

## az-500 Dumps

### Microsoft Azure Security Technologies

<https://www.certleader.com/az-500-dumps.html>



**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 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 2**

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 3**

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 4**

HOTSPOT

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

Name	Member of	Mobile phone	Multi-factor authentication (MFA) status
User1	Group1	123 555 7890	Disabled
User2	Group1, Group2	None	Enabled
User3	Group1	123 555 7891	Required

You create and enforce an Azure AD Identity Protection user risk policy that has the following settings:

▪ Assignment: Include Group1, Exclude Group2 Conditions: Sign-in risk of Medium and above Access: Allow access, Require password change

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
If User1 signs in from an unfamiliar location, he must change his password.	<input type="radio"/>	<input type="radio"/>
If User2 signs in from an anonymous IP address, she must change her password.	<input type="radio"/>	<input type="radio"/>
If User3 signs in from a computer containing malware that is communicating with known bot servers, he must change his password.	<input type="radio"/>	<input type="radio"/>

- A. Mastered  
B. Not Mastered

**Answer:** A

### Explanation:

Box 1: Yes

User1 is member of Group1. Sign in from unfamiliar location is risk level Medium.

Box 2: Yes

User2 is member of Group1. Sign in from anonymous IP address is risk level Medium.

Box 3: No

Sign-ins from IP addresses with suspicious activity is low.

Note:

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

- 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: References:

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

### NEW QUESTION 5

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.

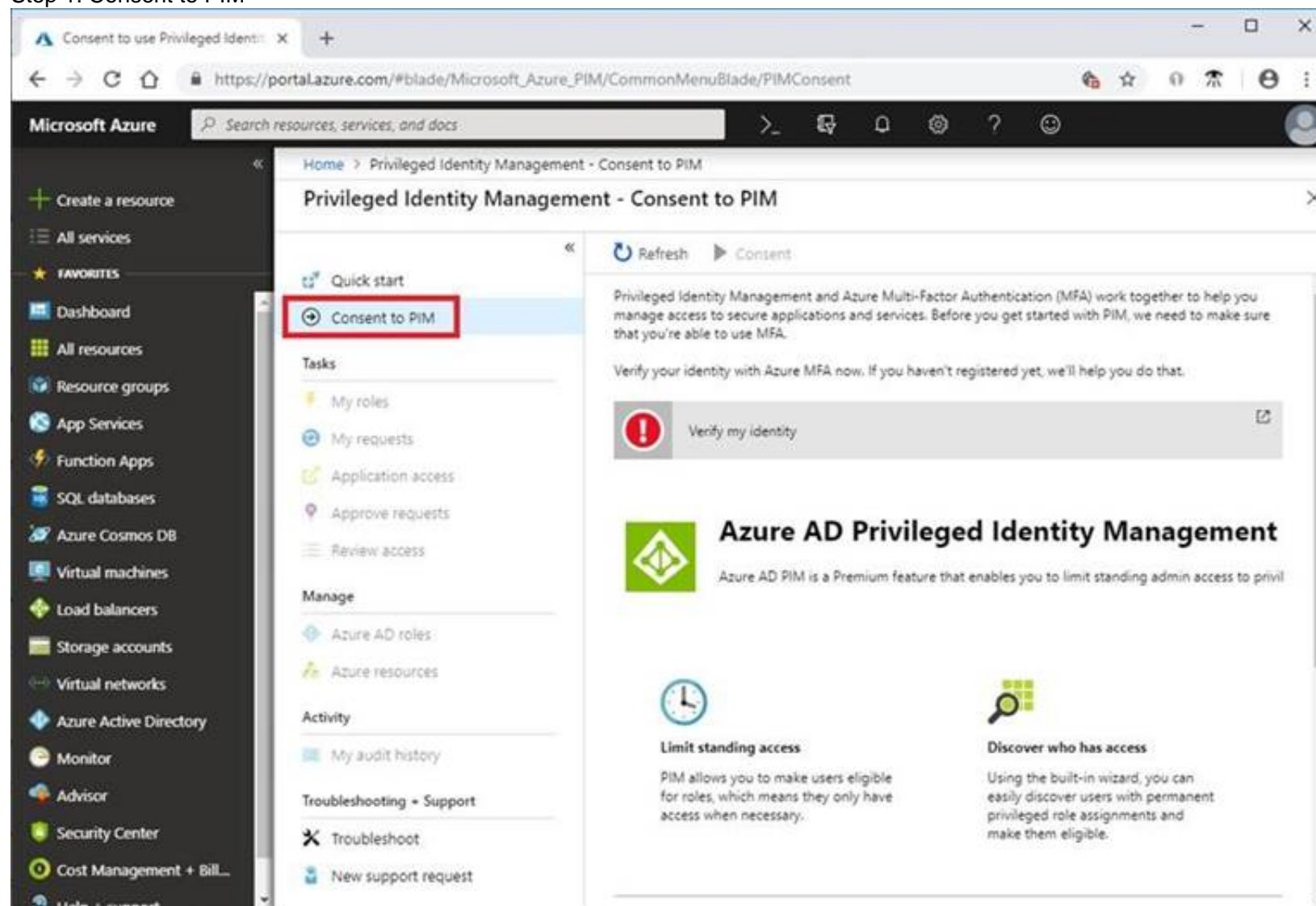
## Answer Area

- 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 6

#### 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.

☐
☐

If User2 signs in to Azure from a device in the Seattle office, User2 must be authenticated by using the Microsoft Authenticator app.

☐
☐

If User2 signs in to Azure from a device in the New York office, User1 must be authenticated by using a phone

☐
☐

A. Mastered

B. Not Mastered

Answer: A

### 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 7

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:

Download images:

- A. Mastered  
B. Not Mastered

**Answer:** A

**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 8**

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

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 9

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:

Group2:

- A. Mastered
- B. Not Mastered

Answer: A

### 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 10

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.

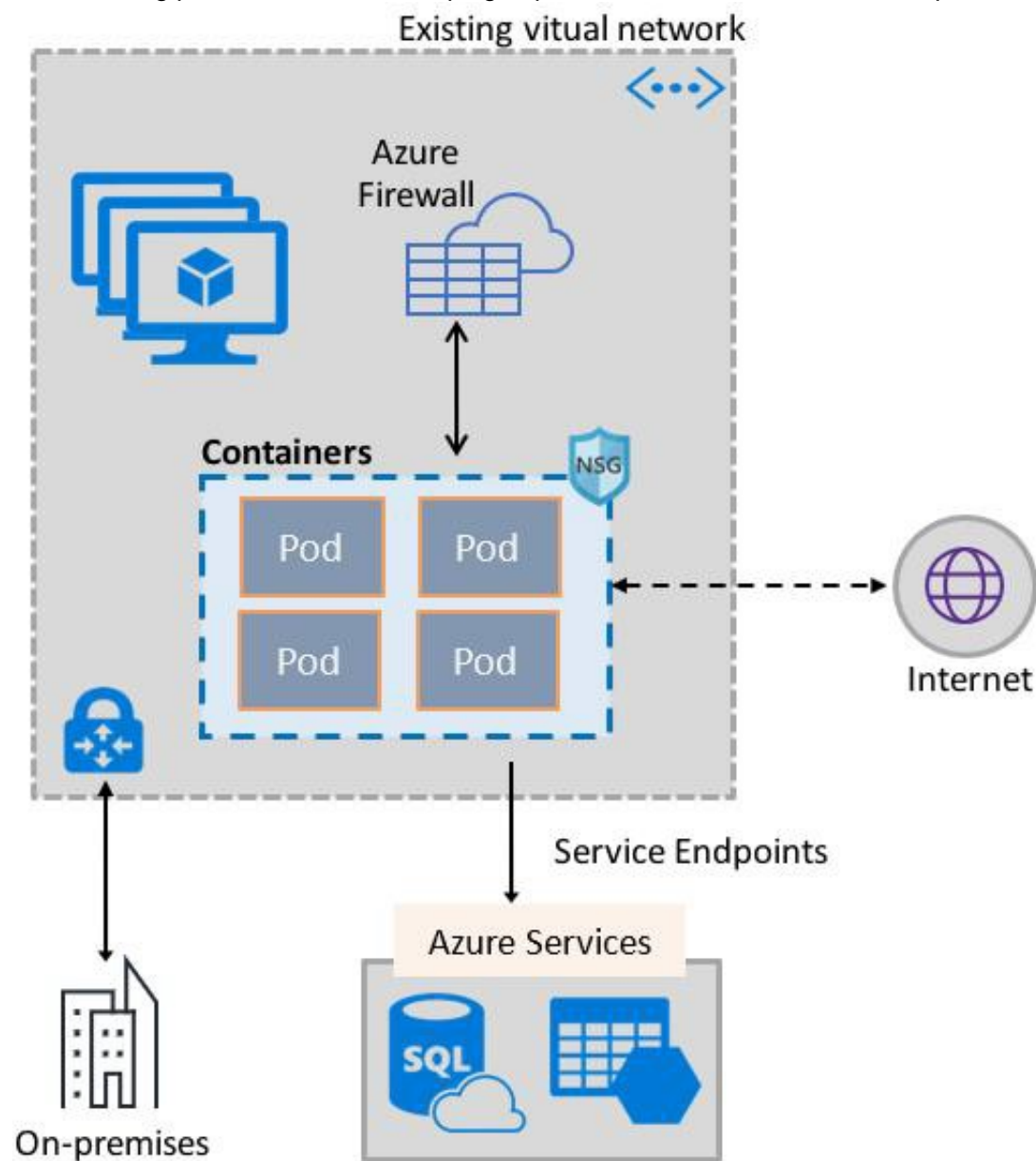
- A. Create an application security group and a network security group (NSG).
- B. Edit the docker-compose.yml file.
- C. Install the container network interface (CNI) plug-in.

**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 10

##### DRAG DROP

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

Name	Region	Description
HubVNet	East US	HubVNet is a virtual network connected to the on-premises network by using a site-to-site VPN that has BGP route propagation enabled. HubVNet contains a subnet named HubVNetSubnet0.
SpokeVNet	East US	SpokeVNet is a virtual network connected to HubVNet by using VNet peering. SpokeVNet contains a subnet named SpokeVNetSubnet0.

The Azure virtual machines on SpokeVNetSubnet0 can communicate with the computers on the on-premises network. You plan to deploy an Azure firewall to HubVNet.

You create the following two routing tables:

\_ RT1: Includes a user-defined route that points to the private IP address of the Azure firewall as a next hop address RT2: Disables BGP route propagation and defines the private IP address of the Azure firewall as the default gateway

You need to ensure that traffic between SpokeVNetSubnet0 and the on-premises network flows through the Azure firewall.

To which subnet should you associate each route table? To answer, drag the appropriate subnets to the correct route tables. Each subnet 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:

## Subnets

Azure FirewallSubnet

GatewaySubnet

HubVNetSubnet0

## Answer Area

RT1:

RT2:

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

## Subnets

Azure FirewallSubnet

GatewaySubnet

HubVNetSubnet0

## Answer Area

RT1:

GatewaySubnet

RT2:

HubVNetSubnet0

### NEW QUESTION 12

#### 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",
    "details": {
      "type": "Microsoft.GuestConfiguration/questConfigurationAssignments",
      "roleDefinitionsId": [
        "/providers/microsoft.authorization/roleDefinitions/12345678-1234-5678-abcd-012345678910"
      ],
      "name": "customExtension",
      "deployment": {
        "properties": {
          "mode": "incremental",
          "parameters": {
            "existenceCondition": {
              "resources": {
                "template": {
                  "type": "Microsoft.Resources/templates",
                  "name": "template",
                  "location": "West Europe",
                  "apiVersion": "2019-06-01",
                  "content": {
                    "parameters": {
                      "vmName": {
                        "type": "String",
                        "defaultValue": "VMName"
                      }
                    },
                    "resources": [
                      {
                        "type": "Microsoft.GuestConfiguration/questConfigurationAssignments",
                        "name": "[concat('customExtension-', vmName)]",
                        "location": "West Europe",
                        "apiVersion": "2019-06-01",
                        "properties": {
                          "mode": "incremental",
                          "parameters": {
                            "vmName": "[vmName]"
                          }
                        }
                      }
                    ]
                  }
                }
              }
            }
          }
        }
      }
    }
  }
}
```

- A. Mastered  
B. Not Mastered

**Answer:** A

**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 14**

HOTSPOT

You have Azure virtual machines that have Update Management enabled. The virtual machines are configured as shown in the following table.

Name	Operating system	Region	Resource group
VM1	Windows Server 2012	East US	RG1
VM2	Windows Server 2012 R2	West US	RG1
VM3	Windows Server 2016	West US	RG2
VM4	Ubuntu Server 18.04 LTS	West US	RG2
VM5	Red Hat Enterprise Linux 7.4	East US	RG1
VM6	CentOS 7.5	East US	RG1

You schedule two update deployments named Update1 and Update2. Update1 updates VM3. Update2 updates VM6.

Which additional virtual machines can be updated by using Update1 and Update2? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Update1: 

	▼
VM2 only	
VM4 only	
VM1 and VM2 only	
VM1, VM2, VM4, VM5, and VM6	

Update2: 

	▼
VM5 only	
VM1 and VM5 only	
VM4 and VM5 only	
VM1, VM2, and VM5 only	
VM1, VM2, VM3, VM4, and VM5	

- A. Mastered  
B. Not Mastered

**Answer:** A

**Explanation:**

Update1: VM1 and VM2 only

VM3: Windows Server 2016 West US RG2

Update2: VM4 and VM5 only VM6: CentOS 7.5 East US RG1

For Linux, the machine must have access to an update repository. The update repository can be private or public. References:

<https://docs.microsoft.com/en-us/azure/automation/automation-update-management>

**NEW QUESTION 16**

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 18**

**HOTSPOT**

You assign User8 the Owner role for RG4, RG5, and RG6.

In which resource groups can User8 create virtual networks and NSGs? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

User8 can create virtual networks in:

▼

RG4 only

RG6 only

RG4 and RG6 only

RG4, RG5, and RG6

User8 can create NSGs in:

▼

RG4 only

RG4 and RG5 only

RG4 and RG6 only

RG4, RG5, and RG6

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Box 1: RG4 only

Virtual Networks are not allowed for Rg5 and Rg6.

Box 2: Rg4,Rg5, and Rg6 Scenario:

Contoso has two Azure subscriptions named Sub1 and Sub2.

Sub1 contains six resource groups named RG1, RG2, RG3, RG4, RG5, and RG6. You assign User8 the Owner role for RG4, RG5, and RG6

User8 city Sidney, Role:None

Note: A network security group (NSG) contains a list of security rules that allow or deny network traffic to resources connected to Azure Virtual Networks (VNet).

NSGs can be associated to subnets, individual VMs (classic), or individual network interfaces (NIC) attached to VMs (Resource Manager).

References:

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

**NEW QUESTION 20**

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 23**

**HOTSPOT**

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

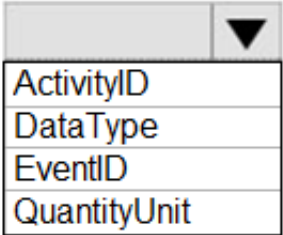
You need to create an Azure Log Analytics query to identify failed user sign-in attempts from the last three days. The results must only show users who had more than five failed sign-in attempts.

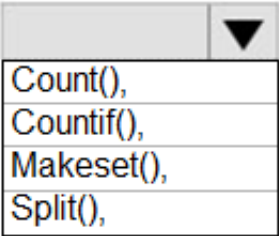
How should you configure the query? To answer, select the appropriate options in the answer area.

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
```

- A. Mastered
- B. Not Mastered

**Answer: A**

**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 28**

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 30**

You have an Azure subscription named Sub1 that contains an Azure Log Analytics workspace named LAW1.

You have 100 on-premises servers that run Windows Server 2012 R2 and Windows Server 2016. The servers connect to LAW1. LAW1 is configured to collect security-related performance counters from the connected servers.

You need to configure alerts based on the data collected by LAW1. The solution must meet the following requirements:

- \_ Alert rules must support dimensions.
- \_ The time it takes to generate an alert must be minimized.
- \_ Alert notifications must be generated only once when the alert is generated and once when the alert is resolved.

Which signal type should you use when you create the alert rules?

- A. Log
- B. Log (Saved Query)
- C. Metric
- D. Activity Log

**Answer: C**

**Explanation:**

Metric alerts in Azure Monitor provide a way to get notified when one of your metrics cross a threshold. Metric alerts work on a range of multi-dimensional platform metrics, custom metrics, Application Insights standard and custom metrics.

Note: Signals are emitted by the target resource and can be of several types. Metric, Activity log, Application Insights, and Log. References:

<https://docs.microsoft.com/en-us/azure/azure-monitor/platform/alerts-metric>

**NEW QUESTION 31**

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 able 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 35

### 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/   |   |


    ,
    "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 36

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 39

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 43**

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

-EnablePurgeProtection

-Tag

-Confirm

-DefaultProfile

-EnableSoftDelete

-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 44**

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

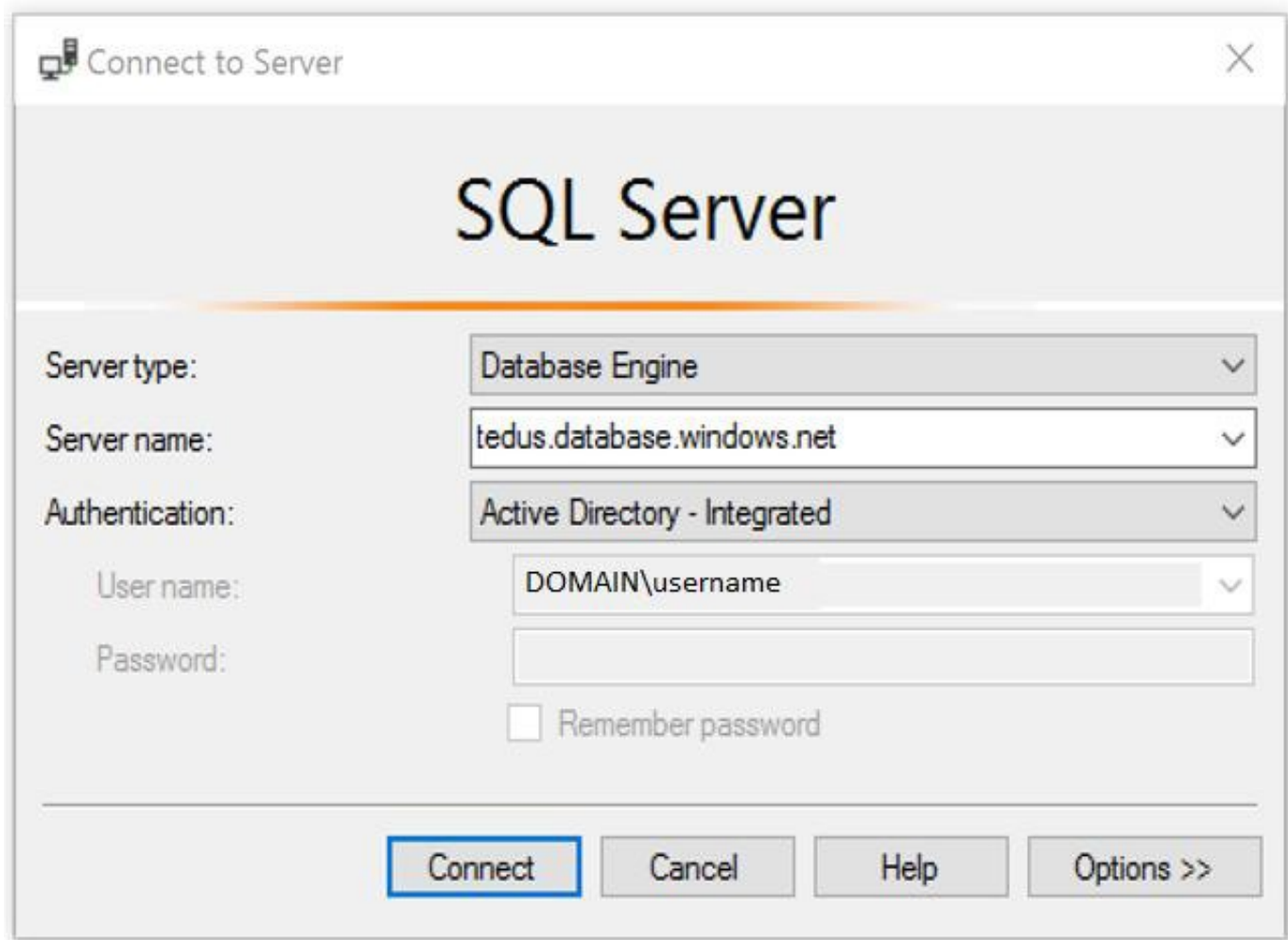
The following procedures show you how to connect to a SQL database with an Azure AD identity using SQL Server Management Studio or SQL Server Database Tools.

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 45

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.	

- A. Mastered
- B. Not Mastered

Answer: A

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 50**

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 53**

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 56**

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