



# Microsoft

## Exam Questions az-500

Microsoft Azure Security Technologies

## NEW QUESTION 1

You need to meet the identity and access requirements for Group1.  
 What should you do?

- A. Add a membership rule to Group1.
- B. Delete Group1. Create a new group named Group1 that has a membership type of Office 365. Add users and devices to the group.
- C. Modify the membership rule of Group1.
- D. Change the membership type of Group1 to Assign
- E. Create two groups that have dynamic membership
- F. Add the new groups to Group1.

**Answer: B**

### Explanation:

Incorrect Answers:

A, C: You can create a dynamic group for devices or for users, but you can't create a rule that contains both users and devices.

D: For assigned group you can only add individual members. Scenario:

Litware identifies the following identity and access requirements: All San Francisco users and their devices must be members of Group1. The tenant currently contain this group:

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.

References:

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

<https://docs.microsoft.com/en-us/azure/active-directory/fundamentals/active-directory-groups-create-azure-portal>

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

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

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

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

All virtual machines have the public IP addresses and the Web Server (IIS) role installed. The firewalls for each virtual machine allow ping requests and web requests.

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.m.

### NEW 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 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 3

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 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"/>

- A. Mastered
- B. Not Mastered

Answer: A

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

#### HOTSPOT

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

Name	Role	Sign in frequency
User1	Password administrator	Sign in every work day
User2	Password administrator	Sign in bi-weekly
User3	Global administrator, Password administrator	Signs in every month

You configure an access review named Review1 as shown in the following exhibit.

Create an access review

Access reviews enable reviewers to attest to users access.

Review name

Review1

Description

Start date

2019-03-01

Frequency

One time

Duration (in days)

1

End

Never

Number of times

0

End date

2019-03-20

Users

Scope

Everyone

Review role membership

Password administrator

Reviewers

Reviewers

Members(self)

Upon completion settings

Auto apply results to resource

Enable

Should reviewer not respond

Take recommendations

Advanced settings

Use the drop-down menus to select the answer choice that completes each statement based on the information presented in the graphic.

NOTE: Each correct selection is worth one point.

Hot Area:



Answer Area

User3 can perform Review1 for

User3 only

User1 and User2 only

User1, User2, and User3

If User2 fails to complete Review1 by March 20, 2019

The Password administrator role will be revoked from User2

User2 will retain the Password administrator role

User3 will receive a confirmation request

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Box 1: User3 only  
Use the Members (self) option to have the users review their own role assignments.  
Box 2: User3 will receive a confirmation request  
Use the Should reviewer not respond list to specify what happens for users that are not reviewed by the reviewer within the review period. This setting does not impact users who have been reviewed by the reviewers manually. If the final reviewer's decision is Deny, then the user's access will be removed.  
No change - Leave user's access unchanged Remove access - Remove user's access Approve access - Approve user's access  
Take recommendations - Take the system's recommendation on denying or approving the user's continued access  
References:  
<https://docs.microsoft.com/bs-latn-ba/azure/active-directory/privileged-identity-management/pim-how-to-start-security-review>

NEW QUESTION 8

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

⬅

➡

⬆

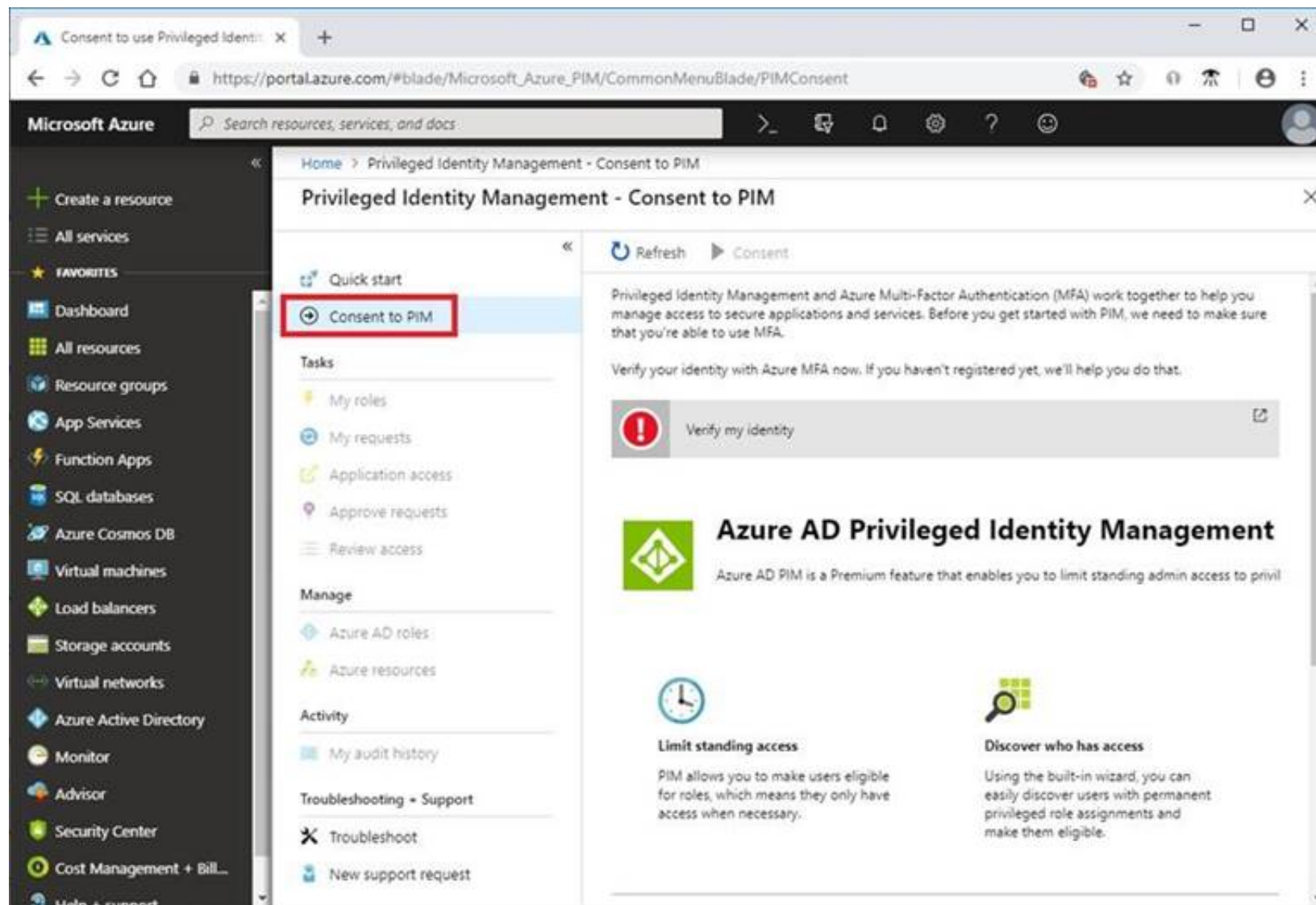
⬆

- A. Mastered
- B. Not Mastered

Answer: A

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 9

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:

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.
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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>  
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- \_ Deploy Azure Firewall to VNetWork1 in Sub2. Register an application named App2 in contoso.com.
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- \_ Enable Azure AD Privileged Identity Management (PIM) for contoso.com

Existing Environment Azure AD

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

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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 10

### 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"/>

- A. Mastered  
 B. Not Mastered

Answer: A

### 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 Subent1.3
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 10

### 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



- A. Mastered
- B. Not Mastered

Answer: A

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 15

HOTSPOT

You plan to use Azure Log Analytics to collect logs from 200 servers that run Windows Server 2016.

You need to automate the deployment of the Microsoft Monitoring Agent to all the servers by using an Azure Resource Manager template. How should you complete the template? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

```
{
  "type": "Microsoft.Compute/virtualMachines/extensions",
  "name": "[concat(parameter('vmname'), /OMSExtension)]",
  "apiVersion": "[variables('apiVersion')]",
  "location": "[resourceGroup().location]",
  "dependsOn": [
    "[concat('Microsoft.Compute/virtualMachines/', parameters('vmName'))]"
  ],
  "properties": {
    "publisher": "Microsoft.EnterpriseCloud.Monitoring",
    "type": "MicrosoftMonitoringAgent",
    "typeHandlerVersion": "1.0",
    "autoUpgradeMinorVersion": true,
    "settings": {
      "[variable('var1')]"
      "AzureADApplicationID"
      "WorkspaceID"
      "WorkspaceName"
      "WorkspaceURL"
    },
    "protectedSettings": {
      "[variable('var2')]"
      "AzureADApplicationSecret"
      "StorageAccountKey"
      "WorkspaceID"
      "WorkspaceKey"
    }
  }
}
```

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

## Answer Area

```
{
  "type" : "Microsoft.Compute/virtualMachines/extensions",
  "name" : "[concat(parameter('vmname'), /OMSExtension)]",
  "apiVersion" : "[variables('apiVersion')]",
  "location" : "[resourceGroup().location]",
  "dependsOn" : [
    "[concat('Microsoft.Compute/virtualMachines/', parameters('vmName'))]"
  ],
  "properties" : {
    "publisher" : "Microsoft.EnterpriseCloud.Monitoring",
    "type" : "MicrosoftMonitoringAgent",
    "typeHandlerVersion" : "1.0",
    "autoUpgradeMinorVersion" : true,
    "settings" : {
      "[variable('var1')]" : "[variable('var1')]"
      "AzureADApplicationID"
      "WorkspaceID"
      "WorkspaceName"
      "WorkspaceURL"
    },
    "protectedSettings" : {
      "[variable('var2')]" : "[variable('var2')]"
      "AzureADApplicationSecret"
      "StorageAccountKey"
      "WorkspaceID"
      "WorkspaceKey"
    }
  }
}
```

References:

<https://blogs.technet.microsoft.com/manageabilityguys/2015/11/19/enabling-the-microsoft-monitoring-agent-in-windows-json-templates/>

## NEW QUESTION 18

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 21

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	Answer Area
Activity log	
Logs	Identify the user who deleted a virtual machine three weeks ago: <input type="text"/>
Metrics	Query the security events of a virtual machine that runs Windows Server 2016: <input type="text"/>
Service Health	

- A. Mastered
- B. Not Mastered

**Answer: A**

### 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

This is a case study. Case studies are not timed separately. You can use as much exam time as you would like to complete each case. However, there may be additional case studies and sections on this exam. You must manage your time to ensure that you are able to complete all questions included on this exam in the time provided.

To answer the questions included in a case study, you will need to reference information that is provided in the case study. Case studies might contain exhibits and other resources that provide more information about the scenario that is described in the case study. Each question is independent of the other question on this case study.

At the end of this case study, a review screen will appear. This screen allows you to review your answers and to make changes before you move to the next sections of the exam. After you begin a new section, you cannot return to this section.

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 25

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 26

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" : [
      ]
  ]
}
```

- A. Mastered  
 B. Not Mastered

**Answer:** A

### 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 28

#### 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).

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

In Azure AD, create a user-assigned managed identity.



- A. Mastered  
 B. Not Mastered

**Answer:** A

**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 32**

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'`

<input type="checkbox"/> -EnabledForDeployment	<input type="checkbox"/> -Confirm
<input type="checkbox"/> -EnablePurgeProtection	<input type="checkbox"/> -DefaultProfile
<input type="checkbox"/> -Tag	<input type="checkbox"/> -EnableSoftDelete
	<input type="checkbox"/> -SKU

- A. Mastered
- B. Not Mastered

**Answer:** A

**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 36**

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 38**

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.

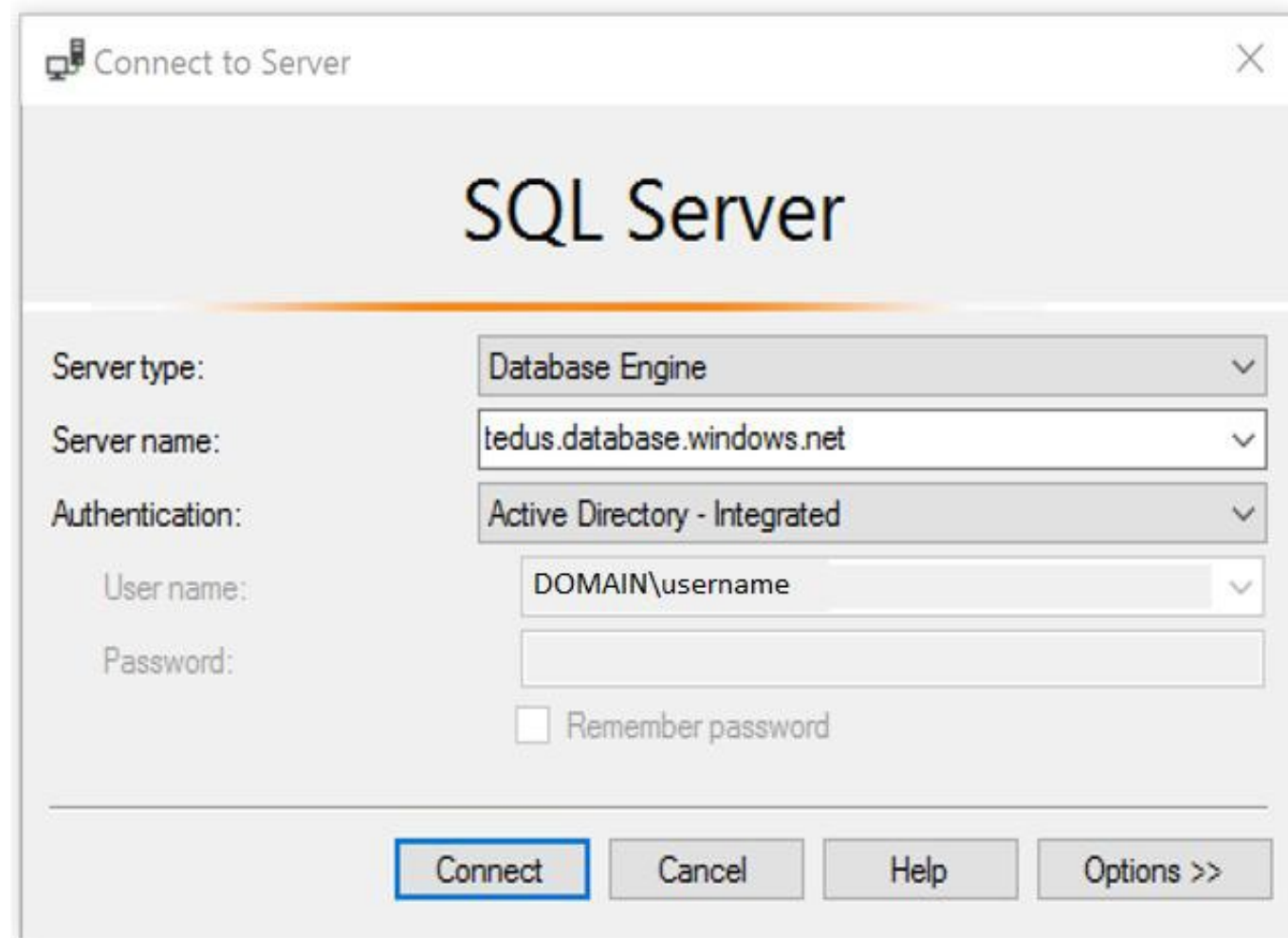
Using an Azure AD identity to connect using SSMS or SSDT

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 41**

You have an Azure SQL Database server named SQL1.

You plan to turn on Advanced Threat Protection for SQL1 to detect all threat detection types. Which action will Advanced Threat Protection detect as a threat?

- A. A user updates more than 50 percent of the records in a table.
- B. A user attempts to sign as select \* from table1.
- C. A user is added to the db\_owner database role.
- D. A user deletes more than 100 records from the same table.

**Answer: B**

**Explanation:**

Advanced Threat Protection can detect potential SQL injections: This alert is triggered when an active exploit happens against an identified application vulnerability to SQL injection. This means the attacker is trying to inject malicious SQL statements using the vulnerable application code or stored procedures.

References:

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-threat-detection-overview>

**NEW QUESTION 44**

HOTSPOT

You have the Azure Information Protection conditions shown in the following table.

Name	Pattern	Case sensitivity
Condition1	White	On
Condition2	Black	Off

You have the Azure Information Protection labels shown in the following table.

Name	Applies to	Use label	Set the default label
Global	<i>Not applicable</i>	<i>None</i>	None
Policy1	User1	Label1	None
Policy2	User1	Label2	None

You need to identify how Azure Information Protection will label files.  
 What should you identify? To answer, select the appropriate options in the answer area.  
 NOTE: Each correct selection is worth one point.  
 Hot Area:

### Answer Area

If User1 creates a Microsoft Word file that includes the text "Black and White", the file will be assigned:

▼

No label

Label1 only

Label2 only

Label1 and Label2

If User1 creates a Microsoft Notepad file that includes the text "Black or white", the file will be assigned:

▼

No label

Label1 only

Label2 only

Label1 and Label2

- A. Mastered
- B. Not Mastered

**Answer:** A

#### Explanation:

Box 1: Label 2 only

How multiple conditions are evaluated when they apply to more than one label

1. The labels are ordered for evaluation, according to their position that you specify in the policy: The label positioned first has the lowest position (least sensitive) and the label positioned last has the highest position (most sensitive).
2. The most sensitive label is applied.
3. The last sublabel is applied.

Box 2: No Label

Automatic classification applies to Word, Excel, and PowerPoint when documents are saved, and apply to Outlook when emails are sent. Automatic classification does not apply to Microsoft Notepad.

References:

<https://docs.microsoft.com/en-us/azure/information-protection/configure-policy-classification>

#### NEW QUESTION 47

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 48

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