Explanation:** You can change an existing playbook in Security Center to add an action, or conditions. To do that you just need to click on the name of the playbook that you want to change, in the Playbooks tab, and Logic App Designer opens up.

References:

<https://docs.microsoft.com/en-us/azure/security-center/security-center-playbooks>

### NEW QUESTION 57

DRAG DROP

You have an Azure subscription that contains 100 virtual machines. Azure Diagnostics is enabled on all the virtual machines. You are planning the monitoring of Azure services in the subscription.

You need to retrieve the following details:

- \_ Identify the user who deleted a virtual machine three weeks ago.
- \_ Query the security events of a virtual machine that runs Windows Server 2016.

What should you use in Azure Monitor? To answer, drag the appropriate configuration settings to the correct details. Each configuration setting 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:



Settings

Activity log

Logs

Metrics

Service Health

Answer Area

Identify the user who deleted a virtual machine three weeks ago:

Query the security events of a virtual machine that runs Windows Server 2016:

Answer:

**Explanation:** Box1: Activity log

Azure activity logs provide insight into the operations that were performed on resources in your subscription. Activity logs were previously known as “audit logs” or “operational logs,” because they report control-plane events for your subscriptions.

Activity logs help you determine the “what, who, and when” for write operations (that is, PUT, POST, or DELETE). Box 2: Logs

Log Integration collects Azure diagnostics from your Windows virtual machines, Azure activity logs, Azure Security Center alerts, and Azure resource provider logs. This integration provides a unified dashboard for all your assets, whether they're on-premises or in the cloud, so that you can aggregate, correlate, analyze, and alert for security events.

References:

<https://docs.microsoft.com/en-us/azure/security/azure-log-audit>

#### Testlet 1

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#### Overview

Litware, Inc. is a digital media company that has 500 employees in the Chicago area and 20 employees in the San Francisco area.

#### Existing Environment

Litware has an Azure subscription named Sub1 that has a subscription ID of 43894a43-17c2-4a39-8cfc-3540c2653ef4.

Sub1 is associated to an Azure Active Directory (Azure AD) tenant named litwareinc.com. The tenant contains the user objects and the device objects of all the Litware employees and their devices. Each user is assigned an Azure AD Premium P2 license. Azure AD Privileged Identity Management (PIM) is activated.

The tenant contains the groups shown in the following table.

Name	Type	Description
Group1	Security group	A group that has the Dynamic User membership type, contains all the San Francisco users, and provides access to many Azure AD applications and Azure resources.
Group2	Security group	A group that has the Dynamic User membership type and contains the Chicago IT team

The Azure subscription contains the objects shown in the following table.

Name	Type	Description
VNet1	Virtual network	VNet1 is a virtual network that contains security-sensitive IT resources. VNet1 contains three subnets named Subnet0, Subnet1, and AzureFirewallSubnet.
VM0	Virtual machine	VM0 is an Azure virtual machine that runs Windows Server 2016, connects to Subnet0, and has just in time (JIT) VM access configured.
VM1	Virtual machine	VM1 is an Azure virtual machine that runs Windows Server 2016 and connects to Subnet0.
SQLDB1	Azure SQL Database	SQLDB1 is an Azure SQL database on a SQL Database server named LitwareSQLServer1.
WebApp1	Web app	WebApp1 is an Azure web app that is accessible by using <a href="https://litwareinc.com">https://litwareinc.com</a> and <a href="http://www.litwareinc.com">http://www.litwareinc.com</a> .
Resource Group1	Resource group	Resource Group1 is a resource group that contains VNet1, VM0, and VM1.
Resource Group2	Resource group	Resource Group2 is a resource group that contains shared IT resources.

Azure Security Center is set to the Free tier.

Planned changes

Litware plans to deploy the Azure resources shown in the following table.

Name	Type	Description
Firewall1	Azure Firewall	An Azure firewall on VNet1.
RT1	Route table	A route table that will contain a route pointing to Firewall1 as the default gateway and will be assigned to Subnet0.
AKS1	Azure Kubernetes Service (AKS)	A managed AKS cluster

Litware identifies the following identity and access requirements:

- \_ All San Francisco users and their devices must be members of Group1.
- \_ The members of Group2 must be assigned the Contributor role to Resource Group2 by using a permanent eligible assignment.
- \_ Users must be prevented from registering applications in Azure AD and from consenting to applications that access company information on the users' behalf.

Platform Protection Requirements

Litware identifies the following platform protection requirements:

- \_ Microsoft Antimalware must be installed on the virtual machines in Resource Group1.
- \_ The members of Group2 must be assigned the Azure Kubernetes Service Cluster Admin Role. Azure AD users must be to authenticate to AKS1 by using their Azure AD credentials.
- \_ Following the implementation of the planned changes, the IT team must be able to connect to VM0 by using JIT VM access.
- \_ A new custom RBAC role named Role1 must be used to delegate the administration of the managed disks in Resource Group1. Role1 must be available only for Resource Group1.

Security Operations Requirements

Litware must be able to customize the operating system security configurations in Azure Security Center.

#### NEW QUESTION 61

You need to configure WebApp1 to meet the data and application requirements.

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 public certificate.
- B. Turn on the HTTPS Only protocol setting.
- C. Set the Minimum TLS Version protocol setting to 1.2.
- D. Change the pricing tier of the App Service plan.
- E. Turn on the Incoming client certificates protocol setting.

**Answer:** AC

**Explanation:** A: To configure Certificates for use in Azure Websites Applications you need to upload a public Certificate.

C: Over time, multiple versions of TLS have been released to mitigate different vulnerabilities. TLS 1.2 is the most current version available for apps running on Azure App Service.

Incorrect Answers:

B: We need support the http url as well.

Note:



WebApp1 is an Azure web app that is accessible by using <https://litwareinc.com> and <http://www.litwareinc.com>.

References:

<https://docs.microsoft.com/en-us/azure/app-service/app-service-web-configure-tls-mutual-auth>

<https://azure.microsoft.com/en-us/updates/app-service-and-functions-hosted-apps-can-now-update-tls-versions/>

### NEW QUESTION 63

HOTSPOT

You need to create Role1 to meet the platform protection requirements.

How should you complete the role definition of Role1? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

```
(  
  "Name" | "Role1",  
  "Id" | "11111111-1111-1111-1111-111111111111",  
  "IsCustom" : true,  
  "Description": "VM storage operator"  
  "Actions" : [  


|                       |   |
|-----------------------|---|
|                       | ▼ |
| "Microsoft.Compute/   |   |
| "Microsoft.Resources/ |   |
| "Microsoft.Storage/   |   |


|                           |   |
|---------------------------|---|
|                           | ▼ |
| disks/*",                 |   |
| storageAccounts/*",       |   |
| virtualMachines/disks/*", |   |

  
  ],  
  "NotActions": [  
    ],  
  "AssignableScopes" : [  
    ]  
)
```

Answer:

**Explanation:** Scenario: A new custom RBAC role named Role1 must be used to delegate the administration of the managed disks in Resource Group1. Role1 must be available only for Resource Group1.

Azure RBAC template managed disks "Microsoft.Storage/" References:

<https://blogs.msdn.microsoft.com/azureedu/2017/02/11/new-managed-disk-storage-option-for-your-azure-vms/>

### NEW QUESTION 67

DRAG DROP

You need to configure SQLDB1 to meet the data and application requirements.

Which three actions should you recommend be performed 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	Answer Area
From the Azure portal, create an Azure AD administrator for LitwareSQLServer1.	
In SQLDB1, create contained database users.	
Connect to SQLDB1 by using Microsoft SQL Server Management Studio (SSMS).	<div> <div>⬅</div> <div>➡</div> </div>
In Azure AD, create a system-assigned managed identity.	<div> <div>⬆</div> <div>⬇</div> </div>
In Azure AD, create a user-assigned managed identity.	

**Answer:**

**Explanation:** Step 1: Connect to SQLDB1 by using Microsoft SQL Server Management Studio (SSMS)

Step 2: In SQLDB1, create contained database users.

Create a contained user in the database that represents the VM's system-assigned identity.

Step 3: In Azure AD, create a system-assigned managed identity.

A system-assigned identity for a Windows virtual machine (VM) can be used to access an Azure SQL server. Managed Service Identities are automatically managed by Azure and enable you to authenticate to services that support Azure AD authentication, without needing to insert credentials into your code.

References:

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/tutorial-windows-vm-access-sql>

Question Set 2

#### NEW QUESTION 68

Your company has an Azure subscription named Sub1 that is associated to an Azure Active Directory (Azure AD) tenant named contoso.com.

The company develops an application named App1. App1 is registered in Azure AD.

You need to ensure that App1 can access secrets in Azure Key Vault on behalf of the application users. What should you configure?

- A. an application permission without admin consent
- B. a delegated permission without admin consent
- C. a delegated permission that requires admin consent
- D. an application permission that requires admin consent

**Answer:** B

**Explanation:** Delegated permissions - Your client application needs to access the web API as the signed-in user, but with access limited by the selected permission. This type of permission can be granted by a user unless the permission requires administrator consent.

Incorrect Answers:

A, D: Application permissions - Your client application needs to access the web API directly as itself (no user context). This type of permission requires administrator consent and is also not available for public (desktop and mobile) client applications.

References:

<https://docs.microsoft.com/en-us/azure/active-directory/develop/quickstart-configure-app-access-web-apis>

#### NEW QUESTION 71

DRAG DROP

Your company has an Azure Active Directory (Azure AD) tenant named contoso.com.

The company is developing an application named App1. App1 will run as a service on server that runs Windows Server 2016. App1 will authenticate to contoso.com and access Microsoft Graph to read directory data.

You need to delegate the minimum required permissions to App1.

Which three actions should you perform in sequence from the Azure portal? 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	Answer Area
Grant permissions	
Add a delegated permission.	
Configure Azure AD Application Proxy.	⬅️
Add an application permission.	➡️
Create an app registration.	⬆️

**Answer:**

**Explanation:** Step 1: Create an app registration

First the application must be created/registered.

Step 2: Add an application permission

Application permissions are used by apps that run without a signed-in user present.

Step 3: Grant permissions

Incorrect Answers: Delegated permission

Delegated permissions are used by apps that have a signed-in user present.

Application Proxy:

Azure Active Directory's Application Proxy provides secure remote access to on-premises web applications.

References:

<https://docs.microsoft.com/en-us/azure/active-directory/develop/v2-permissions-and-consent>

#### NEW QUESTION 73

Your company has an Azure subscription named Sub1 that is associated to an Azure Active Directory Azure (Azure AD) tenant named contoso.com.

The company develops a mobile application named App1. App1 uses the OAuth 2 implicit grant type to acquire Azure AD access tokens. You need to register App1 in Azure AD.

What information should you obtain from the developer to register the application?

- A. a redirect URI
- B. a reply URL
- C. a key
- D. an application ID

**Answer:** A

**Explanation:** For Native Applications you need to provide a Redirect URI, which Azure AD will use to return token responses.

References:

<https://docs.microsoft.com/en-us/azure/active-directory/develop/v1-protocols-oauth-code>

#### NEW QUESTION 74

From the Azure portal, you are configuring an Azure policy.

You plan to assign policies that use the DeployIfNotExist, AuditIfNotExist, Append, and Deny effects. Which effect requires a managed identity for the assignment?

- A. AuditIfNotExist
- B. Append
- C. DeployIfNotExist
- D. Deny

**Answer:** C

**Explanation:** When Azure Policy runs the template in the deployIfNotExists policy definition, it does so using a managed identity.

References:

<https://docs.microsoft.com/bs-latn-ba/azure/governance/policy/how-to/remediate-resources>

#### NEW QUESTION 76

HOTSPOT

You have an Azure subscription named Sub1 that is associated to an Azure Active Directory (Azure AD) tenant named contoso.com. You plan to implement an application that will consist of the resources shown in the following table.

Name	Type	Description
CosmosDBAccount1	Azure Cosmos DB account	A Cosmos DB account containing a database Named CosmosDB1 that serves as a back-end tier of the application
WebApp1	Azure web app	A web app configured to serve as the middle tier of the application

Users will authenticate by using their Azure AD user account and access the Cosmos DB account by using resource tokens. You need to identify which tasks will be implemented in CosmosDB1 and WebApp1.

Which task should you identify for each resource? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

CosmosDB1:

- Authenticate Azure AD users and generate resource tokens.
- Authenticate Azure AD users and relay resource tokens.
- Create database users and generate resource tokens.

WebApp1:

- Authenticate Azure AD users and generate resource tokens.
- Authenticate Azure AD users and relay resource tokens.
- Create database users and generate resource tokens.

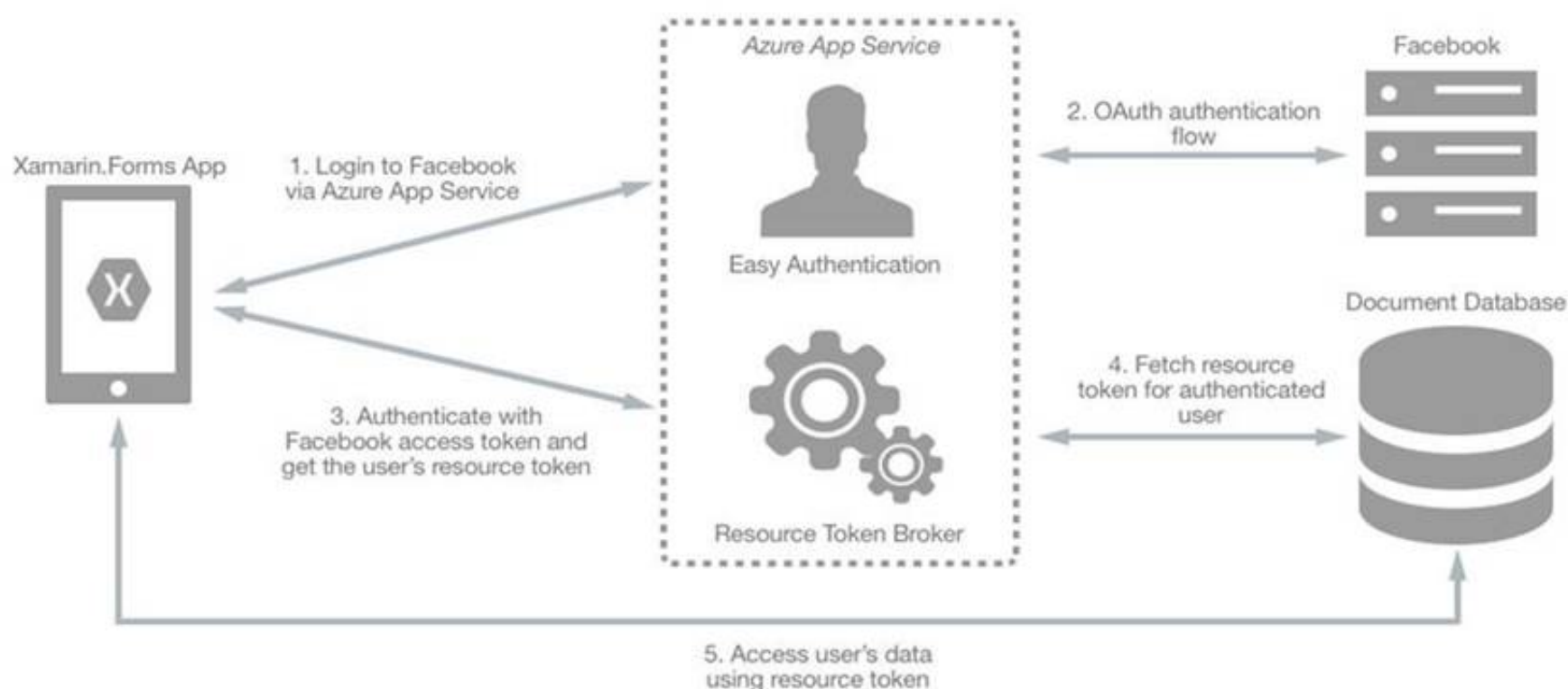
Answer:

**Explanation:** CosmosDB1: Create database users and generate resource tokens.

Azure Cosmos DB resource tokens provide a safe mechanism for allowing clients to read, write, and delete specific resources in an Azure Cosmos DB account according to the granted permissions.

WebApp1: Authenticate Azure AD users and relay resource tokens

A typical approach to requesting, generating, and delivering resource tokens to a mobile application is to use a resource token broker. The following diagram shows a high-level overview of how the sample application uses a resource token broker to manage access to the document database data:



References:

<https://docs.microsoft.com/en-us/xamarin/xamarin-forms/data-cloud/cosmosdb/authentication>

## NEW QUESTION 80

### HOTSPOT

You need to create an Azure key vault. The solution must ensure that any object deleted from the key vault be retained for 90 days.

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

NOTE: Each correct selection is worth one point.

Hot Area:



## Answer Area

```
New-AzureRmKeyVault -VaultName 'KeyVault1' -ResourceGroupName 'RG1'
```

-Location 'East US'

-EnabledForDeployment	-Confirm
-EnablePurgeProtection	-DefaultProfile
-Tag	-EnableSoftDelete
	-SKU

**Answer:**

**Explanation:** Box 1: -EnablePurgeProtection

If specified, protection against immediate deletion is enabled for this vault; requires soft delete to be enabled as well.

Box 2: -EnableSoftDelete

Specifies that the soft-delete functionality is enabled for this key vault. When soft-delete is enabled, for a grace period, you can recover this key vault and its contents after it is deleted.

References:

<https://docs.microsoft.com/en-us/powershell/module/azurerm.keyvault/new-azurermkeyvault>

### NEW QUESTION 85

You have an Azure subscription that contains an Azure key vault named Vault1.

In Vault1, you create a secret named Secret1.

An application developer registers an application in Azure Active Directory (Azure AD). You need to ensure that the application can use Secret1.

What should you do?

- A. In Azure AD, create a role.
- B. In Azure Key Vault, create a key.
- C. In Azure Key Vault, create an access policy.
- D. In Azure AD, enable Azure AD Application Proxy.

**Answer:** A

**Explanation:** Azure Key Vault provides a way to securely store credentials and other keys and secrets, but your code needs to authenticate to Key Vault to retrieve them. Managed identities for Azure resources overview makes solving this problem simpler, by giving Azure services an automatically managed identity in Azure Active Directory (Azure AD). You can use this identity to authenticate to any service that supports Azure AD authentication, including Key Vault, without having any credentials in your code.

Example: How a system-assigned managed identity works with an Azure VM

After the VM has an identity, use the service principal information to grant the VM access to Azure resources. To call Azure Resource Manager, use role-based access control (RBAC) in Azure AD to assign the appropriate role to the VM service principal. To call Key Vault, grant your code access to the specific secret or key in Key Vault.

References:

<https://docs.microsoft.com/en-us/azure/key-vault/quick-create-net>

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

### NEW QUESTION 89

You have a hybrid configuration of Azure Active Directory (Azure AD).

All users have computers that run Windows 10 and are hybrid Azure AD joined.

You have an Azure SQL database that is configured to support Azure AD authentication.

Database developers must connect to the SQL database by using Microsoft SQL Server Management Studio (SSMS) and authenticate by using their on-premises Active Directory account.

You need to tell the developers which authentication method to use to connect to the SQL database from SSMS. The solution must minimize authentication prompts.

Which authentication method should you instruct the developers to use?

- A. SQL Login
- B. Active Directory – Universal with MFA support
- C. Active Directory – Integrated
- D. Active Directory – Password

**Answer:** C

**Explanation:** Azure AD can be the initial Azure AD managed domain. Azure AD can also be an on-premises Active Directory Domain Services that is federated with the Azure AD.

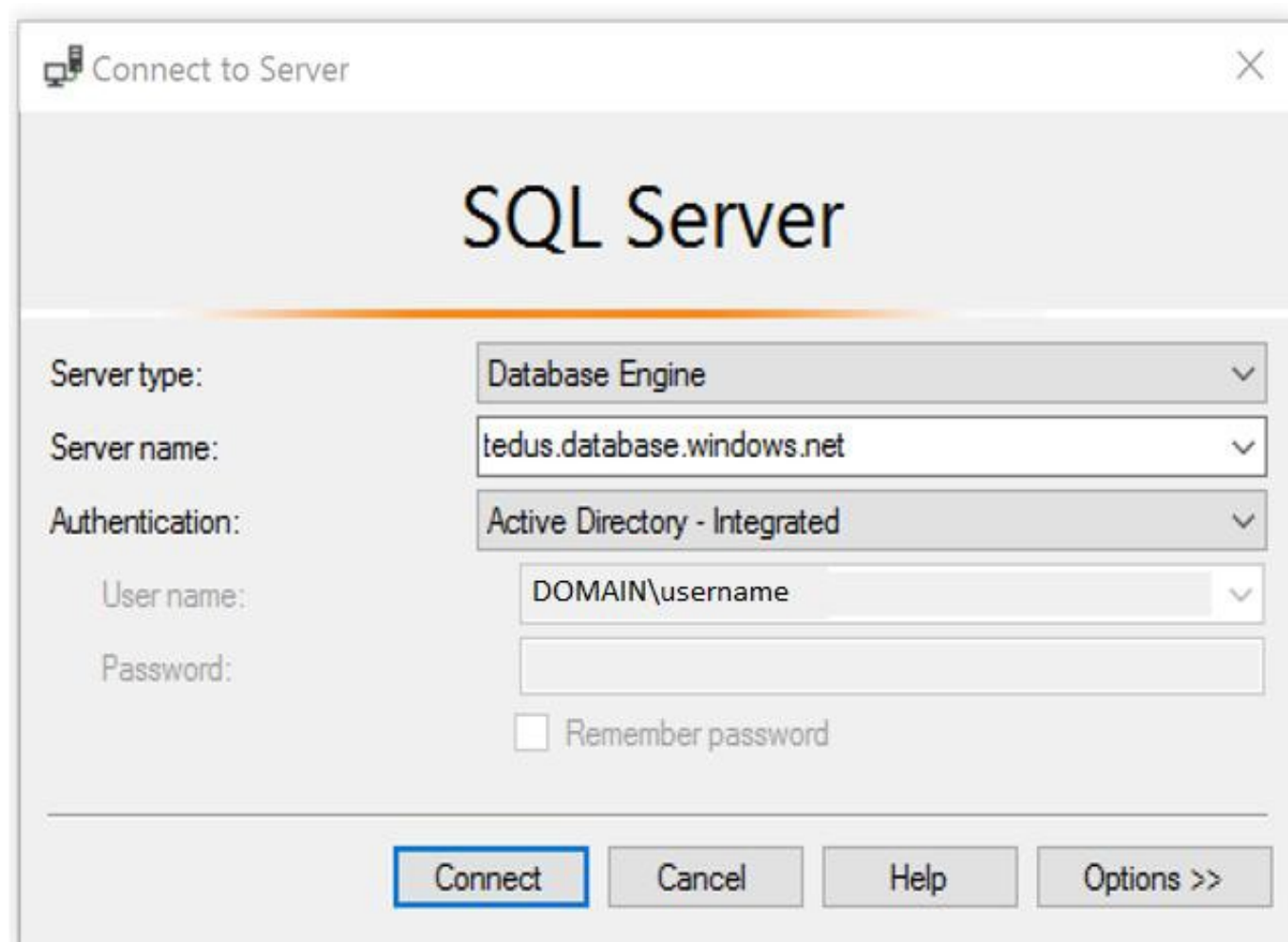
Using an Azure AD identity to connect using SSMS or SSDT

The following procedures show you how to connect to a SQL database with an Azure AD identity using SQL Server Management Studio or SQL Server Database Tools.

Active Directory integrated authentication

Use this method if you are logged in to Windows using your Azure Active Directory credentials from a federated domain.

1. Start Management Studio or Data Tools and in the Connect to Server (or Connect to Database Engine) dialog box, in the Authentication box, select Active Directory - Integrated. No password is needed or can be entered because your existing credentials will be presented for the connection.



2. Select the Options button, and on the Connection Properties page, in the Connect to database box, type the name of the user database you want to connect to. (The AD domain name or tenant ID" option is only supported for Universal with MFA connection options, otherwise it is greyed out.)

References:

<https://github.com/MicrosoftDocs/azure-docs/blob/master/articles/sql-database/sql-database-aad-authentication-configure.md>

## NEW QUESTION 92

DRAG DROP

You have an Azure subscription named Sub1 that contains an Azure Storage account named Contosostorage1 and an Azure key vault named Contosokeyvault1. You plan to create an Azure Automation runbook that will rotate the keys of Contosostorage1 and store them in Contosokeyvault1.

You need to implement prerequisites to ensure that you can implement the runbook.

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	Answer Area
Run Set-AzureRmKeyVaultAccessPolicy	
Create an Azure Automation account.	
Import PowerShell modules to the Azure Automation account.	
Create a user-assigned managed identity.	
Create a connection resource in the Azure Automation account.	

**Answer:**

**Explanation:** Step 1: Create an Azure Automation account

Runbooks live within the Azure Automation account and can execute PowerShell scripts.

Step 2: Import PowerShell modules to the Azure Automation account

Under 'Assets' from the Azure Automation account Resources section select 'to add in Modules to the runbook. To execute key vault cmdlets in the runbook, we need to add AzureRM.profile and AzureRM.key vault.

Step 3: Create a connection resource in the Azure Automation account

You can use the sample code below, taken from the AzureAutomationTutorialScript example runbook, to authenticate using the Run As account to manage Resource Manager resources with your runbooks. The AzureRunAsConnection is a connection asset automatically created when we created 'run as accounts' above. This can be found under Assets -> Connections. After the authentication code, run the same code above to get all the keys from the vault.

```
$connectionName = "AzureRunAsConnection" try
{
# Get the connection "AzureRunAsConnection "
$servicePrincipalConnection=Get-AutomationConnection -Name $connectionName
"Logging in to Azure..." Add-AzureRmAccount `
```

```
-ServicePrincipal `  
-TenantId $servicePrincipalConnection.TenantId `  
-ApplicationId $servicePrincipalConnection.ApplicationId `  
-CertificateThumbprint $servicePrincipalConnection.CertificateThumbprint  
}
```

References:

<https://www.rahulpnath.com/blog/accessing-azure-key-vault-from-azure-runbook/>

#### NEW QUESTION 95

Your company uses Azure DevOps.

You need to recommend a method to validate whether the code meets the company's quality standards and code review standards. What should you recommend implementing in Azure DevOps?

- A. branch folders
- B. branch permissions
- C. branch policies
- D. branch locking

**Answer:** C

**Explanation:** Branch policies help teams protect their important branches of development. Policies enforce your team's code quality and change management standards.

References:

<https://docs.microsoft.com/en-us/azure/devops/repos/git/branch-policies?view=azure-devops&viewFallbackFrom=vsts>

#### NEW QUESTION 100

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