

**AZ-103.examcollection.premium.exam.124q**

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**AZ-103**

**Microsoft Azure Administrator**

**Version 3.0**

## Question Set 1

### QUESTION 1

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

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

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

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

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

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** A

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

The Contributor role can manage all resources (and add resources) in a Resource Group.

### 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.

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

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

Solution: On Subscription1, you assign the Logic App Operator role to the Developers group.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

You would need the Logic App Contributor role.

References:

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

<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-securing-a-logic-app>

**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.

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

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

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

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** A

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

The Logic App Contributor role lets you manage logic app, but not access to them. It provides access to view, edit, and update a logic app.

References:

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

<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-securing-a-logic-app>

**QUESTION 4**

You have an Azure subscription named Subscription1 that contains an Azure Log Analytics workspace named Workspace1.

You need to view the error events from a table named Event.

Which query should you run in Workspace1?

- A. Get-Event Event | where (\$\_.EventType -eq "error")
- B. Get-Event Event | where (\$\_.EventType == "error")
- C. search in (Event) \* | where EventType -eq "error"
- D. search in (Event) "error"

- E. select \*from Event where EventType == "error"
- F. Event | where EventType is "error"

**Correct Answer:** D

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

To search a term in a specific table, add in (table-name) just after the search operator

References:

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

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

### **QUESTION 5**

You have an Azure subscription named Subscription1. Subscription1 contains the resource groups in the following table.

Name	Azure region	Policy
RG1	West Europe	Policy1
RG2	North Europe	Policy2
RG3	France Central	Policy3

RG1 has a web app named WebApp1. WebApp1 is located in West Europe.

You move WebApp1 to RG2.

What is the effect of the move?

- A. The App Service plan for WebApp1 moves to North Europe. Policy2 applies to WebApp1.
- B. The App Service plan for WebApp1 remains in West Europe. Policy2 applies to WebApp1.
- C. The App Service plan for WebApp1 moves to North Europe. Policy1 applies to WebApp1.
- D. The App Service plan for WebApp1 remains in West Europe. Policy1 applies to WebApp1.

**Correct Answer:** B

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

You can move an app to another App Service plan, as long as the source plan and the target plan are in the same resource group and geographical region.

The region in which your app runs is the region of the App Service plan it's in. However, you cannot change an App Service plan's region.

References:

<https://docs.microsoft.com/en-us/azure/app-service/app-service-plan-manage>

### **QUESTION 6**

You have an Azure subscription that contains a resource group named RG1. RG1 contains 100 virtual machines.

Your company has three cost centers named Manufacturing, Sales, and Finance.

You need to associate each virtual machine to a specific cost center.

What should you do?

- A. Configure locks for the virtual machine.
- B. Add an extension to the virtual machines.
- C. Assign tags to the virtual machines.
- D. Modify the inventory settings of the virtual machine.

**Correct Answer:** C

**Section:** [none]

**Explanation**

**Explanation/Reference:**

References:

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

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/resource-group-using-tags>

#### **QUESTION 7**

**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 Subscription1. Subscription1 contains a resource group named RG1. RG1 contains resources that were deployed by using templates.

You need to view the date and time when the resources were created in RG1.

**Solution:** From the Subscriptions blade, you select the subscription, and then click **Programmatic deployment**.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** [none]

**Explanation**

**Explanation/Reference:**

#### **QUESTION 8**

**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 Subscription1. Subscription1 contains a resource group named RG1. RG1 contains resources that were deployed by using templates.

You need to view the date and time when the resources were created in RG1.

Solution: From the Subscriptions blade, you select the subscription, and then click **Resource providers**.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** [none]

**Explanation**

**Explanation/Reference:**

### **QUESTION 9**

**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 Subscription1. Subscription1 contains a resource group named RG1. RG1 contains resources that were deployed by using templates.

You need to view the date and time when the resources were created in RG1.

Solution: From the RG1 blade, you click **Automation script**.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** [none]

**Explanation**

**Explanation/Reference:**

### **QUESTION 10**

**HOTSPOT**

You have an Azure subscription.

You plan to use Azure Resource Manager templates to deploy 50 Azure virtual machines that will be part of the same availability set.

You need to ensure that as many virtual machines as possible are available if the fabric fails or during servicing.

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

**NOTE:** Each correct selection is worth one point.

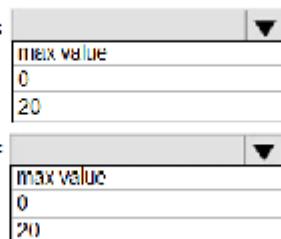
#### **Hot Area:**

### Answer Area

```

    "type": "Microsoft.Compute/availabilitySets",
    "name": "ha",
    "apiVersion": "2017-12-01",
    "location": "eastus",
    "properties": {
        "platformFaultDomainCount": 2,
        "platformUpdateDomainCount": 2
    }
}

```



**Correct Answer:**

## Answer Area

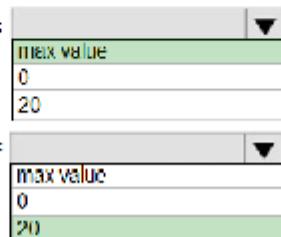
```
{  
    "schema": "https://schema.management.azure.com/schemas/2015-01-01/deploymentTemplate.json",  
    "contentVersion": "1.0.0.0",  
    "parameters": {},  
    "resources": [  
        {  
            "type": "Microsoft.Compute/availabilitySets",  
            "name": "ha",  
            "apiVersion": "2017-12-01",  
            "location": "eastus",  
            "properties": {  
                "platformFaultDomainCount": 

|           |
|-----------|
| Max value |
| 0         |
| 20        |

,  
                "platformUpdateDomainCount": 

|           |
|-----------|
| Max value |
| 0         |
| 20        |

  
            }  
        }  
    ]  
}
```



## Section: [none]

## **Explanation**

#### **Explanation/Reference:**

### **Explanation:**

**Explanation:**  
Use two fault domains.

2 or 3 is max value, depending on which region you are in.

Use 20 for platformUpdateDomainCount

Increasing the update domain (`platformUpdateDomainCount`) helps with capacity and availability planning when the platform reboots nodes. A higher number for the pool (20 is max) means that fewer of their nodes in any given availability set would be rebooted at once.

References:

<https://www.itprotoday.com/microsoft-azure/check-if-azure-region-supports-2-or-3-fault-domains-managed-disks>

<https://github.com/Azure/acs-engine/issues/1030>

**QUESTION 11**

HOTSPOT

You have an Azure subscription named Subscription1 that has a subscription ID of c276fc76-9cd4-44c9-99a7-4fd71546436e.

You need to create a custom RBAC role named CR1 that meets the following requirements:

- Can be assigned only to the resource groups in Subscription1
- Prevents the management of the access permissions for the resource groups
- Allows the viewing, creating, modifying, and deleting of resource within the resource groups

What should you specify in the assignable scopes and the permission elements of the definition of CR1? To answer, select the appropriate options in the answer area.

**NOTE:** Each correct selection is worth one point.

Hot Area:

**Answer Area**

"assignableScopes": [

/
/subscriptions/c276fc76-9cd4-44c9-99a7-4fd71546436e"
/subscriptions/c276fc76-9cd4-44c9-99a7-4fd71546436e/resourceGroups"

],

"permissions": [

{

  "actions": [

  "\*

  ],

  "additionalProperties" : {},

  "dataActions": [],

  "notActions" : [

Microsoft.Authorization/*"
----------------------------

Microsoft.Resources/*"
------------------------

Microsoft.Security/*"
-----------------------

  ],

  "notDataActions": []

}

],

**Correct Answer:**

## Answer Area

```
"assignableScopes": [
    "/",
    "/subscriptions/c276fc76-9cd4-44c9-99a7-4fd71546436e",
    "/subscriptions/c276fc76-9cd4-44c9-99a7-4fd71546436e/resourceGroups"
],
"permissions": [
    {
        "actions": [
            "*"
        ],
        "additionalProperties" : {},
        "dataActions": [],
        "notActions" : [
            "Microsoft.Authorization/*",
            "Microsoft.Resources/*",
            "Microsoft.Security/*"
        ],
        "notDataActions": []
    }
],
```

**Section:** [none]

**Explanation**

**Explanation/Reference:**

References:

<https://docs.microsoft.com/en-us/azure/role-based-access-control/custom-roles>

<https://docs.microsoft.com/en-us/azure/role-based-access-control/resource-provider-operations#microsoftresources>

## QUESTION 12

HOTSPOT

You have an Azure Active Directory (Azure AD) tenant that contains three global administrators named Admin1, Admin2, and Admin3.

The tenant is associated to an Azure subscription. Access control for the subscription is configured as shown in the **Access control** exhibit. (Click the **Exhibit** tab.)

Name 

Type 

Role 

3 selected

Scope 

Group by 

5 items (4Users, 1 Service Principals)



NAME

TYPE

ROLE

SCO

OWNER



Admin3

Admin3@contltd...

User

Owner  Service administrat... This

You sign in to the Azure portal as Admin1 and configure the tenant as shown in the Tenant exhibit. (Click the Exhibit tab.)

 Save  Discard

\* Name

Contoso



Country or region

United States

Location

United States datacenters

Notification language

English



Global admin can manage Azure Subscriptions and Management Groups

Yes

No

Directory ID

a8ccb016-31f3-4582-b9b7-854f413d7177



Technical contact

Global privacy contact

Privacy statement URL

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
Admin1 can add Admin2 as an owner of the subscription.	<input type="radio"/>	<input type="radio"/>
Admin2 can add Admin1 as an owner of the subscription.	<input type="radio"/>	<input type="radio"/>
Admin2 can create a resource group in the subscription.	<input type="radio"/>	<input type="radio"/>

Correct Answer:

## Answer Area

Statements	Yes	No
Admin1 can add Admin2 as an owner of the subscription.	<input checked="" type="radio"/>	<input type="radio"/>
Admin2 can add Admin1 as an owner of the subscription.	<input checked="" type="radio"/>	<input type="radio"/>
Admin2 can create a resource group in the subscription.	<input type="radio"/>	<input checked="" type="radio"/>

Section: [none]

Explanation

Explanation/Reference:

### QUESTION 13

You have an Azure policy as shown in the following exhibit.

SCOPE

\* Scope ([Learn more about setting the scope](#))

Subscription1

Exclusions

Subscription1/ContosoRG1

BASICS

\* Policy definition

Not allowed resource types

\* Assignment name ⓘ

Not allowed resource types

Assignment ID

/subscription/5eb8d0b6-ce3b-4ce0-a631-9f5321bedabb/providers/Microsoft.Authorization/policy/Assignments/0e6fb866b

Description

Assigned by

admin1@contoso.com

PARAMETERS

\* Not allowed resource types ⓘ

Microsoft.Sql/servers



What is the effect of the policy?

- A. You are prevented from creating Azure SQL Servers in ContosoRG1 only.
- B. You can create Azure SQL servers in ContosoRG1 only.
- C. You can create Azure SQL servers in any resource group within Subscription1.
- D. You are prevented from creating Azure SQL servers anywhere in Subscription1.

**Correct Answer:** B

**Section:** [none]

## **Explanation**

### **Explanation/Reference:**

Explanation:

You are prevented from creating Azure SQL servers anywhere in Subscription 1 with the exception of ContosoRG1

## **QUESTION 14**

**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.**

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

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

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

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer: B**

**Section: [none]**

**Explanation**

### **Explanation/Reference:**

Explanation:

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

The Logic App Contributor role lets you manage logic app, but not access to them. It provides access to view, edit, and update a logic app.

References:

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

<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-securing-a-logic-app>

## **QUESTION 15**

You have an Azure Active Directory (Azure AD) tenant that contains 5,000 user accounts.

You create a new user account named AdminUser1.

You need to assign the User administrator administrative role to AdminUser1.

What should you do from the user account properties?

- A. From the Directory role blade, modify the directory role.
- B. From the Licenses blade, assign a new license.
- C. From the Groups blade, invite the user account to a new group.

**Correct Answer:** A

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Assign a role to a user

1. Sign in to the Azure portal with an account that's a global admin or privileged role admin for the directory.
2. Select Azure Active Directory, select Users, and then select a specific user from the list.
3. For the selected user, select Directory role, select Add role, and then pick the appropriate admin roles from the Directory roles list, such as Conditional access administrator.
4. Press Select to save.

References:

<https://docs.microsoft.com/en-us/azure/active-directory/fundamentals/active-directory-users-assign-role-azure-portal>

## **QUESTION 16**

HOTSPOT

You have an Azure subscription named Subscription1.

You plan to deploy an Ubuntu Server virtual machine named VM1 to Subscription1.

You need to perform a custom deployment of the virtual machine. A specific trusted root certification authority (CA) must be added during the deployment.

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

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

### **Answer Area**

File to create:

Answer.ini
Autounattend.conf
Cloud-init.txt
Unattend.xml

Tool to use to deploy the virtual machine:

The az vm create command
The Azure portal
The New-AzureRmVM cmdlet

**Correct Answer:**

## Answer Area

File to create:

Answer.ini
Autounattend.conf
Cloud-init.txt
Unattend.xml

Tool to use to deploy the virtual machine:

The az vm create command
The Azure portal
The New-AzureRmVM cmdlet

**Section: [none]**

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: Cloud-init.txt

Cloud-init.txt is used to customize a Linux VM on first boot up. It can be used to install packages and write files, or to configure users and security. No additional steps or agents are required to apply your configuration.

Box 2: The az vm create command

Once Cloud-init.txt has been created, you can deploy the VM with az vm create cmdlet, sing the --custom-data parameter to provide the full path to the cloud-init.txt file.

References:

<https://docs.microsoft.com/en-us/azure/virtual-machines/linux/tutorial-automate-vm-deployment>

### QUESTION 17

You have an Azure subscription named Subscription1.

In Subscription1, you create an alert rule named Alert1.

The Alert1 action group is configured as shown in the following exhibit.

```
PS Azure:\> Get-AzureRmActionGroup

ResourceGroupName : default-activitylogalerts
GroupShortName   : AG1
Enabled          : True
EmailReceivers   : {Action1_-EmailAction-}
SmsReceivers     : {Action1_-SMSAction-}
WebhookReceivers : {}
Id               : /subscriptions/a4fde29b-d56a-4f6c-8298-6c53cd0b720c/resourceGroups/default-activitylogalerts/providers/microsoft.insights/actionGroups/ActionGroup1
Name             : ActionGroup1
Type             : Microsoft.Insights/ActionGroups
Location         : Global
Tags             : {}
```

Alert1 alert criteria is triggered every minute.

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

The number of email messages that Alert1 will send in an hour is

0
4
6
12
60

The number of SMS messages that Alert1 will send in an hour is

0
4
6
12
60

**Correct Answer:**

### Answer Area

The number of email messages that Alert1 will send in an hour is

0
4
6
12
60

The number of SMS messages that Alert1 will send in an hour is

0
4
6
12
60

**Section: [none]**

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: 60

One alert per minute will trigger one email per minute.

Box 2: 12

No more than 1 SMS every 5 minutes can be send, which equals 12 per hour.

Note: Rate limiting is a suspension of notifications that occurs when too many are sent to a particular phone number, email address or device. Rate limiting ensures that alerts are manageable and actionable.

The rate limit thresholds are:

- SMS: No more than 1 SMS every 5 minutes.
- Voice: No more than 1 Voice call every 5 minutes.
- Email: No more than 100 emails in an hour.
- Other actions are not rate limited.

References:

<https://github.com/MicrosoftDocs/azure-docs/blob/master/articles/monitoring-and-diagnostics/monitoring-overview-alerts.md>

## Testlet 2

### Case study

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 questions in 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 section 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 in 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

Humongous Insurance is an insurance company that has three offices in Miami, Tokyo and Bangkok. Each office has 5,000 users.

#### Existing Environment

##### Active Directory Environment

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

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

##### Network Infrastructure

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

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

##### Active Directory Issue

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

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

##### Licensing Issue

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

You verify that the Azure subscription has the available licenses.

#### Requirements

##### Planned Changes

Humongous Insurance plans to open a new office in Paris. The Paris office will contain 1,000 users who will be

hired during the next 12 months. All the resources used by the Paris office users will be hosted in Azure.

### **Planned Azure AD Infrastructure**

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

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

### **Planned Azure Networking Infrastructure**

You plan to create the following networking resources in a resource group named All\_Resources:

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

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

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

### **Planned Azure Computer Infrastructure**

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

### **Department Requirements**

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

- Web administrators will deploy Azure web apps for the marketing department. Each web app will be added to a separate resource group. The initial configuration of the web apps will be identical. The web administrators have permission to deploy web apps to resource groups.
- During the testing phase, auditors in the finance department must be able to review all Azure costs from the past week.

### **Authentication Requirements**

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

### **QUESTION 1**

You need to resolve the licensing issue before you attempt to assign the license again.

What should you do?

- A. From the Groups blade, invite the user accounts to a new group.
- B. From the Profile blade, modify the usage location.
- C. From the Directory role blade, modify the directory role.

**Correct Answer:** A

**Section:** [none]

**Explanation**

#### **Explanation/Reference:**

Explanation:

License cannot be assigned to a user without a usage location specified.

Scenario: Licensing Issue

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

You verify that the Azure subscription has the available licenses.

## QUESTION 2

You need to resolve the Active Directory issue.

What should you do?

- A. Run the IdFix tool then use the Update actions.
- B. From Active Directory Domains and Trusts, modify the list of UPN suffixes.
- C. From Azure AD Connect, modify the outbound synchronization rule.
- D. From Active Directory Users and Computers, select the user accounts and then modify the UPN suffix value.

**Correct Answer:** A

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

IdFix is used to perform discovery and remediation of identity objects and their attributes in an on-premises Active Directory environment in preparation for migration to Azure Active Directory. IdFix is intended for the Active Directory administrators responsible for directory synchronization with Azure Active Directory.

Scenario: Active Directory Issue

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

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

References:

<https://www.microsoft.com/en-us/download/details.aspx?id=36832>

## QUESTION 3

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

Which domain name should you use?

- A. ad.humongousinsurance.com
- B. humingousinsurance.onmicrosoft.com
- C. humongousinsurance.com
- D. humongousinsurance.local

**Correct Answer:** C

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Every Azure AD directory comes with an initial domain name in the form of domainname.onmicrosoft.com. The initial domain name cannot be changed or deleted, but you can add your corporate domain name to Azure AD as well. For example, your organization probably has other domain names used to do business and users who sign in using your corporate domain name. Adding custom domain names to Azure AD allows you to assign user names in the directory that are familiar to your users, such as 'alice@contoso.com.' instead of 'alice@domain name.onmicrosoft.com'.

Scenario:

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

Humongous Insurance has a single-domain Active Directory forest named humongousinsurance.com

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

References:

<https://docs.microsoft.com/en-us/azure/active-directory/fundamentals/add-custom-domain>

## **Question Set 1**

### **QUESTION 1**

You plan to use the Azure Import/Export service to copy files to a storage account.

Which two files should you create before you prepare the drives for the import job? Each correct answer presents part of the solution.

**NOTE:** Each correct selection is worth one point.

- A. a driveset CSV file
- B. a JSON configuration file
- C. a PowerShell PS1 file
- D. an XML manifest file
- E. a dataset CSV file

**Correct Answer:** AE

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

A: Modify the driveset.csv file in the root folder where the tool resides.

E: Modify the dataset.csv file in the root folder where the tool resides. Depending on whether you want to import a file or folder or both, add entries in the dataset.csv file

References:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-import-export-data-to-files>

### **QUESTION 2**

DRAG DROP

You have an on-premises file server named Server1 that runs Windows Server 2016.

You have an Azure subscription that contains an Azure file share.

You deploy an Azure File Sync Storage Sync Service, and you create a sync group.

You need to synchronize files from Server1 to Azure.

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
Create an Azure on-premises data gateway.	
Install the Azure File Sync agent on Server1.	(Left Arrow)
Register Server1.	(Up Arrow)
Install the DFS Replication server role on Server1	(Right Arrow)
Create a Recovery Services vault.	
Add a server endpoint.	(Down Arrow)

**Correct Answer:**

Actions	Answer Area
Create an Azure on-premises data gateway.	Install the Azure File Sync agent on Server1
Install the Azure File Sync agent on Server1.	Register Server1.
Register Server1.	(Up Arrow)
Install the DFS Replication server role on Server1	(Right Arrow)
Create a Recovery Services vault.	Add a server endpoint
Add a server endpoint.	(Down Arrow)

**Section: [none]**

**Explanation**

**Explanation/Reference:**

Explanation:

Step 1: Install the Azure File Sync agent on Server1

The Azure File Sync agent is a downloadable package that enables Windows Server to be synced with an Azure file share

Step 2: Register Server1.

Register Windows Server with Storage Sync Service

Registering your Windows Server with a Storage Sync Service establishes a trust relationship between your server (or cluster) and the Storage Sync Service.

Step 3: Add a server endpoint

Create a sync group and a cloud endpoint.

A sync group defines the sync topology for a set of files. Endpoints within a sync group are kept in sync with each other. A sync group must contain one cloud endpoint, which represents an Azure file share and one or more server endpoints. A server endpoint represents a path on registered server.

**References:**

<https://docs.microsoft.com/en-us/azure/storage/files/storage-sync-files-deployment-guide>

**QUESTION 3**

You create an Azure Storage account named contosostorage.

You plan to create a file share named data.

Users need to map a drive to the data file share from home computers that run Windows 10.

Which outbound port should you open between the home computers and the data file share?

- A. 80
- B. 443
- C. 445
- D. 3389

**Correct Answer:** C

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Ensure port 445 is open: The SMB protocol requires TCP port 445 to be open; connections will fail if port 445 is blocked.

References:

<https://docs.microsoft.com/en-us/azure/storage/files/storage-how-to-use-files-windows>

**QUESTION 4**

HOTSPOT

You have several Azure virtual machines on a virtual network named VNet1.

You configure an Azure Storage account as shown in the following exhibit.

Home > Storage accounts >contoso – Firewalls and virtual networks

contoso – Firewalls and virtual networks

Storage Account

Search (Ctrl+ /)

Save Discard

Allow access from  
 All networks  Selected networks

Configure network security for your storage accounts. [Learn more.](#)

Virtual networks

Secure your storage account with virtual networks. + [Add existing virtual network](#)  
+ [Add new virtual network](#)

VIRTUAL NET...	SUBNET	ADDRESS RA...	ENDPOINT ST...	RESOURCE G...	SUBSC...
▼ VNet1	1	10.2.0.0/16		DemoRG	Prod
	Prod	10.2.0.0/24	✓ Enabled	DemoRG	Prod

Firewall

Add IP ranges to allow access from the internet or your on-premises networks. [Learn more.](#)

ADDRESS RANGE

IP address or CIDR

Exceptions

Allow trusted Microsoft services to access this storage account [?](#)

Allow read access to storage logging from any network

Allow read access to storage metrics from any network

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

The virtual machines on the 10.2.9.0/24 subnet will have network connectivity to the file shares in the storage account

▼
always
during a backup
never

Azure Backup will be able to back up the unmanaged hard disks of the virtual machines in the storage account

▼
always
during a backup
never

Correct Answer:

## Answer Area

The virtual machines on the 10.2.9.0/24 subnet will have network connectivity to the file shares in the storage account

▼
always
during a backup
never

Azure Backup will be able to back up the unmanaged hard disks of the virtual machines in the storage account

▼
always
during a backup
never

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Box 1: always

Endpoint status is enabled.

Box 2: Never

After you configure firewall and virtual network settings for your storage account, select Allow trusted Microsoft services to access this storage account as an exception to enable Azure Backup service to access the network restricted storage account.

The screenshot shows the Azure Storage account 'sogupstorage' configuration page. On the left, there's a sidebar with various options like Overview, Activity log, Access control (IAM), Tags, and Diagnose and solve problems. Under SETTINGS, 'Firewalls and virtual networks' is selected. The main pane shows the 'Firewalls and virtual networks' section with the 'Selected networks' option chosen for 'Allow access from'. Below this, there's a table header for 'Virtual networks' with columns: VIRTUAL NET..., SUBNET, ADDRESS RA..., ENDPOINT ST..., RESOURCE G..., and SUBSCRIPTION. A message says 'No network selected.' In the 'Firewall' section, there's an 'ADDRESS RANGE' input field and an 'Exceptions' section. The 'Exceptions' section contains three checkboxes: 'Allow trusted Microsoft services to access this storage account' (which is checked and highlighted with a red box), 'Allow read access to storage logging from any network', and 'Allow read access to storage metrics from any network'.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/files/storage-how-to-use-files-windows>

<https://azure.microsoft.com/en-us/blog/azure-backup-now-supports-storage-accounts-secured-with-azure-storage-firewalls-and-virtual-networks/>

## QUESTION 5

### HOTSPOT

You have an Azure subscription named Subscription1 that contains the resources shown in the following table.

Name	Type	Resource group
VNET1	Virtual network	RG1
VNET2	Virtual network	RG2
VM1	Virtual machine	RG2

The status of VM1 is **Running**.

You assign an Azure policy as shown in the exhibit. (Click the **Exhibit** tab.)

## Assign policy

### SCOPE

\* Scope (Learn more about setting the scope)

Azure Pass/RG2



### Exclusions

Optionally select resources to exempt from the policy assignment



### BASICS

\* Policy definition

Not allowed resource types



\* Assignment name ⓘ

Not allowed resource types

### Description

### Assigned by

First User

### PARAMETERS

\* Not allowed resource types\*

3 selected



Assign

Cancel

You assign the policy by using the following parameters:

Microsoft.ClassicNetwork/virtualNetworks  
Microsoft.Network/virtualNetworks  
Microsoft.Compute/virtualMachines

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
An administrator can move VNET1 to RG2.	<input type="radio"/>	<input type="radio"/>
The state of VM1 changed to deallocated.	<input type="radio"/>	<input type="radio"/>
An administrator can modify the address space of VNET2.	<input type="radio"/>	<input type="radio"/>

Correct Answer:

## Answer Area

Statements	Yes	No
An administrator can move VNET1 to RG2.	<input type="radio"/>	<input checked="" type="radio"/>
The state of VM1 changed to deallocated.	<input checked="" type="radio"/>	<input type="radio"/>
An administrator can modify the address space of VNET2.	<input type="radio"/>	<input checked="" type="radio"/>

Section: [none]

Explanation

Explanation/Reference:

### QUESTION 6

#### SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g, copy and paste, ability to navigate to external websites) will not be possible by design.

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Please note that once you submit your work by clicking the Next button within a lab, you will NOT be able to return to the lab.

You may now click next to proceed to the lab.

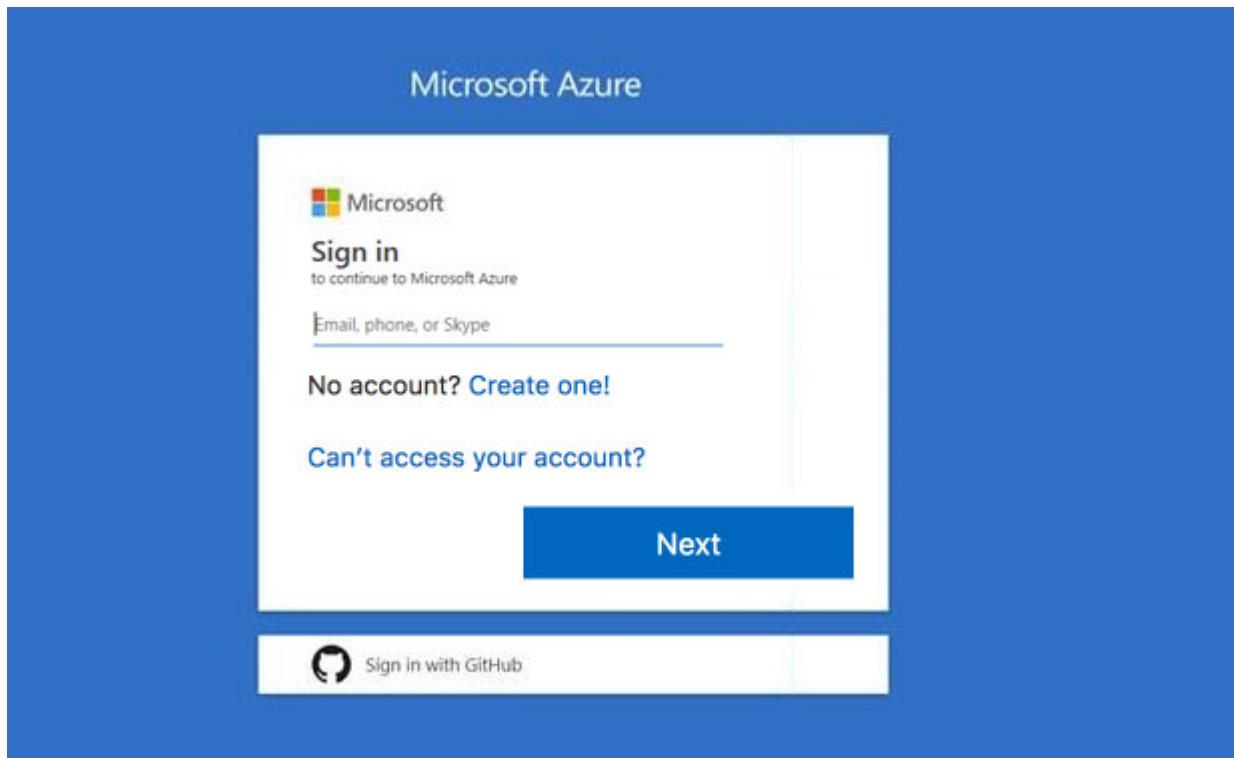
Use the following login credentials as needed:

**Azure Username:** XXXXXXX

**Azure Password:** XXXXXXX

The following information is for technical support purposes only:

**Lab Instance:** 9172796



## Task 2

You plan to store media files in the rg1lod9172796 storage account.

You need to configure the storage account to store the media files. The solution must ensure that only users who have access keys can download the media files and that the files are accessible only over HTTPS.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

We should create an Azure file share.

Step 1: In the Azure portal, select All services. In the list of resources, type Storage Accounts. As you begin typing, the list filters based on your input. Select Storage Accounts.

On the Storage Accounts window that appears.

Step 2: Locate the rg1lod9172796 storage account.

Step 3: On the storage account page, in the Services section, select Files.

**Services**

**Blobs**

Object storage for understanding data

[View metrics](#)  
[Configure CORS rules](#)  
[Setup custom domain](#)

**Files**

File shares that use SMB 3.0

[View metrics](#)  
[Configure CORS rules](#)

**Tables**

Tabular data storage

[View metrics](#)

**Queues**

Scale apps depending on traffic

[View metrics](#)

Step 4: On the menu at the top of the File service page, click + File share. The New file share page drops down.

Step 5: In Name type myshare. Click OK to create the Azure file share.

References:

<https://docs.microsoft.com/en-us/azure/storage/files/storage-how-to-use-files-portal>

## QUESTION 7 SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g, copy and paste, ability to navigate to external websites) will not be possible by design.

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You may now click next to proceed to the lab.

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- Resource groups
- App Services
- Function App
- SQL databases
- Azure Cosmos DB
- Virtual machines
- Load balancers
- Storage accounts
- Virtual networks
- Azure Active Directory
- Monitor
- Advisor
- Security Center
- Cost Management + B...
- Help + support

Azure services See all (100+) > Create a resource >

Virtual machines App Services Storage accounts SQL databases Azure Database for PostgreSQL servers Azure

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Recent resources See all your recent resources > See all your resources >

No recent resources to display

As you visit resources, they'll be listed in Recently used resources for quick and easy access.

Create a resource

## Task 1

You plan to migrate a large amount of corporate data to Azure Storage and to back up files stored on old hardware to Azure Storage.

You need to create a storage account named `corpdata9172795n1` in the `corpdatalod9172795` resource group. The solution must meet the following requirements:

- Corpdata9172795n1 must be able to host the virtual disk files for Azure virtual machines.
- The cost of accessing the files must be minimized.
- Replication costs must be minimized.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section: [none]**

**Explanation**

**Explanation/Reference:**

Explanation:

Step 1: In the Azure portal, click All services. In the list of resources, type Storage Accounts. As you begin typing, the list filters based on your input. Select Storage Accounts.

Step 2: On the Storage Accounts window that appears, choose Add.

Step 3: Select the subscription in which to create the storage account.

Step 4: Under the Resource group field, select corpdatalod9172795.

## Create storage account

Basics   Advanced   Tags   Review + create

Azure Storage is a Microsoft-managed service providing cloud storage that is highly available, secure, durable, scalable, and reliable. Azure Storage includes Azure Blobs (objects), Azure Data Lake Storage Gen2, Azure Files, Azure Queues, and Azure Tables. The performance and cost of your storage account depends on the usage and the options you choose below. [Learn more](#)

### PROJECT DETAILS

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

\* Subscription

<your-subscription>

\* Resource group

sample-resource-group

[Create new](#)

### INSTANCE DETAILS

The default deployment model is Resource Manager. You can also use the classic deployment model instead. [Choose classic](#)

A resource group is a container that holds related resources for an Azure solution.

\* Storage account name [i](#)

\* Name

your-resource-group 

\* Location

[OK](#)

[Cancel](#)

Performance [i](#)

StorageV2 (general purpose v2)

Account kind [i](#)

Locally-redundant storage (LRS)

Replication [i](#)

Cool  Hot

Access tier (default) [i](#)

[Review + create](#)

[Previous](#)

[Next : Advanced >](#)

Step 5: Enter a name for your storage account: corpdata9172795n1

Step 6: For Account kind select: General-purpose v2 accounts (recommended for most scenarios)  
General-purpose v2 accounts is recommended for most scenarios. . General-purpose v2 accounts deliver the lowest per-gigabyte capacity prices for Azure Storage, as well as industry-competitive transaction prices.

Step 7: For replication select: Read-access geo-redundant storage (RA-GRS)  
Read-access geo-redundant storage (RA-GRS) maximizes availability for your storage account. RA-GRS provides read-only access to the data in the secondary location, in addition to geo-replication across two regions.

References:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-quickstart-create-account>

<https://docs.microsoft.com/en-us/azure/storage/common/storage-account-overview>

## **QUESTION 8**

### SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g. copy and paste, ability to navigate to external websites) will not be possible by design.

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Please note that once you submit your work by clicking the Next button within a lab, you will NOT be able to return to the lab.

You may now click next to proceed to the lab.

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- Cost Management + B...
- Help + support

Azure services See all (100+) > Create a resource >

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Recent resources See all your recent resources > See all your resources >

No recent resources to display

As you visit resources, they'll be listed in Recently used resources for quick and easy access.

Create a resource

## Task 2

You plan to move backup files and documents from an on-premises Windows file server to Azure Storage. The backup files will be stored as blobs.

You need to create a storage account named corpdata9172795n2. The solution must meet the following requirements:

- Ensure that the documents are accessible via drive mappings from Azure virtual machines that run Windows Server 2016.
- Provide the highest possible redundancy for the documents.
- Minimize storage access costs.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

**Explanation:**

Step 1: In the Azure portal, click All services. In the list of resources, type Storage Accounts. As you begin typing, the list filters based on your input. Select Storage Accounts.

Step 2: On the Storage Accounts window that appears, choose Add.

Step 3: Select the subscription in which to create the storage account.

Step 4: Under the Resource group field, select Create New. Create a new Resource

## Create storage account

Basics   Advanced   Tags   Review + create

Azure Storage is a Microsoft-managed service providing cloud storage that is highly available, secure, reliable, and cost-effective. Azure Storage includes Azure Blobs (objects), Azure Data Lake Storage Gen2, Azure Files, Azure Queues, and Azure Tables. The cost of your storage account depends on the usage and the options you choose below. [Learn more](#)

### PROJECT DETAILS

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize resources.

\* Subscription

<your-subscription>

└ \* Resource group

sample-resource-group

[Create new](#)

### INSTANCE DETAILS

The default deployment model is Resource Manager. You can also choose the classic deployment model instead. [Choose classic](#)

A resource group is a container that holds resources for an Azure solution.

\* Storage account name [?](#)

\* Name

your-resource-group

\* Location

OK

Cancel

Performance [?](#)

StorageV2 (general purpose v2)

Account kind [?](#)

Locally-redundant storage (LRS)

Replication [?](#)

Cool  Hot

Access tier (default) [?](#)

[Review + create](#)

[Previous](#)

[Next : Advanced >](#)

Step 5: Enter a name for your storage account: corpdata9172795n2

Step 6: For Account kind select: General-purpose v2 accounts (recommended for most scenarios)  
General-purpose v2 accounts is recommended for most scenarios. General-purpose v2 accounts deliver the lowest per-gigabyte capacity prices for Azure Storage, as well as industry-competitive transaction prices.

Step 7: For replication select: Read-access geo-redundant storage (RA-GRS)

Read-access geo-redundant storage (RA-GRS) maximizes availability for your storage account. RA-GRS provides read-only access to the data in the secondary location, in addition to geo-replication across two regions.

References:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-quickstart-create-account>

<https://docs.microsoft.com/en-us/azure/storage/common/storage-account-overview>

### QUESTION 9

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

Name	Type
RG1	Resource group
Store1	Azure Storage account
Sync1	Azure File Sync

Store1 contains a file share named Data. Data contains 5,000 files.

You need to synchronize the files in Data to an on-premises server named Server1.

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

**NOTE:** Each correct selection is worth one point.

- A. Download an automation script.
- B. Register Server1.
- C. Create a sync group.
- D. Create a container instance.
- E. Install the Azure File Sync agent on Server1.

**Correct Answer:** BCE

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Step 1 (E): Install the Azure File Sync agent on Server1

The Azure File Sync agent is a downloadable package that enables Windows Server to be synced with an Azure file share

Step 2 (B): Register Server1.

Register Windows Server with Storage Sync Service

Registering your Windows Server with a Storage Sync Service establishes a trust relationship between your server (or cluster) and the Storage Sync Service.

Step 3 (C): Create a sync group and a cloud endpoint.

A sync group defines the sync topology for a set of files. Endpoints within a sync group are kept in sync with

each other. A sync group must contain one cloud endpoint, which represents an Azure file share and one or more server endpoints. A server endpoint represents a path on registered server.

## References:

<https://docs.microsoft.com/en-us/azure/storage/files/storage-sync-files-deployment-guide>

## QUESTION 10

## DRAG DROP

You have an Azure subscription named Subscription1.

You create an Azure Storage account named contosostorage, and then you create a file share named data.

Which UNC path should you include in a script that references files from the data file share? To answer, drag the appropriate values to the correct targets. Each value 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:

Values	Answer Area
blob	
blob.core.windows.net	
contosostorage	
data	
file	
file.core.windows.net	
portal.azure.com	
subscription1	

## **Correct Answer:**

Values	Answer Area
blob	
blob.core.windows.net	\ contosostorage . file.core.windows.net \ data
contosostorage	
data	
file	
file.core.windows.net	
portal.azure.com	
subscription1	

Section: [none]

Explanation

**Explanation/Reference:**

Explanation:

Box 1: contosostorage

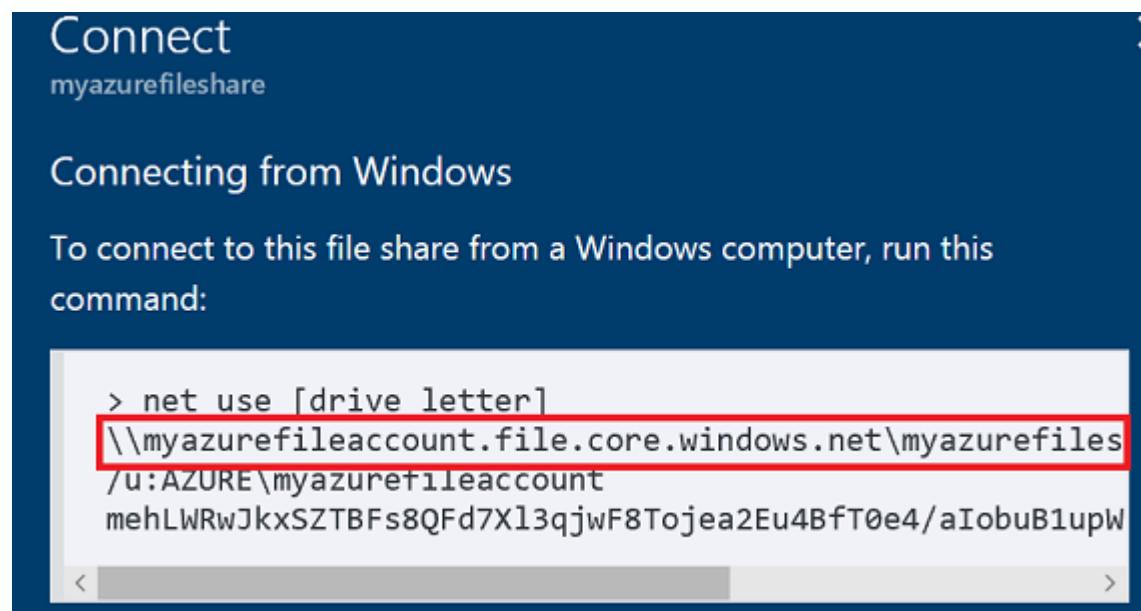
The name of account

Box 2: file.core.windows.net

Box 3: data

The name of the file share is data.

Example:



References:

<https://docs.microsoft.com/en-us/azure/storage/files/storage-how-to-use-files-windows>

**QUESTION 11**

DRAG DROP

You have an Azure subscription that contains a storage account.

You have an on-premises server named Server1 that runs Windows Server 2016. Server1 has 2 TB of data.

You need to transfer the data to the storage account by using the Azure Import/Export service.

In which order should you perform the actions? To answer, move all actions from the list of actions to the answer area and arrange them in the correct order.

**NOTE:** More than one order of answer choices is correct. You will receive credit for any of the correct orders you select.

**Select and Place:**

Actions	Answer Area
Attach an external disk to Server1, and then run wainportexport.exe.	1
From the Azure portal, create an import job.	2
Detach the external disks from Server1 and ship the disks to an Azure data center.	3
From the Azure portal, update the import job.	4

**Correct Answer:**

Actions	Answer Area
Attach an external disk to Server1, and then run wainportexport.exe.	1 Attach an external disk to Server1, and then run wainportexport.exe.
From the Azure portal, create an import job.	2 From the Azure portal, create an import job.
Detach the external disks from Server1 and ship the disks to an Azure data center.	3 Detach the external disks from Server1 and ship the disks to an Azure data center.
From the Azure portal, update the import job.	4 From the Azure portal, update the import job.

**Section: [none]****Explanation****Explanation/Reference:**

Explanation:

At a high level, an import job involves the following steps:

Step 1: Attach an external disk to Server1 and then run wainportexport.exe

Determine data to be imported, number of drives you need, destination blob location for your data in Azure

storage.

Use the WAImpoerExport tool to copy data to disk drives. Encrypt the disk drives with BitLocker.

Step 2: From the Azure portal, create an import job.

Create an import job in your target storage account in Azure portal. Upload the drive journal files.

Step 3: Detach the external disks from Server1 and ship the disks to an Azure data center.

Provide the return address and carrier account number for shipping the drives back to you.

Ship the disk drives to the shipping address provided during job creation.

Step 4: From the Azure portal, update the import job

Update the delivery tracking number in the import job details and submit the import job.

The drives are received and processed at the Azure data center.

The drives are shipped using your carrier account to the return address provided in the import job.

References:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-import-export-service>

## QUESTION 12

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

Name	Azure Region
VM1	West Europe
VM2	West Europe
VM3	North Europe
VM4	North Europe

You have a Recovery Services vault that protects VM1 and VM2.

You need to protect VM3 and VM4 by using Recovery Services.

What should you do first?

- A. Create a new backup policy.
- B. Configure the extensions for VM3 and VM4.
- C. Create a storage account.
- D. Create a new Recovery Services vault.

**Correct Answer:** D

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

A Recovery Services vault is a storage entity in Azure that houses data. The data is typically copies of data, or configuration information for virtual machines (VMs), workloads, servers, or workstations. You can use Recovery Services vaults to hold backup data for various Azure services

References:

<https://docs.microsoft.com/en-us/azure/site-recovery/azure-to-azure-tutorial-enable-replication>

## QUESTION 13

HOTSPOT

You have an Azure subscription named Subscription1 that is associated to an Azure Active Directory (Azure AD) tenant named AAD1.

Subscription1 contains the objects in the following table.

Name	Type
Share1	Azure file share
Account1	Azure Storage account
RG1	Resource group
Vault1	Recovery Services vault

You plan to create a single backup policy for Vault1.

To answer, select the appropriate options in the answer area.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

### Answer Area

You can create an Azure backup policy for:

A dropdown menu containing the following options:

- AAD1 only
- Account1 only
- RG1 only
- Share1 only
- AAD1 and Share1 only
- AAD1, Share1 and Account1 only
- AAD1, Share1, Account1, and RG1

In the backup policy that you create, you can configure the backups to be retained for up to:

A dropdown menu containing the following options:

- 7 days
- 31 days
- 90 days
- 120 days
- 365 days
- 99 years

**Correct Answer:**

## Answer Area

You can create an Azure backup policy for:

AAD1 only
Account1 only
RG1 only
Share1 only
AAD1 and Share1 only
AAD1, Share1 and Account1 only
AAD1, Share1, Account1, and RG1

In the backup policy that you create, you can configure the backups to be retained for up to:

7 days
31 days
90 days
120 days
365 days
99 years

**Section: [none]**

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: Share1 only

Box 2: 99 years

With the latest update to Azure Backup, customers can retain their data for up to 99 years in Azure.

Note: A backup policy defines a matrix of when the data snapshots are taken, and how long those snapshots are retained.

The backup policy interface looks like this:

\* Policy name

Backup frequency  
Daily  5:30 AM  Local Time (UTC-07:00)

Retention range

Retention of daily backup point.

\* At  For  Day(s)

Retention of weekly backup point.

\* On  \* At  For  Week(s)

Retention of monthly backup point.

Week Based  Day Based

\* On  \* Day  \* At  For  Month(s)

Retention of yearly backup point.

Week Based  Day Based

\* In  \* On  \* Day  \* At  For  Year(s)

References:

<https://docs.microsoft.com/en-us/azure/backup/backup-azure-files>

<https://docs.microsoft.com/en-us/azure/backup/backup-azure-vms-first-look-arm#defineing-a-backup-policy>

<https://blogs.microsoft.com/firehose/2015/02/16/february-update-to-azure-backup-includes-data-retention-up-to-99-years-offline-backup-and-more/>

**QUESTION 14**  
**HOTSPOT**

You have an Azure subscription named Subscription1.

In Subscription1, you create an Azure file share named share1.

You create a shared access signature (SAS) named SAS1 as shown in the following exhibit.

**Allowed services** ⓘ Blob  File  Queue  Table**Allowed resource types** ⓘ Service  Container  Object**Allowed permissions** ⓘ Read  Write  Delete  List  Add  Create  Update**Start and expiry date/time** ⓘ

Start

  2:00:00 PM

End

  2:00:00 PM

(UTC+02:00) --- Current Timezone ---

**Allowed IP addresses** ⓘ**Allowed protocols** ⓘ HTTPS only  HTTPS and HTTP**Signing key** ⓘ **Generate SAS and connection string**

To answer, select the appropriate options in the answer area.

**NOTE:** Each correct selection is worth one point.**Hot Area:**

## Answer Area

If on September 2, 2018, you run Microsoft Azure Storage Explorer on a computer that has an IP address of 193.77.134.1, and you use SAS1 to connect to the storage account, you

▼
will be prompted for credentials
will have no access
will have read, write, and list access
will have read only access

If on September 10, 2018, you run the net use command on a computer that has an IP address of 193.77.134.50, and you use SAS1 as the password to connect to share1, you

▼
will be prompted for credentials
will have no access
will have read, write, and list access
will have read-only access

**Correct Answer:**

## Answer Area

If on September 2, 2018, you run Microsoft Azure Storage Explorer on a computer that has an IP address of 193.77.134.1, and you use SAS1 to connect to the storage account, you

▼
will be prompted for credentials
will have no access
will have read, write, and list access
will have read only access

If on September 10, 2018, you run the net use command on a computer that has an IP address of 193.77.134.50, and you use SAS1 as the password to connect to share1, you

▼
will be prompted for credentials
will have no access
will have read, write, and list access
will have read-only access

**Section: [none]**

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: Will have no access

The IP 193.77.134.1 does not have access on the SAS.

Box 2: Will have read, write, and list access

The net use command is used to connect to file shares.

References:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-dotnet-shared-access-signature-part-1>

<https://docs.microsoft.com/en-us/azure/vs-azure-tools-storage-manage-with-storage-explorer?tabs=windows>

## QUESTION 15

HOTSPOT

You have Azure Storage accounts as shown in the following exhibit.

Home > Storage accounts

## Storage accounts

Contoso



Add



Edit columns



Refresh



Assign Tags



Delete

Subscriptions: All 2 selected – Don't see a subscription? [Switch directories](#)

Filter by name...

All subscriptions

All resource groups

All types

3 items

<input type="checkbox"/>	NAME	TYPE	KIND	RESOURCE ...	LOCATION
<input type="checkbox"/>	storageaccount1	Storage account	Storage	ContosoRG1	East US
<input type="checkbox"/>	storageaccount2	Storage account	StorageV2	ContosoRG1	Central US
<input type="checkbox"/>	storageaccount3	Storage account	BlobStorage	ContosoRG1	East US

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

You can use [answer choice] for Azure Table Storage.

storageaccount1 only
storageaccount2 only
storageaccount3 only
storageaccount1 and storageaccount2 only
storageaccount2 and storageaccount3 only

You can use [answer choice] for Azure Blob storage.

storageaccount3 only
storageaccount2 and storageaccount3 only
storageaccount1 and storageaccount3 only
all the storage accounts

Correct Answer:

## Answer Area

You can use [answer choice] for Azure Table Storage.

storageaccount1 only
storageaccount2 only
storageaccount3 only
storageaccount1 and storageaccount2 only
storageaccount2 and storageaccount3 only

You can use [answer choice] for Azure Blob storage.

storageaccount3 only
storageaccount2 and storageaccount3 only
storageaccount1 and storageaccount3 only
all the storage accounts

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Box 1: storageaccount1 and storageaccount2 only

Box 2: All the storage accounts

Note: The three different storage account options are: General-purpose v2 (GPv2) accounts, General-purpose v1 (GPv1) accounts, and Blob storage accounts.

- General-purpose v2 (GPv2) accounts are storage accounts that support all of the latest features for blobs, files, queues, and tables.
- Blob storage accounts support all the same block blob features as GPv2, but are limited to supporting only block blobs.

- General-purpose v1 (GPv1) accounts provide access to all Azure Storage services, but may not have the latest features or the lowest per gigabyte pricing.

References:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-account-options>

## QUESTION 16

### SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g, copy and paste, ability to navigate to external websites) will not be possible by design.

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Please note that once you submit your work by clicking the Next button within a lab, you will NOT be able to return to the lab.

You may now click next to proceed to the lab.

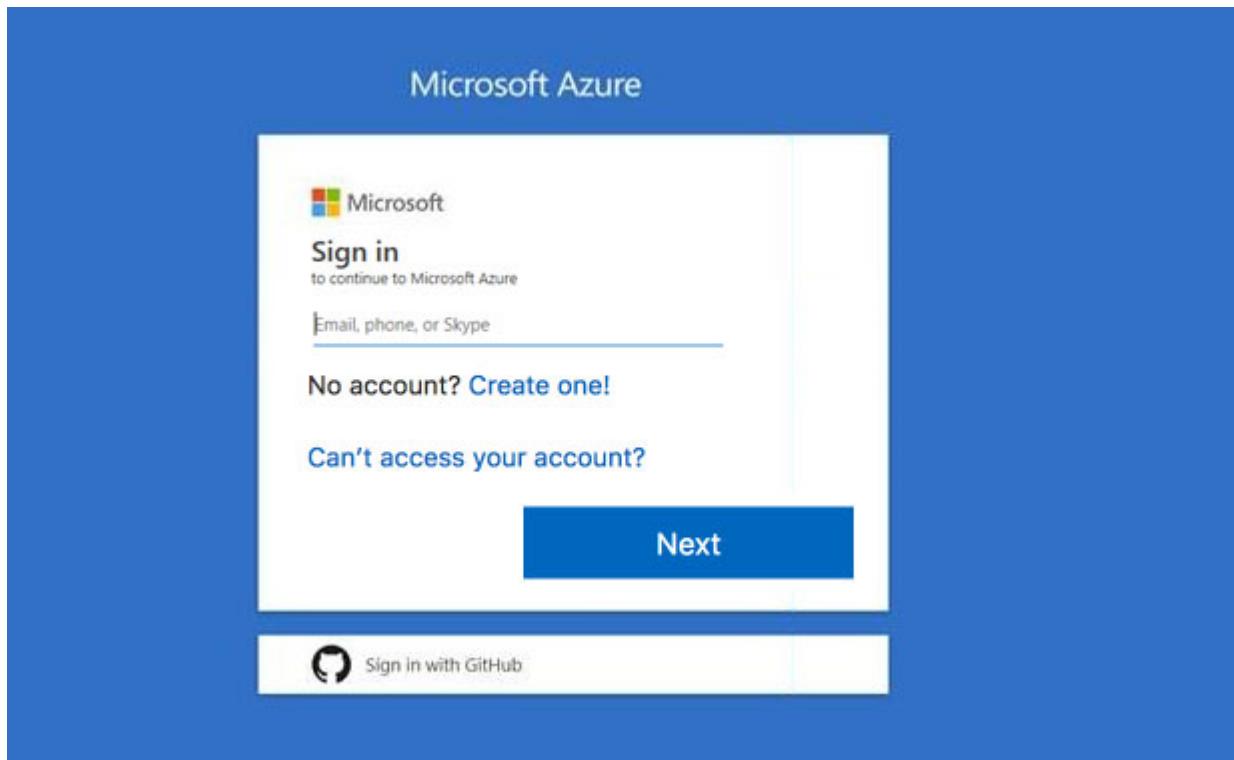
Use the following login credentials as needed:

**Azure Username:** XXXXXXXX

**Azure Password:** XXXXXXXX

The following information is for technical support purposes only:

**Lab Instance:** 9172796



## Task 1

You plan to prevent users from accidentally deleting blob data from Azure.

You need to ensure that administrators can recover any blob data that is deleted accidentally from the storagelod9272261 storage account for 14 days after the deletion occurred.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

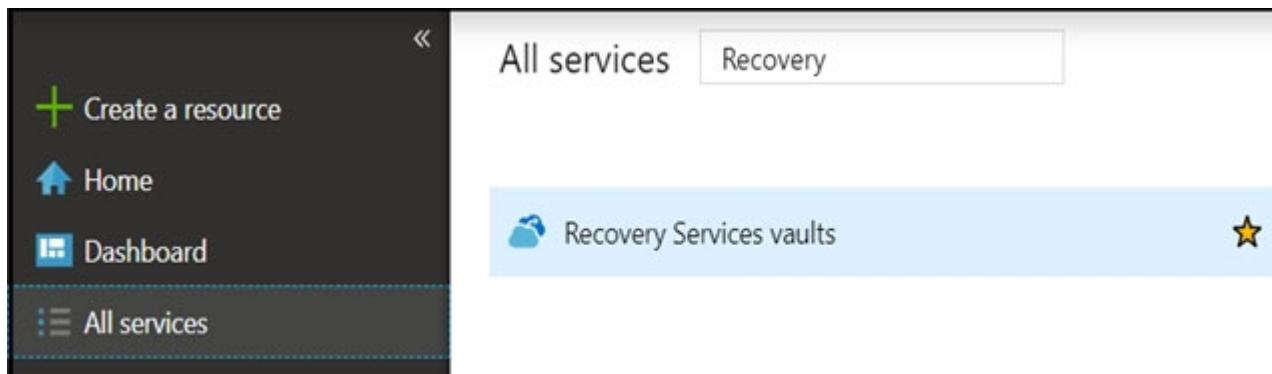
**Explanation**

**Explanation/Reference:**

Explanation:

Task A: Create a Recovery Services vault (if a vault already exists skip this task, go to Task B below)

A1. From Azure Portal, On the Hub menu, click All services and in the list of resources, type Recovery Services and click Recovery Services vaults.



If there are recovery services vaults in the subscription, the vaults are listed.

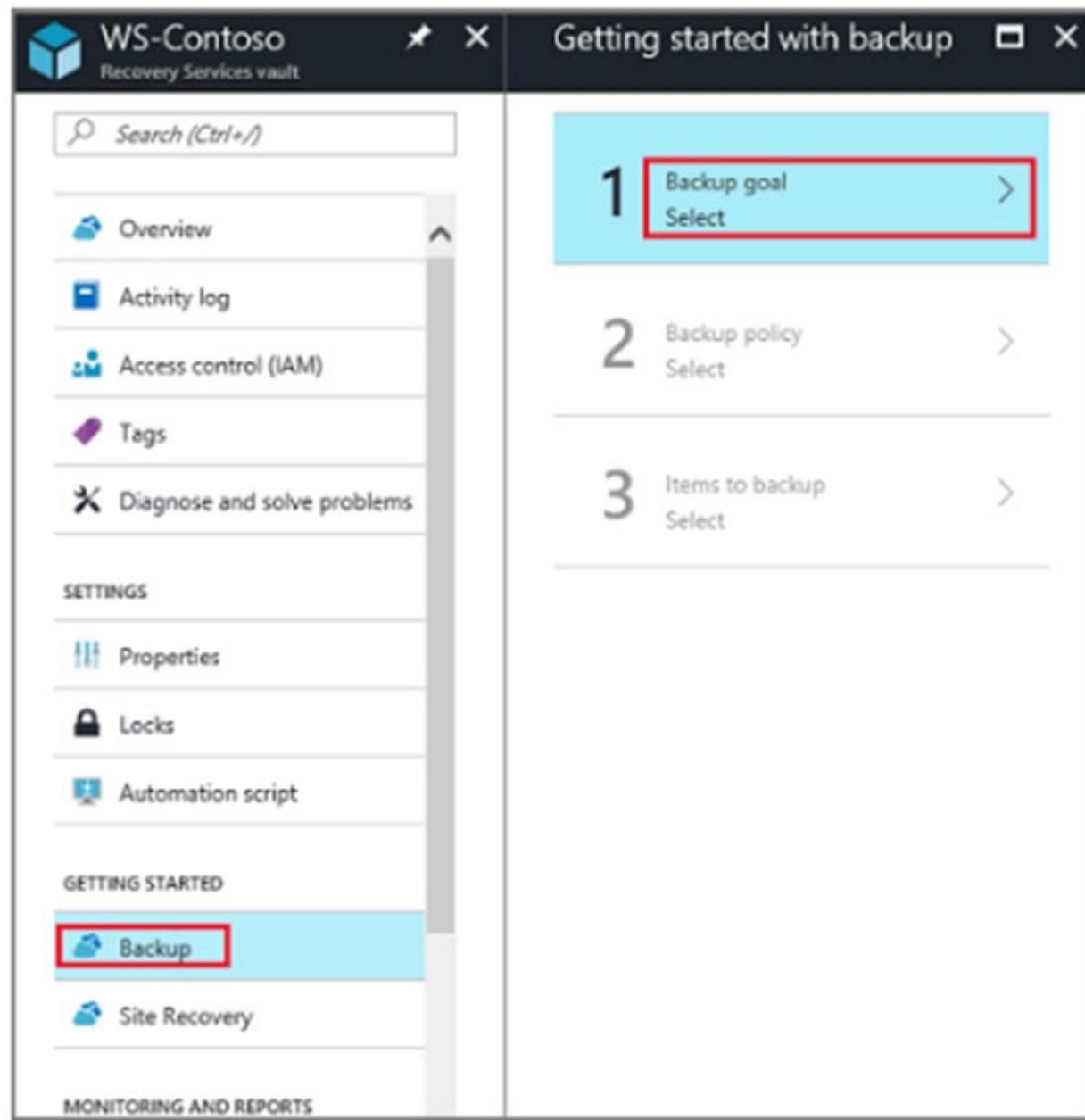
A2. On the Recovery Services vaults menu, click Add.

The screenshot shows the 'Recovery Services vaults' blade in the Azure portal. At the top left is the 'Home' link and the 'Recovery Services vaults' title. Below the title is the Microsoft logo. A red box highlights the 'Add' button, which has a blue plus sign icon. To the right of the 'Add' button are 'Edit columns', 'Refresh' (with a circular arrow icon), and 'Assign tags'. Underneath these buttons, the text 'Subscriptions: CAT\_Eng' is displayed. Below this are three filter dropdowns: 'Filter by name...', 'All resource groups', and 'All locations'. A message '0 items' is shown. The main table area has columns: a checkbox column, 'NAME' (sorted by ascending order), 'RESOURCE GROUP' (sorted by descending order), and 'LOCATION' (sorted by descending order). There are no rows in the table.

A3. The Recovery Services vault blade opens, prompting you to provide a Name, Subscription, Resource group, and Location

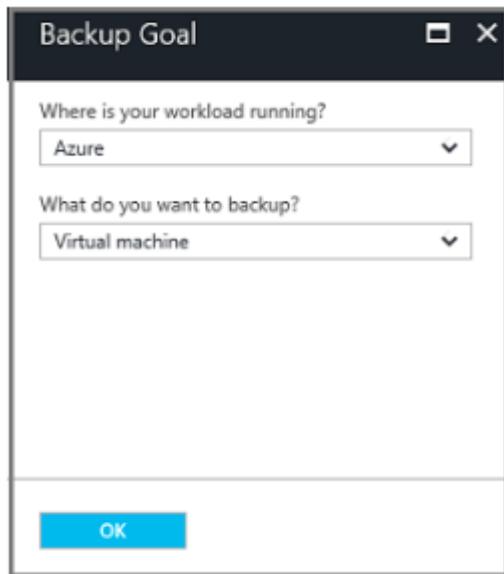
Task B. Create a backup goal

B1. On the Recovery Services vault blade (for the vault you just created), in the Getting Started section, click Backup, then on the Getting Started with Backup blade, select Backup goal.



The Backup Goal blade opens. If the Recovery Services vault has been previously configured, then the Backup Goal blades opens when you click Backup on the Recovery Services vault blade.

B2. From the Where is your workload running? drop-down menu, select Azure.

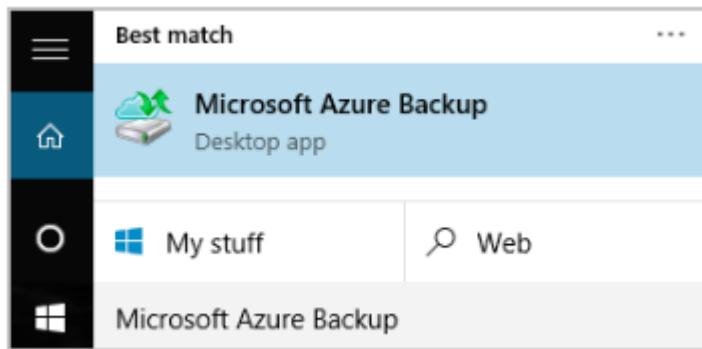


B3. From the What do you want to backup? menu, select Blob Storage, and click OK.

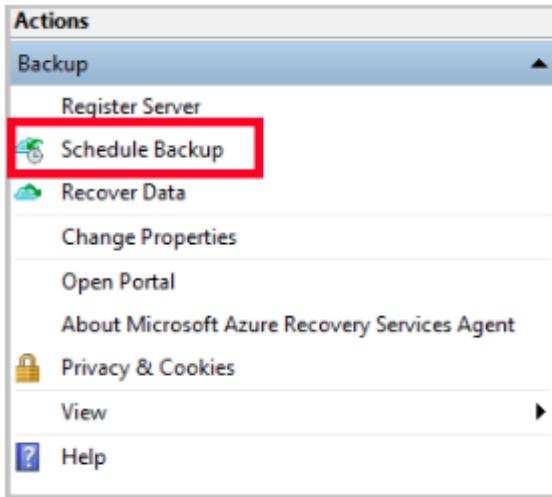
B4. Finish the Wizard.

#### Task C. create a backup schedule

C1. Open the Microsoft Azure Backup agent. You can find it by searching your machine for Microsoft Azure Backup.



C2. In the Backup agent's Actions pane, click Schedule Backup to launch the Schedule Backup Wizard.



C3. On the Getting started page of the Schedule Backup Wizard, click Next.

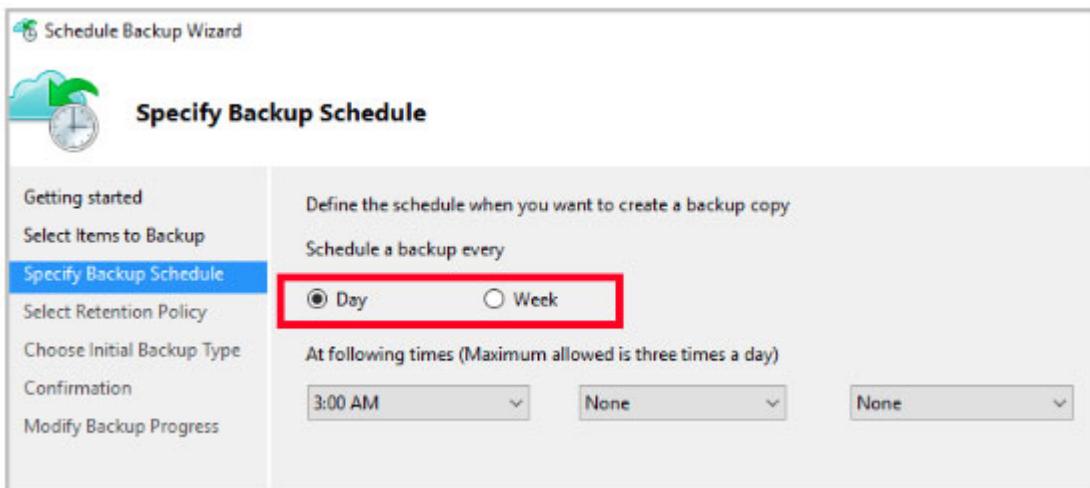
C4. On the Select Items to Backup page, click Add Items.

The Select Items dialog opens.

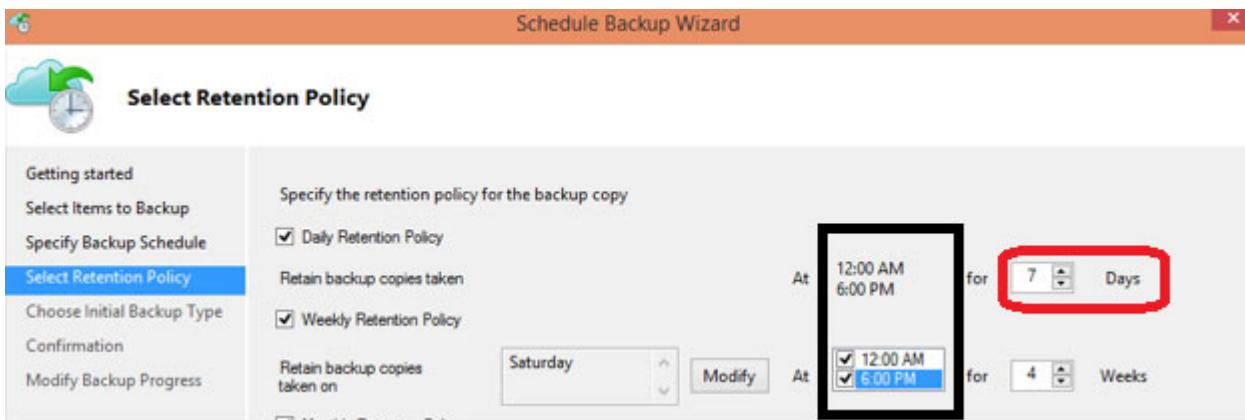
C5. Select Blob Storage you want to protect, and then click OK.

C6. In the Select Items to Backup page, click Next.

On the Specify Backup Schedule page, specify Schedule a backup every day, and click Next.



C7. On the Select Retention Policy page, set it to 14 days, and click Next.



C8. Finish the Wizard.

References:

<https://docs.microsoft.com/en-us/azure/backup/backup-configure-vault>

### QUESTION 17

#### SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

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You may now click next to proceed to the lab.

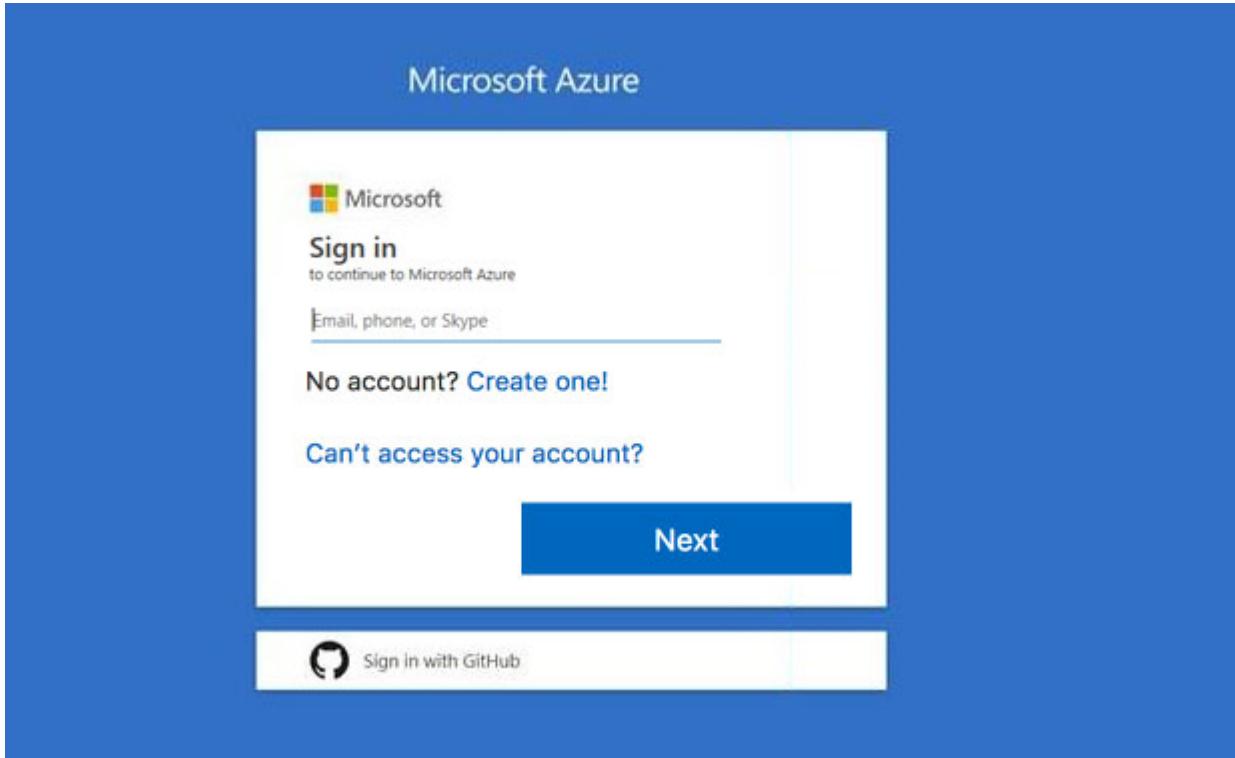
Use the following login credentials as needed:

**Azure Username:** XXXXXXXX

**Azure Password:** XXXXXXXX

The following information is for technical support purposes only:

**Lab Instance:** 9172796



## Task 2

Your company plans to store several documents on a public website.

You need to create a container named bios that will host the documents in the storagelod9272261 storage account. The solution must ensure anonymous access and must ensure that users can browse folders in the container.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Azure portal create public container

To create a container in the Azure portal, follow these steps:

Step 1: Navigate to your new storage account in the Azure portal.

Step 2: In the left menu for the storage account, scroll to the blob service section, then select Blobs.  
Select the + Container button.

Type a name for your new container: bios

Set the level of public access to the container: Select anonymous access.

The screenshot shows the Azure Storage Blobs interface. On the left, there's a sidebar with options like Blob service, Blobs, Custom domain, Soft delete, Azure CDN, Add Azure Search, and Lifecycle Management. The 'Blobs' option is selected. The main area is titled 'New container'. It has a field labeled 'Name' with the value 'container-example' and a checked checkmark. Below it is a dropdown for 'Public access level' set to 'Private (no anonymous access)'. At the bottom are 'OK' and 'Cancel' buttons.

Step 3: Select OK to create the container.

References:

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-quickstart-blobs-portal>

## QUESTION 18

### SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g. copy and paste, ability to navigate to external websites) will not be possible by design.

Scoring is based on the outcome of performing the tasks stated in the lab. In other words, it doesn't matter how you accomplish the task, if you successfully perform it, you will earn credit for that task.

Labs are not timed separately, and this exam may have more than one lab that you must complete. You can use as much time as you would like to complete each lab. But, you should manage your time appropriately to ensure that you are able to complete the lab(s) and all other sections of the exam in the time provided.

Please note that once you submit your work by clicking the Next button within a lab, you will NOT be able to return to the lab.

You may now click next to proceed to the lab.

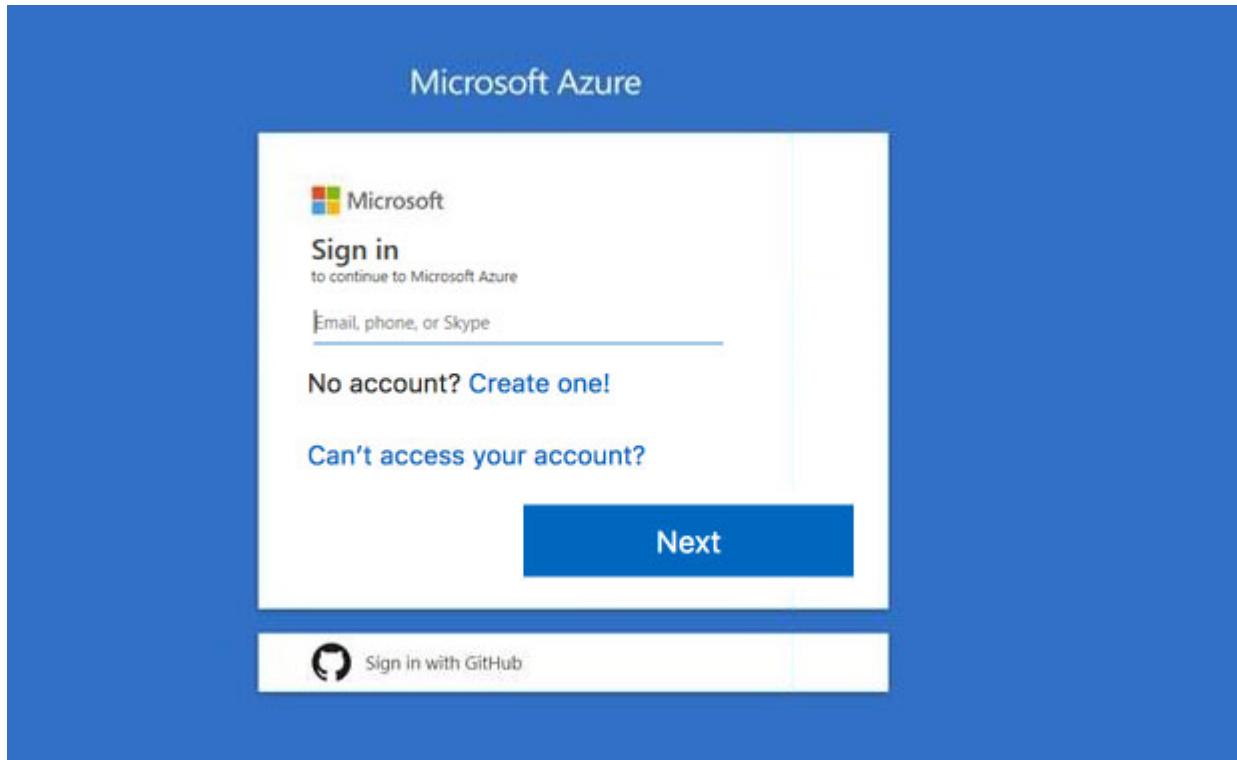
Use the following login credentials as needed:

**Azure Username:** XXXXXXXX

**Azure Password:** XXXXXXXX

The following information is for technical support purposes only:

**Lab Instance:** 9172796



### Task 3

Your company plans to host in Azure the source files of several line-of-business applications.

You need to create an Azure file share named corpsoftware in the storagelod9272261 storage account. The solution must ensure that corpsoftware can store only up to 250 GB of data.

What should you do from the Azure portal?

**Correct Answer:** See explanation below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Step 1: Go to the Storage Account blade on the Azure portal:

The screenshot shows the Azure Storage Account 'myazurefileaccount' overview page. The left sidebar contains links for Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, and a Settings section with Access keys, Configuration, Shared access signature, Properties, and Locks. The main content area has tabs for Essentials, Services, and Monitoring. The Essentials tab displays resource group (andredstage), status (Primary: Available, Secondary: Available), location (eastus2(stage), northcentralus(stage)), subscription name (Microsoft Azure Internal Consumption), and subscription ID (ad9aea31-efa4-4e02-8a24-e922120021f6). The Services tab includes Blobs, Files (which is highlighted with a red box), and Tables. The Monitoring tab shows Total requests.

Step 2: Click on add File Share button:

The screenshot shows the Microsoft Azure File service blade for the 'myazurefileaccount'. It features a navigation bar with icons for File service, myazurefileaccount, Refresh, and Essentials. A search bar at the bottom allows searching by prefix. The '+ File share' button is highlighted with a red box.

Step 3: Provide Name (storagelod9272261) and Quota (250 GB).

New file share

File service (myazurefileaccount)

\* Name  
myfirstazurefileshare

Quota ⓘ  
5120

References:

<https://docs.microsoft.com/en-us/azure/storage/files/storage-how-to-create-file-share>

**QUESTION 19**

**SIMULATION**

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g, copy and paste, ability to navigate to external websites) will not be possible by design.

Scoring is based on the outcome of performing the tasks stated in the lab. In other words, it doesn't matter how you accomplish the task, if you successfully perform it, you will earn credit for that task.

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Please note that once you submit your work by clicking the Next button within a lab, you will NOT be able to return to the lab.

You may now click next to proceed to the lab.

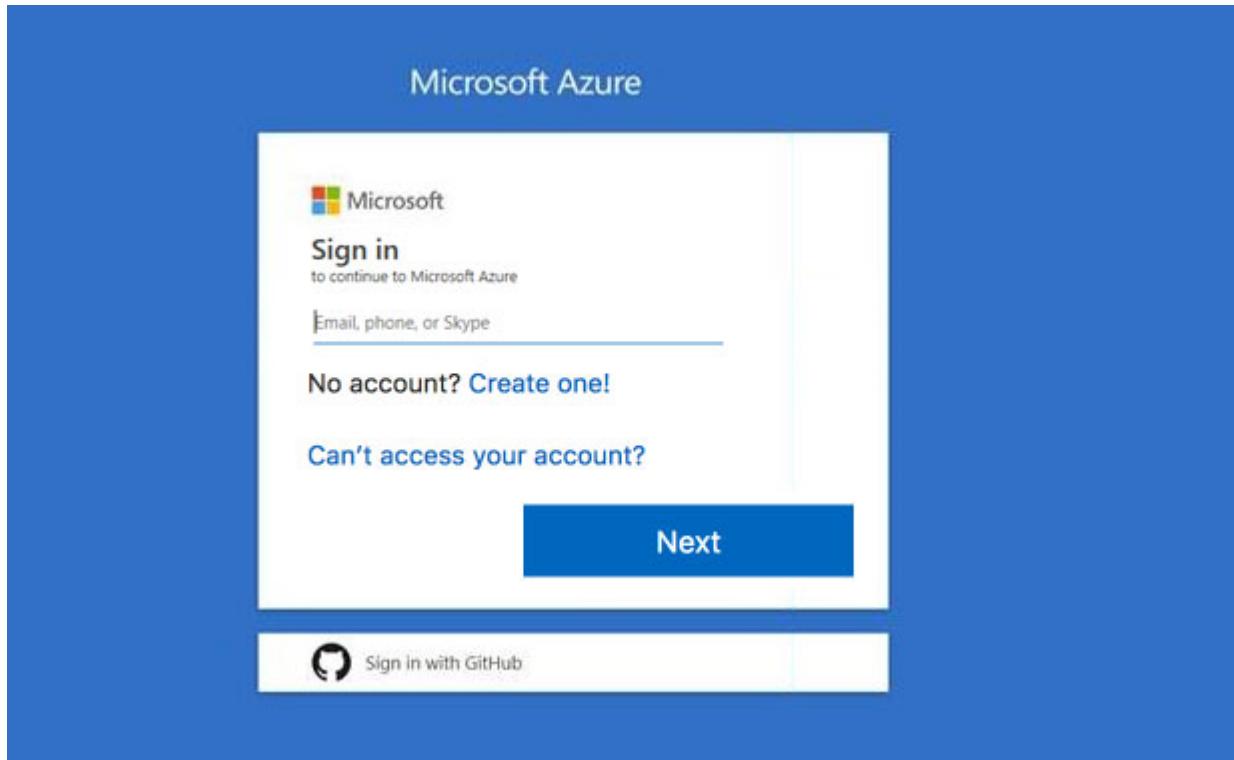
Use the following login credentials as needed:

**Azure Username:** XXXXXXXX

**Azure Password:** XXXXXXXX

The following information is for technical support purposes only:

**Lab Instance:** 9172796



## Task 6

You recently created a virtual machine named Web01.

You need to attach a new 80-GB standard data disk named Web01-Disk1 to Web01.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

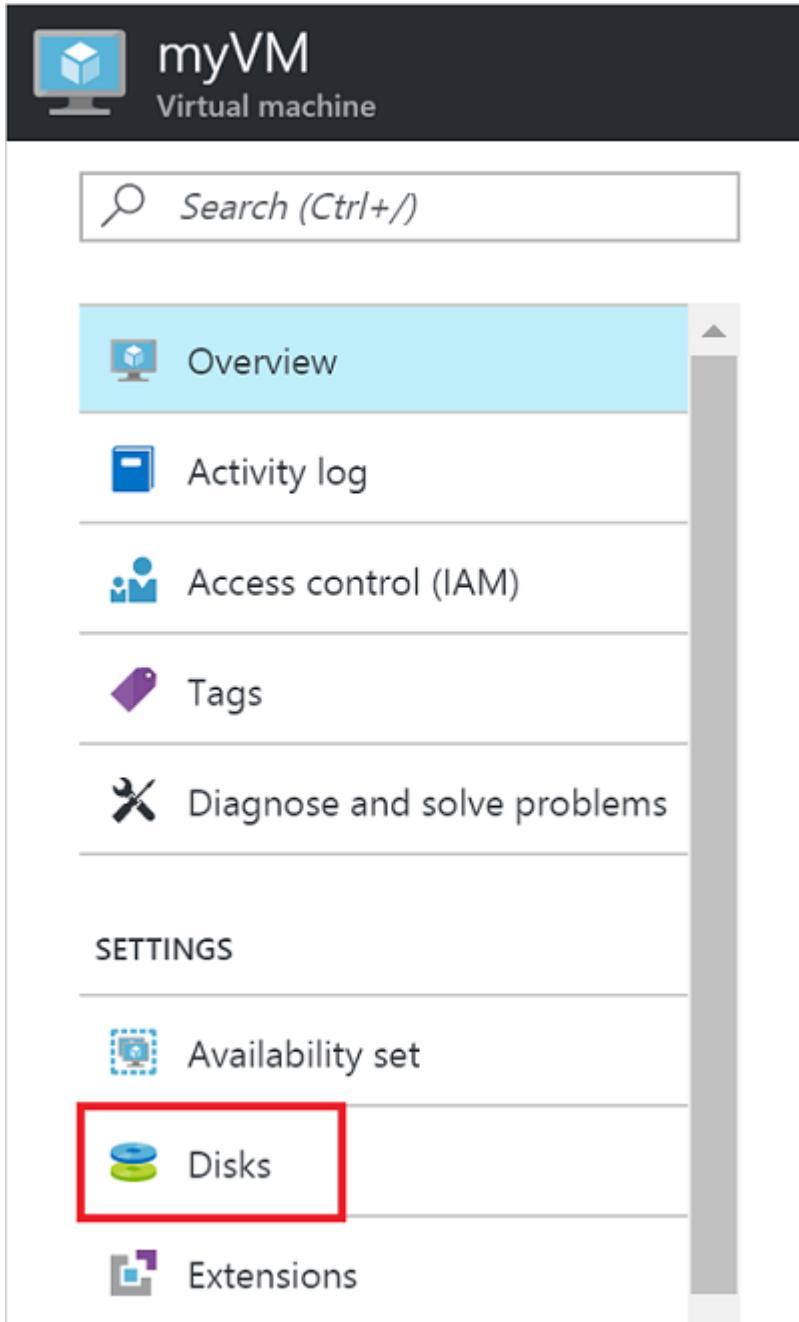
Explanation:

Add a data disk

Step 1: In the Azure portal, from the menu on the left, select **Virtual machines**.

Step 2: Select the Web01 virtual machine from the list.

Step 3: On the **Virtual machine** page, , in Essentials, select **Disks**.



Step 4: On the **Disks** page, select the Web01-Disk1 from the list of existing disks.

Step 5: In the Disks pane, click + Add data disk.

Step 6: Click the drop-down menu for Name to view a list of existing managed disks accessible to your Azure subscription. Select the managed disk Web01-Disk1 to attach:



Save



Discard

## OS disk

NAME	SIZE	ACCOUNT TYPE
myVM		Premium_LRS

## Data disks

LUN	NAME	SIZE	ACCOUNT TYPE
0	myDataDisk	1023 GiB	Premium_LRS

1



Create disk

**Disks in resource group 'myResourceGroup'**

myExistingDisk

size: 1023 GiB, account type: Premium\_LRS

**All disks**

myExistingDisk

size: 1023 GiB, account type: Premium\_LRS, resource group: MYRESOURCEGROUP

## References:

<https://docs.microsoft.com/en-us/azure/virtual-machines/linux/attach-disk-portal>

## Testlet 2

### Case study

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 questions in 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 section 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 in 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

Contoso, Ltd. is a manufacturing company that has offices worldwide. Contoso works with partner organizations to bring products to market.

Contoso products are manufactured by using blueprint files that the company authors and maintains.

#### Existing Environment

Currently, Contoso uses multiple types of servers for business operations, including the following:

- File servers
- Domain controllers
- Microsoft SQL Server servers

Your network contains an Active Directory forest named contoso.com. All servers and client computers are joined to Active Directory.

You have a public-facing application named App1. App1 is comprised of the following three tiers:

- A SQL database
- A web front end
- A processing middle tier

Each tier is comprised of five virtual machines. Users access the web front end by using HTTPS only.

#### Requirements

#### Planned Changes

Contoso plans to implement the following changes to the infrastructure:

- Move all the tiers of App1 to Azure.
- Move the existing product blueprint files to Azure Blob storage.

- Create a hybrid directory to support an upcoming Microsoft Office 365 migration project.

## Technical Requirements

Contoso must meet the following technical requirements:

- Move all the virtual machines for App1 to Azure.
- Minimize the number of open ports between the App1 tiers.
- Ensure that all the virtual machines for App1 are protected by backups.
- Copy the blueprint files to Azure over the Internet.
- Ensure that the blueprint files are stored in the archive storage tier.
- Ensure that partner access to the blueprint files is secured and temporary.
- Prevent user passwords or hashes of passwprds from being stored in Azure.
- Use unmanaged standard storage for the hard disks of the virtual machines.
- Ensure that when users join devices to Azure Active Directory (Azure AD), the users use a mobile phone to verify their identity
- Minimize administrative effort whenever possible

## User Requirements

Contoso identifies the following requirements for users:

- Ensure that only users who are part of a group named Pilot can join devices to Azure AD.
- Designate a new user named Admin1 as the service admin for the Azure subscription.
- Admin1 must receive email alerts regarding service outages.
- Ensure that a new user named User3 can create network objects for the Azure subscription.

## QUESTION 1

### HOTSPOT

You need to identify the storage requirements for Contoso.

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
Contoso requires a storage account that supports Blob storage.	<input type="radio"/>	<input type="radio"/>
Contoso requires a storage account that supports Azure Table storage.	<input type="radio"/>	<input type="radio"/>
Contoso requires a storage account that supports Azure File Storage.	<input type="radio"/>	<input type="radio"/>

**Correct Answer:**

## Answer Area

Statements	Yes	No
Contoso requires a storage account that supports Blob storage.	<input checked="" type="radio"/>	<input type="radio"/>
Contoso requires a storage account that supports Azure Table storage.	<input type="radio"/>	<input checked="" type="radio"/>
Contoso requires a storage account that supports Azure File Storage.	<input type="radio"/>	<input checked="" type="radio"/>

Section: [none]

Explanation

**Explanation/Reference:**

Explanation:

Box 1: Yes

Contoso is moving the existing product blueprint files to Azure Blob storage.

Use unmanaged standard storage for the hard disks of the virtual machines. We use Page Blobs for these.

Box 2: No

Box 3: No

## QUESTION 2

You need to move the blueprint files to Azure.

What should you do?

- A. Use Azure Storage Explorer to copy the files.
- B. Use the Azure Import/Export service.
- C. Generate a shared access signature (SAS). Map a drive, and then copy the files by using File Explorer.
- D. Generate an access key. Map a drive, and then copy the files by using File Explorer.

**Correct Answer:** A

Section: [none]

Explanation

**Explanation/Reference:**

Explanation:

Azure Storage Explorer is a free tool from Microsoft that allows you to work with Azure Storage data on Windows, macOS, and Linux. You can use it to upload and download data from Azure blob storage.

Scenario:

Planned Changes include: move the existing product blueprint files to Azure Blob storage.

Technical Requirements include: Copy the blueprint files to Azure over the Internet.

References:

<https://docs.microsoft.com/en-us/azure/machine-learning/team-data-science-process/move-data-to-azure-blob-using-azure-storage-explorer>

## QUESTION 3

You need to implement a backup solution for App1 after the application is moved.

What should you create first?

- A. a recovery plan
- B. a Recovery Services vault
- C. an Azure Backup Server
- D. a backup policy

**Correct Answer:** B

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

A Recovery Services vault is a logical container that stores the backup data for each protected resource, such as Azure VMs. When the backup job for a protected resource runs, it creates a recovery point inside the Recovery Services vault.

Scenario:

There are three application tiers, each with five virtual machines.

Move all the virtual machines for App1 to Azure.

Ensure that all the virtual machines for App1 are protected by backups.

References:

<https://docs.microsoft.com/en-us/azure/backup/quick-backup-vm-portal>

## **Testlet 3**

### **Case study**

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 questions in 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 section 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 in 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**

Humongous Insurance is an insurance company that has three offices in Miami, Tokyo and Bangkok. Each office has 5,000 users.

#### **Existing Environment**

##### **Active Directory Environment**

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

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

##### **Network Infrastructure**

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

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

##### **Active Directory Issue**

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

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

##### **Licensing Issue**

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

You verify that the Azure subscription has the available licenses.

#### **Requirements**

##### **Planned Changes**

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

### **Planned Azure AD Infrastructure**

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

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

### **Planned Azure Networking Infrastructure**

You plan to create the following networking resources in a resource group named All\_Resources:

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

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

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

### **Planned Azure Computer Infrastructure**

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

### **Department Requirements**

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

- Web administrators will deploy Azure web apps for the marketing department. Each web app will be added to a separate resource group. The initial configuration of the web apps will be identical. The web administrators have permission to deploy web apps to resource groups.
- During the testing phase, auditors in the finance department must be able to review all Azure costs from the past week.

### **Authentication Requirements**

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

### **QUESTION 1**

DRAG DROP

You need to prepare the environment to ensure that the web administrators can deploy the web apps as quickly as possible.

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
From the Automation script blade of the resource group, click Deploy.	
From the Templates service, select the template, and then share the template to the web administrators.	
From the Automation script blade of the resource group, click Add to library.	 
From the Automation Accounts service, add an automation account.	 
Create a resource group, and then deploy a web app to the resource group.	
From the Automation script blade of the resource group, click the Parameters tab.	

### Correct Answer:

Actions	Answer Area
From the Automation script blade of the resource group, click Deploy.	From the Automation Accounts service, add an automation account.
From the Templates service, select the template, and then share the template to the web administrators.	From the Automation script blade of the resource group, click Add to library.
From the Automation script blade of the resource group, click Add to library.	 
From the Automation Accounts service, add an automation account.	 
Create a resource group, and then deploy a web app to the resource group.	From the Templates service, select the template, and then share the template to the web administrators.
From the Automation script blade of the resource group, click the Parameters tab.	

### Section: [none]

#### Explanation

#### Explanation/Reference:

Explanation:

#### Step 1:

First you create a storage account using the Azure portal.

#### Step 2:

Select Automation options at the bottom of the screen. The portal shows the template on the Template tab.

Add the storage account to the library.

#### Step 3:

Share the template.

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

References:

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/resource-manager-quickstart-create-templates-use-the-portal>

## Question Set 1

### QUESTION 1

You plan to automate the deployment of a virtual machine scale set that uses the Windows Server 2016 Datacenter image.

You need to ensure that when the scale set virtual machines are provisioned, they have web server components installed.

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

**NOTE:** Each correct selection is worth one point.

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

**Correct Answer:** AD

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Virtual Machine Scale Sets can be used with the Azure Desired State Configuration (DSC) extension handler. Virtual machine scale sets provide a way to deploy and manage large numbers of virtual machines, and can elastically scale in and out in response to load. DSC is used to configure the VMs as they come online so they are running the production software.

References:

<https://docs.microsoft.com/en-us/azure/virtual-machine-scale-sets/virtual-machine-scale-sets-dsc>

### QUESTION 2

DRAG DROP

You have two Azure virtual machines named VM1 and VM2. VM1 has a single data disk named Disk1.

You need to attach Disk1 to VM2. The solution must minimize downtime for both virtual machines.

Which four 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
Attach Disk1 to VM2.	
Start VM1.	
Stop VM2.	◀
Start VM2.	▶
Stop VM1.	
Detach Disk1 from VM1.	

**Correct Answer:**

Actions	Answer Area
Attach Disk1 to VM2.	Stop VM1.
Start VM1.	Detach Disk1 from VM1.
Stop VM2.	◀
Start VM2.	▶
Stop VM1.	Attach Disk1 to VM2.
Detach Disk1 from VM1.	▶

**Section: [none]**

**Explanation**

**Explanation/Reference:**

Explanation:

Step 1: Stop VM1.

Step 2: Detach Disk1 from VM1.

Step 3: Attach Disk1 to VM2

Attach an existing disk

Follow these steps to reattach an existing available data disk to a running VM.

1. Select a running VM for which you want to reattach a data disk.
2. From the menu on the left, select Disks.
3. Select Attach existing to attach an available data disk to the VM.
4. From the Attach existing disk pane, select OK.

Step 4: Start VM1.

Detach a data disk using the portal

1. In the left menu, select Virtual Machines.

2. Select the virtual machine that has the data disk you want to detach and click Stop to deallocate the VM.
3. In the virtual machine pane, select Disks.
4. At the top of the Disks pane, select Edit.
5. In the Disks pane, to the far right of the data disk that you would like to detach, click the Detach button image detach button.
6. After the disk has been removed, click Save on the top of the pane.
7. In the virtual machine pane, click Overview and then click the Start button at the top of the pane to restart the VM.
8. The disk stays in storage but is no longer attached to a virtual machine.

References:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/detach-disk>

<https://docs.microsoft.com/en-us/azure/lab-services/devtest-lab-attach-detach-data-disk>

### **QUESTION 3**

#### HOTSPOT

You have an Azure subscription named Subscription1. Subscription1 contains a virtual machine named VM1.

You install and configure a web server and a DNS server on VM1.

VM1 has the effective network security rules shown in the following exhibit.

Network Interface: **vm1900** Effective security rules Topology  Virtual network/subnet: **VMRG-vnet/default** Public IP: **104.40.215.211** Private IP: **10.0.0.5** Accelerated networking: Disabled

INBOUND PORT RULES  **VM1-nsg** (attached to network interface **vm1900**)

Network security group  
Impacts 1 subnets, 1 network interfaces

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINATION
900	 Rule2	50-60	Any	Any	
1000	 default-allow-rdp	3389	TCP	Any	
1010	Rule1	50-500	TCP	Any	
65000	AllowVnetInBound	Any	Any	VirtualNet...	
65001	AllowAzureLoadBalanc...	Any	Any	AzureLoad...	
65500	DenyAllInBound	Any	Any	Any	

OUTBOUND PORT RULES 

Network security group **VM1-nsg** (attached to network interface **vm1900**)  
Impacts 0 subnets, 1 network interfaces

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINATION
1000	Rule3	80	Any	Any	Any
65000	AllowVnetOutBound	Any	Any	VirtualNet...	VirtualNet...
65001	AllowInternetOutBou...	Any	Any	Any	Internet
65500	DenyAllOutBound	Any	Any	Any	Any

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

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

## Answer Area

Internet users

- can connect to only the DNS server on VM1
- can connect to only the web server on VM1
- can connect to the web server and the DNS server on VM1
- cannot connect to the web server and the DNS server on VM1

If you delete Rule2, Internet users

- can connect to only the DNS server on VM1
- can connect to only the web server on VM1
- can connect to the web server and the DNS server on VM1
- cannot connect to the web server and the DNS server on VM1

Correct Answer:

## Answer Area

Internet users

- can connect to only the DNS server on VM1
- can connect to only the web server on VM1
- can connect to the web server and the DNS server on VM1
- cannot connect to the web server and the DNS server on VM1

If you delete Rule2, Internet users

- can connect to only the DNS server on VM1
- can connect to only the web server on VM1
- can connect to the web server and the DNS server on VM1
- cannot connect to the web server and the DNS server on VM1

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Box 1:

Rule2 blocks ports 50-60, which includes port 53, the DNS port. Internet users can reach the Web server, since it uses port 80.

Box 2:

If Rule2 is removed internet users can reach the DNS server as well.

Note: Rules are processed in priority order, with lower numbers processed before higher numbers, because lower numbers have higher priority. Once traffic matches a rule, processing stops. As a result, any rules that exist with lower priorities (higher numbers) that have the same attributes as rules with higher priorities are not processed.

References:

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

QUESTION 4

## DRAG DROP

You have an Azure Linux virtual machine that is protected by Azure Backup.

One week ago, two files were deleted from the virtual machine.

You need to restore the deleted files to an on-premises computer as quickly as possible.

Which four 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
From the Azure portal, click <b>File Recovery</b> from the vault.	
Copy the files by using AzCopy.	
Select a restore point.	
Copy the files by using File Explorer.	 
From the Azure portal, click <b>Restore VM</b> from the vault.	
Mount a VHD.	
Download and run a script.	

### Correct Answer:

Actions	Answer Area
From the Azure portal, click <b>File Recovery</b> from the vault.	From the Azure portal, click <b>File Recovery</b> from the vault.
Copy the files by using AzCopy.	Select a restore point.
Select a restore point.	Download and run a script.
Copy the files by using File Explorer.	Copy the files by using AzCopy.
From the Azure portal, click <b>Restore VM</b> from the vault.	
Mount a VHD.	
Download and run a script.	

### Section: [none]

#### Explanation

#### Explanation/Reference:

Explanation:

To restore files or folders from the recovery point, go to the virtual machine and choose the desired recovery point.

- Step 0. In the virtual machine's menu, click Backup to open the Backup dashboard.
- Step 1. In the Backup dashboard menu, click File Recovery.
- Step 2. From the Select recovery point drop-down menu, select the recovery point that holds the files you want. By default, the latest recovery point is already selected.
- Step 3: To download the software used to copy files from the recovery point, click Download Executable (for Windows Azure VM) or Download Script (for Linux Azure VM, a python script is generated).
- Step 4: Copy the files by using AzCopy

AzCopy is a command-line utility designed for copying data to/from Microsoft Azure Blob, File, and Table storage, using simple commands designed for optimal performance. You can copy data between a file system and a storage account, or between storage accounts.

References:

<https://docs.microsoft.com/en-us/azure/backup/backup-azure-restore-files-from-vm>

<https://docs.microsoft.com/en-us/azure/storage/common/storage-use-azcopy>

## **QUESTION 5**

### SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g, copy and paste, ability to navigate to external websites) will not be possible by design.

Scoring is based on the outcome of performing the tasks stated in the lab. In other words, it doesn't matter how you accomplish the task, if you successfully perform it, you will earn credit for that task.

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Please note that once you submit your work by clicking the Next button within a lab, you will NOT be able to return to the lab.

You may now click next to proceed to the lab.

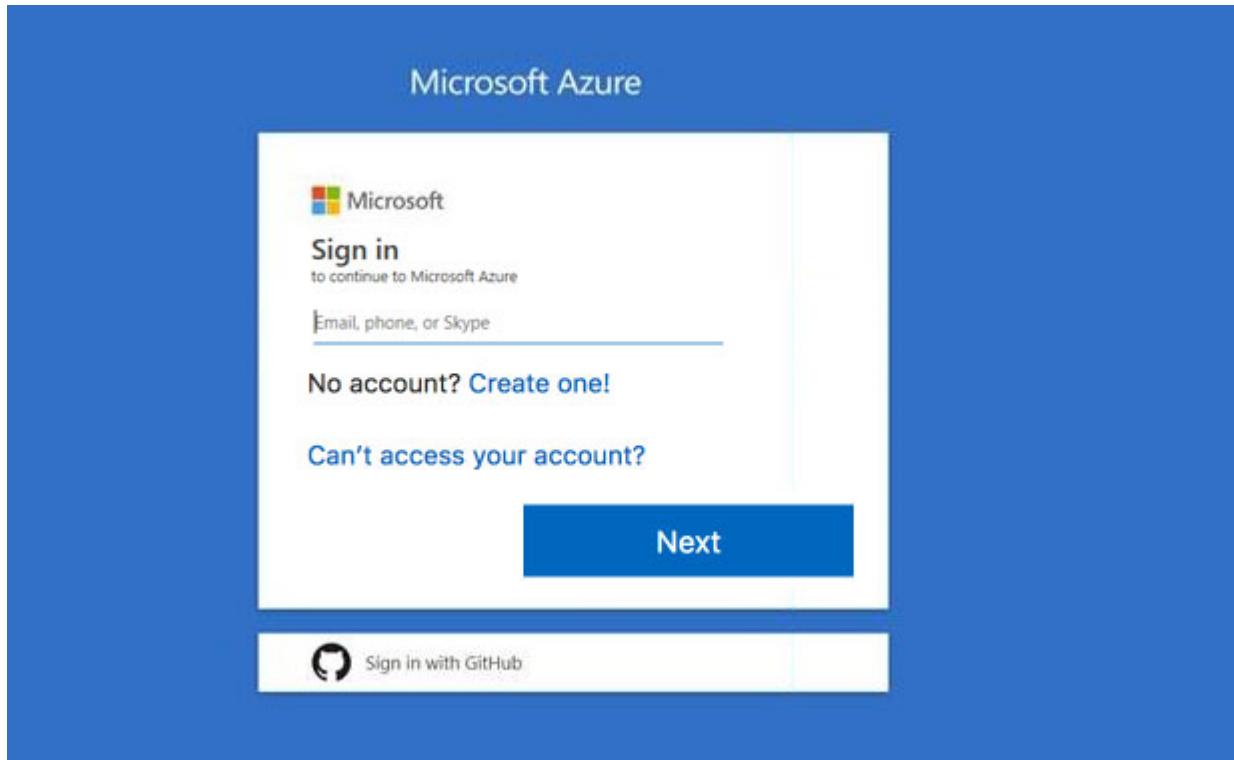
Use the following login credentials as needed:

**Azure Username:** XXXXXXXX

**Azure Password:** XXXXXXXX

The following information is for technical support purposes only:

**Lab Instance:** 9172796



### Task 3

You plan to protect on-premises virtual machines and Azure virtual machines by using Azure Backup.

You need to prepare the backup infrastructure in Azure. The solution must minimize the cost of storing the backups in Azure.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

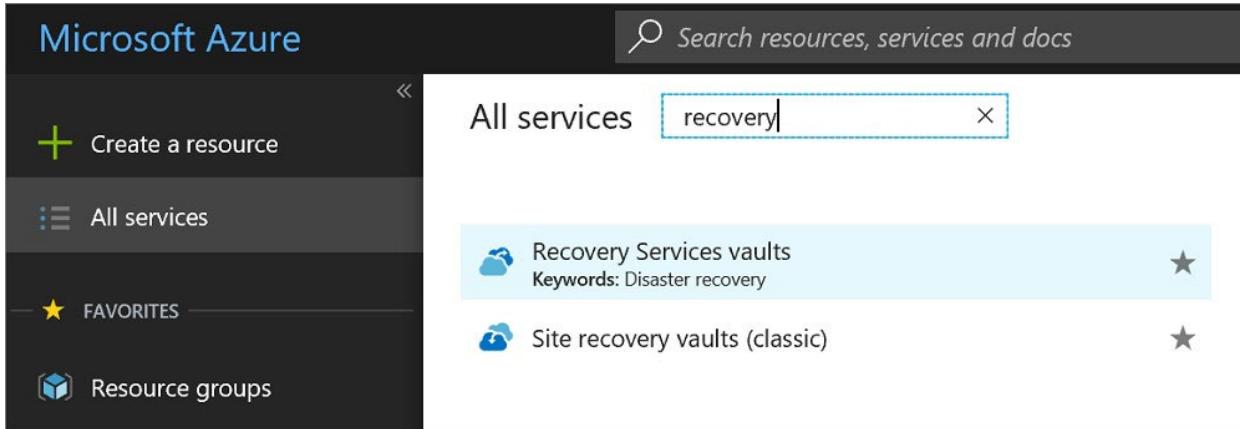
**Explanation**

**Explanation/Reference:**

Explanation:

First, create Recovery Services vault.

Step 1: On the left-hand menu, select All services and in the services list, type Recovery Services. As you type, the list of resources filters. When you see Recovery Services vaults in the list, select it to open the Recovery Services vaults menu.



Step 2: In the Recovery Services vaults menu, click Add to open the Recovery Services vault menu.

A screenshot of the Microsoft Azure portal showing the "Recovery Services vault" creation dialog. On the left, there is a sidebar with various icons. The main area shows a list of "Recovery Services vaults" under "Microsoft". A red box highlights the "+ Add" button. The right side shows the configuration form:

- \* Name: myRecoveryServicesVault
- \* Subscription: SubscriptionID (selected)
- \* Resource group: myResourceGroup (selected)
- \* Location: West Europe
- Pin to dashboard
- Create** button (highlighted with a red box)
- Automation options link

Step 3: In the Recovery Services vault menu, for example,

Type myRecoveryServicesVault in Name.

The current subscription ID appears in Subscription. If you have additional subscriptions, you could choose another subscription for the new vault.

For Resource group select Use existing and choose myResourceGroup. If myResourceGroup doesn't exist, select Create new and type myResourceGroup.

From the Location drop-down menu, choose West Europe.

Click Create to create your Recovery Services vault.

References:

<https://docs.microsoft.com/en-us/azure/backup/tutorial-backup-vm-at-scale>

## QUESTION 6

### SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

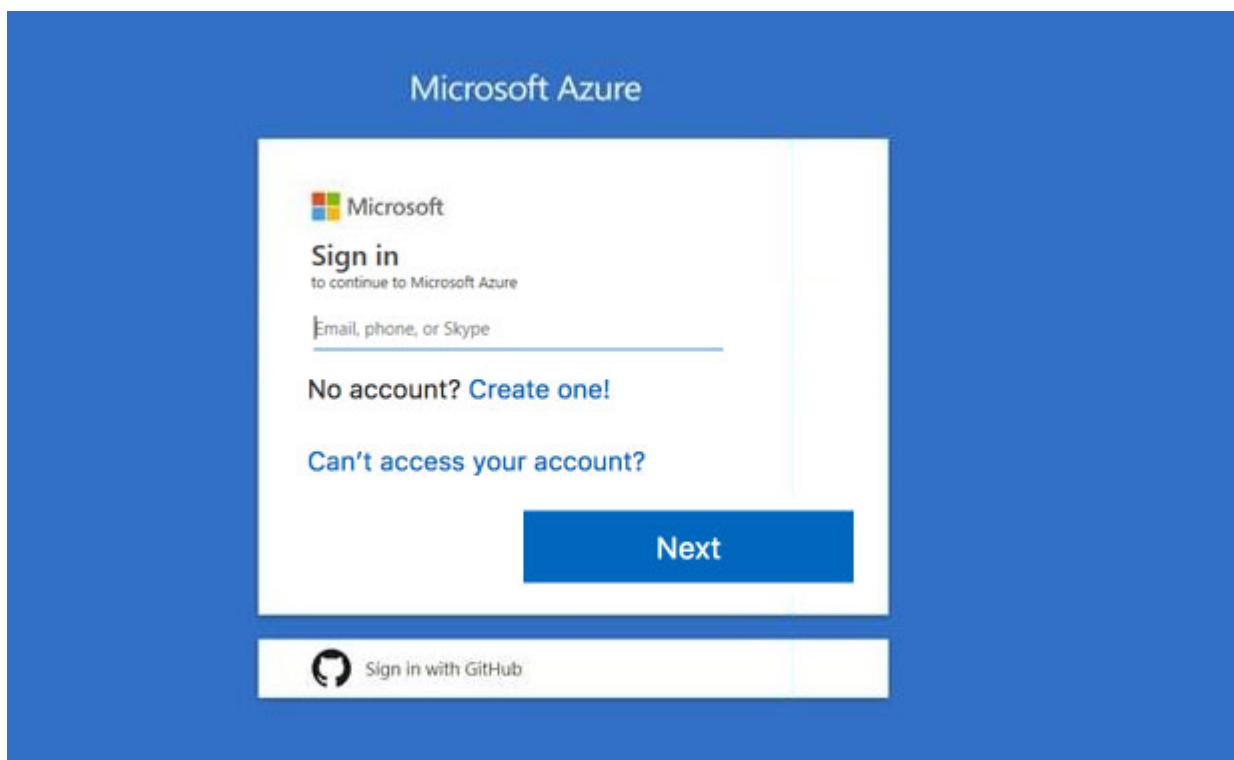
When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g, copy and paste, ability to navigate to external websites) will not be possible by design.

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You may now click next to proceed to the lab.



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As you visit resources, they'll be listed in Recently used resources for quick and easy access.

Create a resource

### Task 3

You need to deploy two Azure virtual machines named VM1003a and VM1003b based on an Ubuntu Server image. The deployment must meet the following requirements:

- Provide a Service Level Agreement (SLA) of 99.95 percent availability.
- Use managed disks.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Step 1: Open the Azure portal.

Step 2: On the left menu, select All resources. You can sort the resources by Type to easily find your images.

Step 3: Select the image you want to use from the list. The image Overview page opens.

Step 4: Select Create VM from the menu.

Step 5: Enter the virtual machine information.

Select VM1003a as the name for the first Virtual machine.

The user name and password entered here will be used to log in to the virtual machine. When complete, select OK. You can create the new VM in an existing resource group, or choose Create new to create a new resource group to store the VM.

Step 6: Select a size for the VM. To see more sizes, select View all or change the Supported disk type filter.

Step 7: Under Settings, make changes as necessary and select OK.

Step 8: On the summary page, you should see your image name listed as a Private image. Select Ok to start the virtual machine deployment.

Repeat the procedure for the second VM and name it VM1003b.

References:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/create-vm-generalized-managed>

## **QUESTION 7**

### SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g, copy and paste, ability to navigate to external websites) will not be possible by design.

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You may now click next to proceed to the lab.

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As you visit resources, they'll be listed in Recently used resources for quick and easy access.

Create a resource

#### Task 4

You need to deploy an Azure virtual machine named VM1004a based on an Ubuntu Server image, and then configure VM1004a to meet the following requirements:

- The virtual machine must contain data disks that can store at least 15 TB of data.
- The data disks must be able to provide at least 2.000 IOPS.
- Storage costs must be minimized.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Step 1: Open the Azure portal.

Step 2: On the left menu, select All resources. You can sort the resources by Type to easily find your images.

Step 3: Select the image you want to use from the list. The image Overview page opens.

Step 4: Select Create VM from the menu.

Step 5: Enter the virtual machine information.

Select VM1004a as the name for the first Virtual machine.

The user name and password entered here will be used to log in to the virtual machine. When complete, select OK. You can create the new VM in an existing resource group, or choose Create new to create a new resource group to store the VM.

Step 6: Select a size for the VM. To see more sizes, select View all or change the Supported disk type filter. To support 15 TB of data you would need a Premium disk.

Step 7: Under Settings, make changes as necessary and select OK.

Step 8: On the summary page, you should see your image name listed as a Private image. Select Ok to start the virtual machine deployment.

References:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/create-vm-generalized-managed>

### QUESTION 8

You have an Azure subscription that contains a virtual machine named VM1. VM1 hosts a line-of-business application that is available 24 hours a day. VM1 has one network interface and one managed disk. VM1 uses the D4s v3 size.

You plan to make the following changes to VM1:

- Change the size to D8s v3.
- Add a 500-GB managed disk.
- Add the Puppet Agent extension.
- Attach an additional network interface.

Which change will cause downtime for VM1?

- A. Add the Puppet Agent extension.
- B. Change the size to D8s v3.
- C. Add a 500-GB managed disk.
- D. Attach an additional network interface.

**Correct Answer:** B

**Section:** [none]

**Explanation**

#### Explanation/Reference:

Explanation:

While resizing the VM it must be in a stopped state.

References:

<https://azure.microsoft.com/en-us/blog/resize-virtual-machines/>

### QUESTION 9

You have an Azure virtual machine named VM1 that you use for testing. VM1 is protected by Azure Backup.

You delete VM1.

You need to remove the backup data stored for VM1.

What should you do first?

- A. Delete the Recovery Services vault.
- B. Delete the storage account.
- C. Stop the backup
- D. Modify the backup policy.

**Correct Answer:** D

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Azure Backup provides backup for virtual machines — created through both the classic deployment model and the Azure Resource Manager deployment model — by using custom-defined backup policies in a Recovery Services vault.

With the release of backup policy management, customers can manage backup policies and model them to meet their changing requirements from a single window. Customers can edit a policy, associate more virtual machines to a policy, and delete unnecessary policies to meet their compliance requirements.

Incorrect Answers:

B: You can't delete a Recovery Services vault if it is registered to a server and holds backup data. If you try to delete a vault, but can't, the vault is still configured to receive backup data.

References:

<https://azure.microsoft.com/en-in/updates/azure-vm-backup-policy-management/>

## QUESTION 10

You have an Azure subscription named Subscription1.

You deploy a Linux virtual machine named VM1 to Subscription1.

You need to monitor the metrics and the logs of VM1.

What should you use?

- A. the AzurePerformanceDiagnostics extension
- B. Azure HDInsight
- C. Linux Diagnostic Extension (LAD) 3.0
- D. Azure Analysis Services

**Correct Answer:** A

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

You can use extensions to configure diagnostics on your VMs to collect additional metric data.

The basic host metrics are available, but to see more granular and VM-specific metrics, you need to install the Azure diagnostics extension on the VM. The Azure diagnostics extension allows additional monitoring and diagnostics data to be retrieved from the VM.

References:

<https://docs.microsoft.com/en-us/azure/virtual-machines/linux/tutorial-monitoring>

**QUESTION 11**

DRAG DROP

You have an availability set named AS1 that contains three virtual machines named VM1, VM2, and VM3.

You attempt to reconfigure VM1 to use a larger size. The operation fails and you receive an allocation failure message.

You need to ensure that the resize operation succeeds.

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
Start VM2 and VM3.	
Stop VM2 and VM3.	
Start VM1.	
Stop VM1, VM2 and VM3.	
Resize VM1.	
Start VM1, VM2, and VM3.	

**Correct Answer:**

Actions	Answer Area
Start VM2 and VM3.	
Stop VM2 and VM3.	Stop VM1, VM2 and VM3.
Start VM1.	Resize VM1.
	Start VM1, VM2, and VM3.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Step 1: Stop VM1, VM, and VM3.

If the VM you wish to resize is part of an availability set, then you must stop all VMs in the availability set before changing the size of any VM in the availability set. The reason all VMs in the availability set must be stopped before performing the resize operation to a size that requires different hardware is that all running VMs in the availability set must be using the same physical hardware cluster. Therefore, if a change of physical hardware cluster is required to change the VM size then all VMs must be first stopped and then restarted one-by-one to a different physical hardware clusters.

Step 2: Resize VM1.

Step 3: Start VM1, VM2, and VM3.

**References:**

<https://azure.microsoft.com/es-es/blog/resize-virtual-machines/>

**QUESTION 12**

You plan to back up an Azure virtual machine named VM1.

You discover that the Backup Pre-Check status displays a status of Warning.

What is a possible cause of the Warning status?

- A. VM1 is stopped.
- B. VM1 does not have the latest version of WaAppAgent.exe installed.
- C. VM1 has an unmanaged disk.
- D. A Recovery Services vault is unavailable.

**Correct Answer:** B

**Section: [none]****Explanation****Explanation/Reference:**

Explanation:

The Warning state indicates one or more issues in VM's configuration that might lead to backup failures and provides recommended steps to ensure successful backups. Not having the latest VM Agent installed, for example, can cause backups to fail intermittently and falls in this class of issues.

References:

<https://azure.microsoft.com/en-us/blog/azure-vm-backup-pre-checks/>

**QUESTION 13**

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

Name	Type
storage1	Storage account
RG1	Resource group
Container1	Blob container
Share1	File share

Another administrator deploys a virtual machine named VM1 and an Azure Storage account named Storage2 by using a single Azure Resource Manager template.

You need to view the template used for the deployment.

From which blade can you view the template that was used for the deployment?

- A. Container1
- B. RG1
- C. VM1
- D. Storage2

**Correct Answer: B**

**Section: [none]****Explanation****Explanation/Reference:**

Explanation:

View template from deployment history

1. Go to the resource group for your new resource group. Notice that the portal shows the result of the last deployment. Select this link.

The screenshot shows the Azure Resource Group blade for the 'exportsite' resource group. The left sidebar lists 'Overview', 'Activity log', and 'Access control (IAM)'. The main area has a search bar and a toolbar with 'Add', 'Columns', 'Delete', 'Refresh', and 'Move' buttons. Below the toolbar, the 'Essentials' section displays the 'Subscription name (change)', 'Microsoft Azure Consumption', and 'Subscription ID'. To the right, a 'Deployments' section shows a red box around the '1 Succeeded' status.

2. You see a history of deployments for the group. In your case, the portal probably lists only one deployment. Select this deployment.

The screenshot shows a deployment history page. At the top, there are buttons for Delete, Cancel, Redeploy, and View template. Below is a search bar with placeholder text "Search for deployments by name...". A table lists deployments with columns for Deployment Name and Status. One row is highlighted with a red box: "Microsoft.WebSiteSQLDatabased1..." with a status of "Succeeded".

DEPLOYMENT NAME	STATUS
Microsoft.WebSiteSQLDatabased1...	Succeeded

3. The portal displays a summary of the deployment. The summary includes the status of the deployment and its operations and the values that you provided for parameters. To see the template that you used for the deployment, select View template.

The screenshot shows a deployment summary for "Microsoft.WebSiteSQLDatabased13386b0-9908". On the left is a sidebar with icons for various services. The main area shows deployment details: Deployment Date (7/5/2017 4:01:15 PM), Status (Succeeded), Duration (1 minute 30 seconds), Resource Group (exportsite), and Related (Events). At the top, there are buttons for Delete, Cancel, Refresh, Redeploy, and View template, with the "View template" button highlighted by a red box.

References:

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/resource-manager-export-template>

#### QUESTION 14

**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 virtual machine named VM1. VM1 was deployed by using a custom Azure Resource Manager template named ARM1.json.

You receive a notification that VM1 will be affected by maintenance.

You need to move VM1 to a different host immediately.

Solution: From the Overview blade, you move the virtual machine to a different subscription.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

You would need to redeploy the VM.

References:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/redeploy-to-new-node>

## **QUESTION 15**

**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 virtual machine named VM1. VM1 was deployed by using a custom Azure Resource Manager template named ARM1.json.

You receive a notification that VM1 will be affected by maintenance.

You need to move VM1 to a different host immediately.

Solution: From the Redeploy blade, you click **Redeploy**.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** A

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

When you redeploy a VM, it moves the VM to a new node within the Azure infrastructure and then powers it back on, retaining all your configuration options and associated resources.

References:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/redeploy-to-new-node>

## **QUESTION 16**

**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 virtual machine named VM1. VM1 was deployed by using a custom Azure Resource Manager template named ARM1.json.

You receive a notification that VM1 will be affected by maintenance.

You need to move VM1 to a different host immediately.

Solution: From the Update management blade, you click **Enable**.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

You would need to redeploy the VM.

References:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/redeploy-to-new-node>

## **QUESTION 17**

HOTSPOT

You have an Azure subscription named Subscription1. Subscription1 contains two Azure virtual machines named VM1 and VM2. VM1 and VM2 run Windows Server 2016.

VM1 is backed up daily by Azure Backup without using the Azure Backup agent.

VM1 is affected by ransomware that encrypts data.

You need to restore the latest backup of VM1.

To which location can you restore the backup? To answer, select the appropriate options in the answer area.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

## Answer Area

You can perform a file recovery of VM1 to:

VM1 only
VM2 only
VM1 and VM2 only
A new Azure virtual machine only
Any Windows computer that has Internet connectivity

You can restore VM1 to:

VM1 only
VM2 only
VM1 and VM2 only
A new Azure virtual machine only
Any Windows computer that has Internet connectivity

Correct Answer:

## Answer Area

You can perform a file recovery of VM1 to:

VM1 only
VM2 only
VM1 and VM2 only
A new Azure virtual machine only
Any Windows computer that has Internet connectivity

You can restore VM1 to:

VM1 only
VM2 only
VM1 and VM2 only
A new Azure virtual machine only
Any Windows computer that has Internet connectivity

Section: [none]

Explanation

Explanation/Reference:

### QUESTION 18

You download an Azure Resource Manager template based on an existing virtual machine. The template will be used to deploy 100 virtual machines.

You need to modify the template to reference an administrative password. You must prevent the password from being stored in plain text.

What should you create to store the password?

- A. an Azure Key Vault and an access policy
- B. a Recovery Services vault and a backup policy
- C. Azure Active Directory (AD) Identity Protection and an Azure policy
- D. an Azure Storage account and an access policy

**Correct Answer:** A

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

You can use a template that allows you to deploy a simple Windows VM by retrieving the password that is stored in a Key Vault. Therefore, the password is never put in plain text in the template parameter file.

References:

<https://azure.microsoft.com/en-us/resources/templates/101-vm-secure-password/>

### **QUESTION 19**

HOTSPOT

You create a virtual machine scale set named Scale1. Scale1 is configured as shown in the following exhibit.

## INSTANCES

\* Instance count

\* Instance size ([View full pricing details](#))

Deploy as low priority  No  Yes

Use managed disks  No  Yes

[+ Show advanced settings](#)

## AUTOSCALE

Autoscale  Disabled  Enabled

\* Minimum number of VMs

\* Maximum number of VMs

Scale out

\* CPU threshold (%)

\* Number of VMs to increase by

Scale in

\* CPU threshold (%)

\* Number of VMs to decrease by

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

If Scale is utilized at 85 percent for six minutes, Scale1 will be running.

2 virtual machines
4 virtual machines
0 virtual machines
10 virtual machines
20 virtual machines

If Scale1 is first utilized at 25 percent for six minutes, and then utilized at 50 percent for six minutes, Scale1 will be running.

2 virtual machines
4 virtual machines
6 virtual machines
8 virtual machines
20 virtual machines

Correct Answer:

## Answer Area

If Scale is utilized at 85 percent for six minutes, Scale1 will be running.

2 virtual machines
4 virtual machines
0 virtual machines
10 virtual machines
20 virtual machines

If Scale1 is first utilized at 25 percent for six minutes, and then utilized at 50 percent for six minutes, Scale1 will be running.

2 virtual machines
4 virtual machines
6 virtual machines
8 virtual machines
20 virtual machines

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Box 1:

The Autoscale scale out rule increases the number of VMs by 2 if the CPU threshold is 80% or higher. The initial instance count is 4 and rises to 6 when the 2 extra instances of VMs are added.

Box 2:

The Autoscale scale in rule decreases the number of VMs by 4 if the CPU threshold is 30% or lower. The initial instance count is 4 and thus cannot be reduced to 0 as the minimum instances is set to 2. Instances are only added when the CPU threshold reaches 80%.

References:

<https://docs.microsoft.com/en-us/azure/azure-monitor/platform/autoscale-overview>

<https://docs.microsoft.com/en-us/azure/azure-monitor/platform/autoscale-best-practices>

<https://docs.microsoft.com/en-us/azure/azure-monitor/platform/autoscale-common-scale-patterns>

## QUESTION 20

### SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g, copy and paste, ability to navigate to external websites) will not be possible by design.

Scoring is based on the outcome of performing the tasks stated in the lab. In other words, it doesn't matter how you accomplish the task, if you successfully perform it, you will earn credit for that task.

Labs are not timed separately, and this exam may have more than one lab that you must complete. You can use as much time as you would like to complete each lab. But, you should manage your time appropriately to ensure that you are able to complete the lab(s) and all other sections of the exam in the time provided.

Please note that once you submit your work by clicking the Next button within a lab, you will NOT be able to return to the lab.

You may now click next to proceed to the lab.

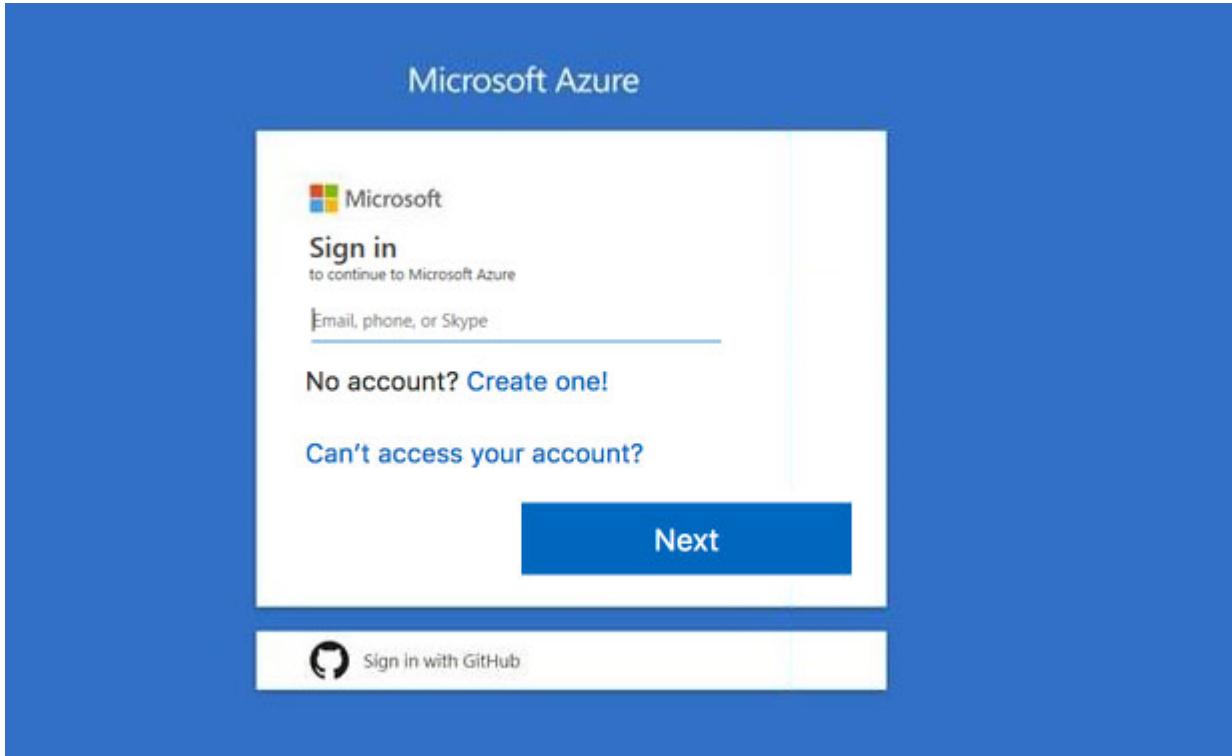
Use the following login credentials as needed:

**Azure Username:** XXXXXXXX

**Azure Password:** XXXXXXXX

The following information is for technical support purposes only:

**Lab Instance:** 9172796



#### Task 4

You plan to back up all the Azure virtual machines in your Azure subscription at 02:00 Coordinated Universal Time (UTC) daily.

You need to prepare the Azure environment to ensure that any new virtual machines can be configured quickly for backup. The solution must ensure that all the daily backups performed at 02:00 UTC are stored for only 90 days.

What should you do from your Recovery Services vault on the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Task A: Create a Recovery Services vault (if a vault already exists skip this task, go to Task B below)  
A1. From Azure Portal, On the Hub menu, click All services and in the list of resources, type Recovery Services and click Recovery Services vaults.

If there are recovery services vaults in the subscription, the vaults are listed.

A2. On the Recovery Services vaults menu, click Add.

A3. The Recovery Services vault blade opens, prompting you to provide a Name, Subscription, Resource group, and Location

Task B.

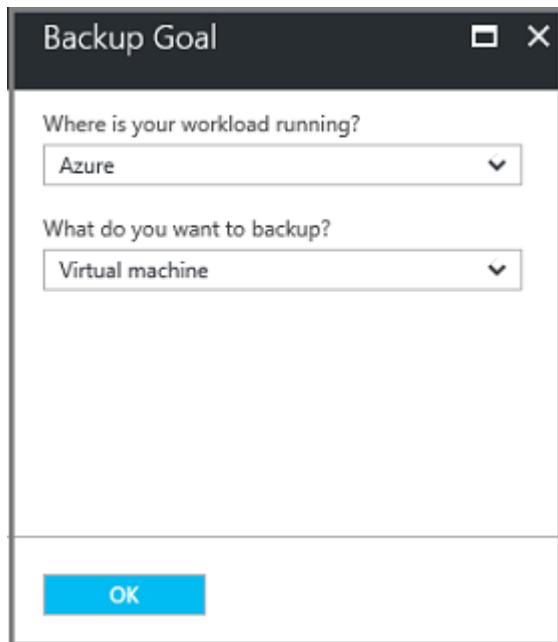
B1. On the Recovery Services vault blade (for the vault you just created), in the Getting Started section, click Backup, then on the Getting Started with Backup blade, select Backup goal.

The Backup Goal blade opens. If the Recovery Services vault has been previously configured, then the

Backup Goal blades opens when you click Backup on the Recovery Services vault blade.

B2. From the Where is your workload running? drop-down menu, select Azure.

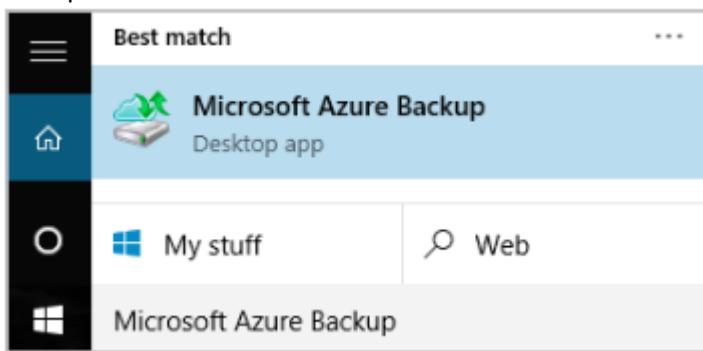
B3. From the What do you want to backup? menu, select Virtual Machine, and click OK.



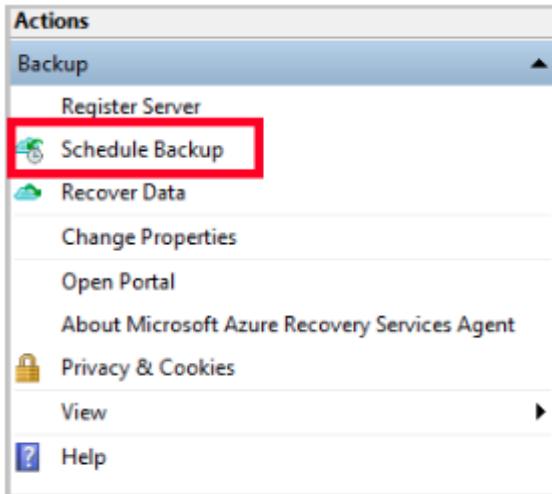
B4. Finish the Wizard.

Task C. create a backup schedule

C1. Open the Microsoft Azure Backup agent. You can find it by searching your machine for Microsoft Azure Backup.



C2. In the Backup agent's Actions pane, click Schedule Backup to launch the Schedule Backup Wizard.



C3. On the Getting started page of the Schedule Backup Wizard, click Next.

C4. On the Select Items to Backup page, click Add Items.

The Select Items dialog opens.

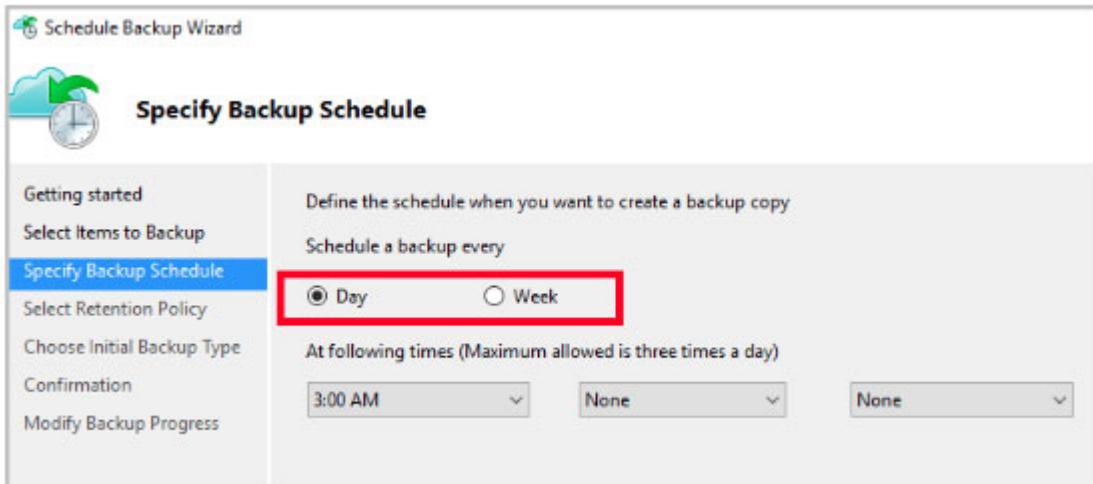
C5. Select Blob Storage you want to protect, and then click OK.

C6. In the Select Items to Backup page, click Next.

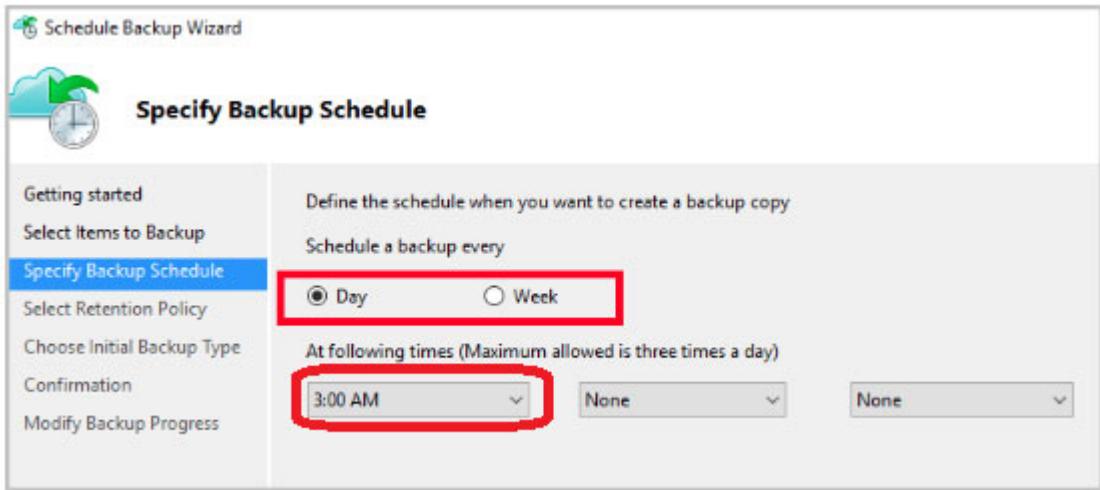
On the Specify Backup Schedule page, specify

Schedule a backup every: day

At the following times: 2:00 AM



C7. On the Select Retention Policy page, set it to 90 days, and click Next.



C8. Finish the Wizard.

References:

<https://docs.microsoft.com/en-us/azure/backup/backup-configure-vault>

## QUESTION 21

### SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g, copy and paste, ability to navigate to external websites) will not be possible by design.

Scoring is based on the outcome of performing the tasks stated in the lab. In other words, it doesn't matter how you accomplish the task, if you successfully perform it, you will earn credit for that task.

Labs are not timed separately, and this exam may have more than one lab that you must complete. You can use as much time as you would like to complete each lab. But, you should manage your time appropriately to ensure that you are able to complete the lab(s) and all other sections of the exam in the time provided.

Please note that once you submit your work by clicking the Next button within a lab, you will NOT be able to return to the lab.

You may now click next to proceed to the lab.

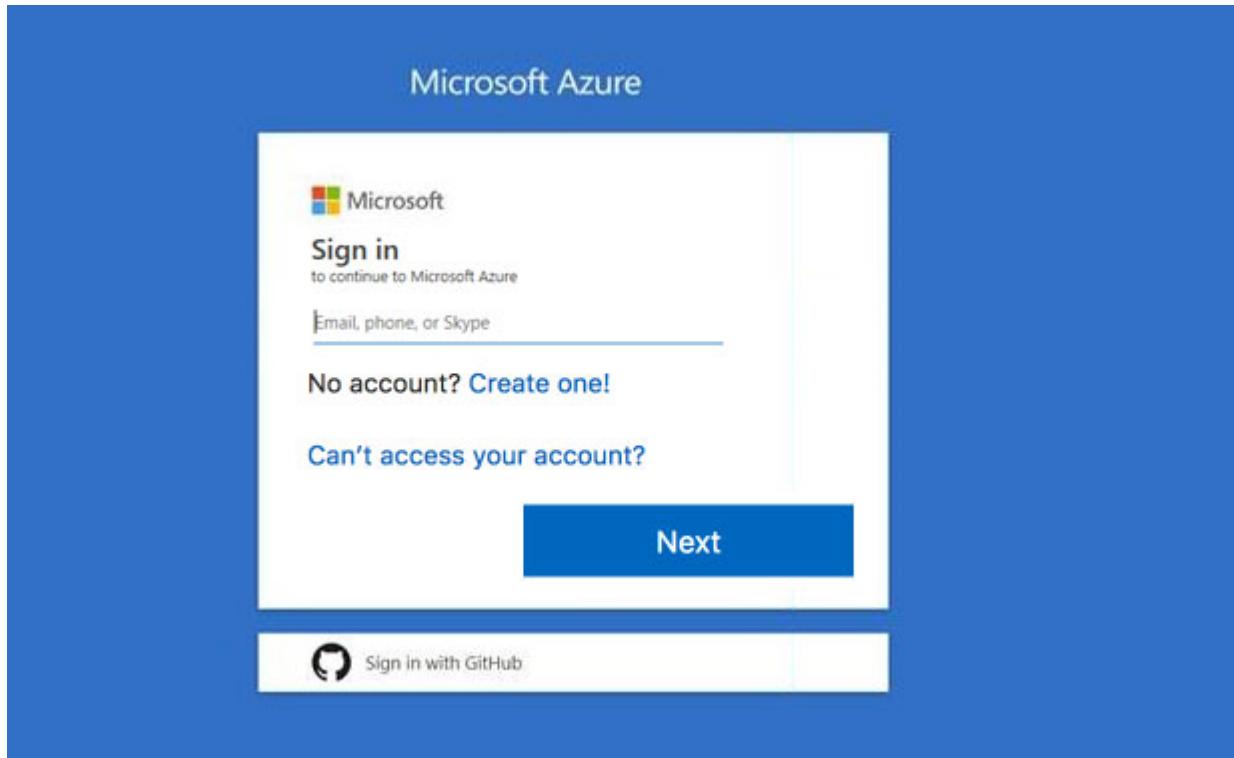
Use the following login credentials as needed:

**Azure Username:** XXXXXXXX

**Azure Password:** XXXXXXXX

The following information is for technical support purposes only:

**Lab Instance:** 9172796



## Task5

You plan to connect several virtual machines to the VNET01-USSEA2 virtual network.

In the Web-RGlod9272261 resource group, you need to create a virtual machine that uses the Standard\_B2ms size named Web01 that runs Windows Server 2016. Web01 must be added to an availability set.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Step 1: Choose Create a resource in the upper left-hand corner of the Azure portal.

Step 2: In the Basics tab, under Project details, make sure the correct subscription is selected and then choose Web-RGlod9272261 resource group

Home > New > Create a virtual machine

## Create a virtual machine

Basics Disks Networking Management Guest config Tags Review + create

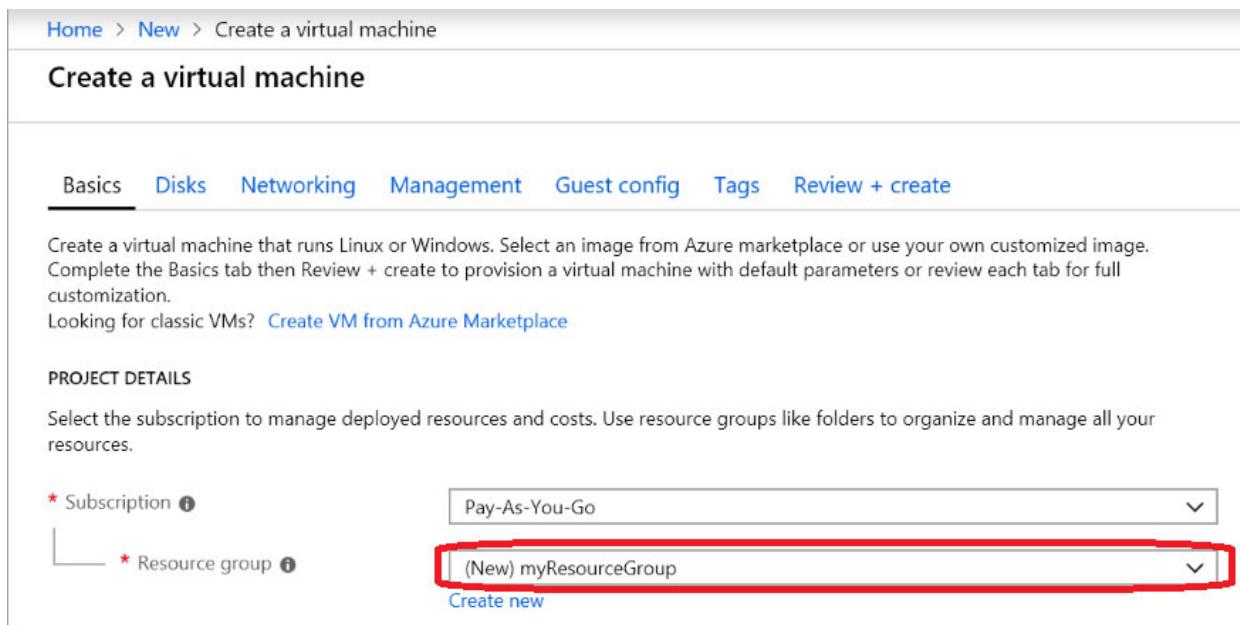
Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization.

Looking for classic VMs? [Create VM from Azure Marketplace](#)

**PROJECT DETAILS**

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

\* Subscription [Pay-As-You-Go](#)  
\* Resource group [\(New\) myResourceGroup](#) [Create new](#)



Step 3: Under Instance details type/select:

Virtual machine name: Web01  
Image: Windows Server 2016  
Size: Standard\_B2ms size  
Leave the other defaults.

**INSTANCE DETAILS**

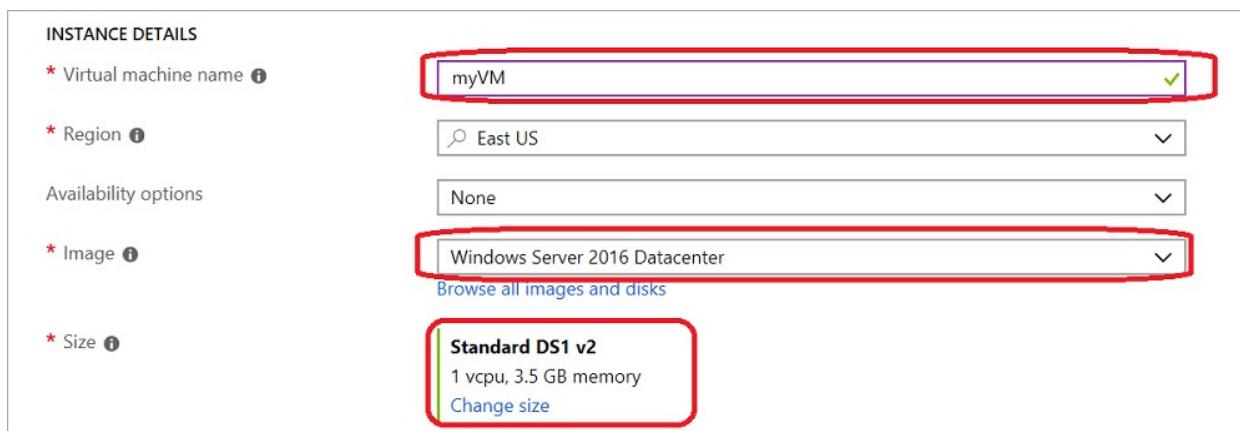
\* Virtual machine name [myVM](#)

\* Region [East US](#)

Availability options [None](#)

\* Image [Windows Server 2016 Datacenter](#) [Browse all images and disks](#)

\* Size [Standard DS1 v2](#)  
1 vcpu, 3.5 GB memory  
[Change size](#)



Step 4: Finish the Wizard

## Testlet 2

### Case study

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 questions in 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 section 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 in 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

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

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

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

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

#### Existing Environment

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

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

Contoso.com contains a user named User1.

All the offices connect by using private links.

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

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

Name	Role	Contains virtual machine
Server1	VMWare vCenter server	VM1
Server2	Hyper-V-host	VM2

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

The Azure subscription contains the resources in the following table.

Name	Type
VNet1	Virtual network
VM3	Virtual machine
VM4	Virtual machine

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

### Planned Changes

Contoso plans to implement the following changes:

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

### Technical requirements

Contoso must meet the following technical requirements:

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

### QUESTION 1

You discover that VM3 does **NOT** meet the technical requirements.

You need to verify whether the issue relates to the NSGs.

What should you use?

- A. Diagram in VNet1
- B. the security recommendations in Azure Advisor
- C. Diagnostic settings in Azure Monitor
- D. Diagnose and solve problems in Traffic Manager profiles
- E. IP flow verify in Azure Network Watcher

**Correct Answer:** E

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Scenario: Contoso must meet technical requirements including:

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

IP flow verify checks if a packet is allowed or denied to or from a virtual machine. The information consists of direction, protocol, local IP, remote IP, local port, and remote port. If the packet is denied by a security group, the name of the rule that denied the packet is returned. While any source or destination IP can be chosen, IP flow verify helps administrators quickly diagnose connectivity issues from or to the internet and from or to the on-premises environment.

References:

<https://docs.microsoft.com/en-us/azure/network-watcher/network-watcher-ip-flow-verify-overview>

## Question Set 1

### 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.**

Your company registers a domain name of contoso.com.

You create an Azure DNS zone named contoso.com, and then you add an A record to the zone for a host named www that has an IP address of 131.107.1.10.

You discover that Internet hosts are unable to resolve www.contoso.com to the 131.107.1.10 IP address.

You need to resolve the name resolution issue.

Solution: You modify the name servers at the domain registrar.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Modify the Name Server (NS) record.

References:

<https://docs.microsoft.com/en-us/azure/dns/dns-delegate-domain-azure-dns>

### 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.**

Your company registers a domain name of contoso.com.

You create an Azure DNS zone named contoso.com, and then you add an A record to the zone for a host named www that has an IP address of 131.107.1.10.

You discover that Internet hosts are unable to resolve www.contoso.com to the 131.107.1.10 IP address.

You need to resolve the name resolution issue.

Solution: You modify the SOA record in the contoso.com zone.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Modify the NS record, not the SOA record.

Note: The SOA record stores information about the name of the server that supplied the data for the zone; the administrator of the zone; the current version of the data file; the number of seconds a secondary name server should wait before checking for updates; the number of seconds a secondary name server should wait before retrying a failed zone transfer; the maximum number of seconds that a secondary name server can use data before it must either be refreshed or expire; and a default number of seconds for the time-to-live file on resource records.

References:

<https://searchnetworking.techtarget.com/definition/start-of-authority-record>

### **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.**

Your company registers a domain name of contoso.com.

You create an Azure DNS zone named contoso.com, and then you add an A record to the zone for a host named www that has an IP address of 131.107.1.10.

You discover that Internet hosts are unable to resolve www.contoso.com to the 131.107.1.10 IP address.

You need to resolve the name resolution issue.

Solution: You add an NS record to the contoso.com Azure DNS zone.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** A

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Before you can delegate your DNS zone to Azure DNS, you need to know the name servers for your zone. The NS record set contains the names of the Azure DNS name servers assigned to the zone.

References:

<https://docs.microsoft.com/en-us/azure/dns/dns-delegate-domain-azure-dns>

### **QUESTION 4**

You are troubleshooting a performance issue for an Azure Application Gateway.

You need to compare the total requests to the failed requests during the past six hours.

What should you use?

- A. NSG flow logs in Azure Network Watcher
- B. Metrics in Application Gateway
- C. Connection monitor in Azure Network Watcher
- D. Diagnostics logs in Application Gateway

**Correct Answer:** B

**Section:** [none]

**Explanation**

**Explanation/Reference:**

References:

<https://docs.microsoft.com/en-us/azure/application-gateway/application-gateway-diagnostics#metrics>

## QUESTION 5

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

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

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

You need to connect VNet1 to VNet2.

What should you do first?

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

**Correct Answer:** C

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

The virtual networks can be in the same or different regions, and from the same or different subscriptions. When connecting VNets from different subscriptions, the subscriptions do not need to be associated with the same Active Directory tenant.

Configuring a VNet-to-VNet connection is a good way to easily connect VNets. Connecting a virtual network to another virtual network using the VNet-to-VNet connection type (VNet2VNet) is similar to creating a Site-to-Site IPsec connection to an on-premises location. Both connectivity types use a VPN gateway to provide a secure tunnel using IPsec/IKE, and both function the same way when communicating.

The local network gateway for each VNet treats the other VNet as a local site. This lets you specify additional address space for the local network gateway in order to route traffic.

References:

<https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-howto-vnet-vnet-resource-manager-portal>

## QUESTION 6

DRAG DROP

You have an Azure subscription that contains two virtual networks named VNet1 and VNet2. Virtual machines connect to the virtual networks.

The virtual networks have the address spaces and the subnets configured as shown in the following table.

Virtual network	Address space	Subnet	Peering
VNet1	10.1.0.0/16	10.1.0.0/24 10.1.1.0/26	VNet2
VNet2	10.2.0.0/16	10.2.0.0/24	VNet1

You need to add the address space of 10.33.0.0/16 to VNet1. The solution must ensure that the hosts on VNet1 and VNet2 can communicate.

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

On the peering connection in VNet2, allow gateway transit

On the peering connection in VNet1, allow gateway transit

Remove VNet1.

Create a new virtual network named VNet1.

Remove peering between VNet1 and VNet2.

Add the 10.33.0.0/16 address space to VNet1.

Recreate peering between VNet1 and VNet2.



**Correct Answer:**

Actions	Answer Area
On the peering connection in VNet2, allow gateway transit	
On the peering connection in VNet1, allow gateway transit	
Remove VNet1.	(Left)  (Right) 
Create a new virtual network named VNet1.	1 Remove peering between VNet1 and VNet2. 2 Add the 10.33.0.0/16 address space to VNet1. 3 Recreate peering between VNet1 and VNet2.
Remove peering between VNet1 and VNet2.	
Add the 10.33.0.0/16 address space to VNet1.	
Recreate peering between VNet1 and VNet2.	

#### Section: [none]

#### Explanation

#### Explanation/Reference:

Explanation:

Step 1: Remove peering between Vnet1 and VNet2.

You can't add address ranges to, or delete address ranges from a virtual network's address space once a virtual network is peered with another virtual network. To add or remove address ranges, delete the peering, add or remove the address ranges, then re-create the peering.

Step 2: Add the 10.44.0.0/16 address space to VNet1.

Step 3: Recreate peering between VNet1 and VNet2

#### References:

<https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-manage-peering>

#### QUESTION 7

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

Name	Type	Azure region	Resource group
VNet1	Virtual network	West US	RG2
VNet2	Virtual network	West US	RG1
VNet3	Virtual network	East US	RG1
NSG1	Network security group (NSG)	East US	RG2

To which subnets can you apply NSG1?

- A. the subnets on VNet2 only
- B. the subnets on VNet2 and VNet3 only

- C. the subnets on VNet1, VNet2, and VNet3
- D. the subnets on VNet1 only
- E. the subnets on VNet3 only

**Correct Answer:** E

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

All Azure resources are created in an Azure region and subscription. A resource can only be created in a virtual network that exists in the same region and subscription as the resource.

References:

<https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-vnet-plan-design-arm>

## QUESTION 8

HOTSPOT

You have an Azure virtual machine named VM1 that connects to a virtual network named VNet1. VM1 has the following configurations:

- Subnet 10.0.0.0/24
- Availability set: AVSet
- Network security group (NSG): None
- Private IP address: 10.0.0.4 (dynamic)
- Public IP address: 40.90.219.6 (dynamic)

You deploy a standard, Internet-facing load balancer named slb1.

You need to configure slb1 to allow connectivity to VM1.

Which changes should you apply to VM1 as you configure slb1? To answer, select the appropriate options in the answer area.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

**Answer Area**

Before you create a backend pool on slb1, you must:

Create and assign an NSG to VM1
Remove the public IP address from VM1
Change the private IP address of VM1 to static

Before you can connect to VM1 from slb1, you must:

Create and configure an NSG
Remove the public IP address from VM1
Change the private IP address of VM1 to static

**Correct Answer:**

## Answer Area

Before you create a backend pool on slb1, you must:

Create and assign an NSG to VM1
Remove the public IP address from VM1
Change the private IP address of VM1 to static

Before you can connect to VM1 from slb1, you must:

Create and configure an NSG
Remove the public IP address from VM1
Change the private IP address of VM1 to static

Section: [none]

Explanation

Explanation/Reference:

### QUESTION 9

You have five Azure virtual machines that run Windows Server 2016. The virtual machines are configured as web servers.

You have an Azure load balancer named LB1 that provides load balancing services for the virtual machines.

You need to ensure that visitors are serviced by the same web server for each request.

What should you configure?

- A. Protocol to **UDP**
- B. Session persistence to **None**
- C. Session persistence to **Client IP**
- D. Idle Time-out (minutes) to **20**

Correct Answer: C

Section: [none]

Explanation

Explanation/Reference:

Explanation:

You can set the sticky session in load balancer rules with setting the session persistence as the client IP.

References:

<https://cloudopszone.com/configure-azure-load-balancer-for-sticky-sessions/>

### QUESTION 10

You have the Azure virtual networks shown in the following table.

Name	Address space	Subnet	Resource group Azure region
VNet1	10.11.0.0/16	10.11.0.0/17	West US
VNet2	10.11.0.0/17	10.11.0.0/25	West US
VNet3	10.10.0.0/22	10.10.1.0/24	East US
VNet4	192.168.16.0/22	192.168.16.0/24	North Europe

To which virtual networks can you establish a peering connection from VNet1?

- A. VNet2 and VNet3 only
- B. VNet2 only
- C. VNet3 and VNet4 only
- D. VNet2, VNet3, and VNet4

**Correct Answer:** D

**Section:** [none]

**Explanation**

**Explanation/Reference:**

References:

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

### QUESTION 11

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

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

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

**NOTE:** Each correct selection is worth one point.

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

**Correct Answer:** BC

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

B: A VPN gateway is used when creating a VPN connection to your on-premises network.

Route-based VPN devices use any-to-any (wildcard) traffic selectors, and let routing/forwarding tables direct traffic to different IPsec tunnels. It is typically built on router platforms where each IPsec tunnel is modeled as a network interface or VTI (virtual tunnel interface).

C: Policy-based VPN devices use the combinations of prefixes from both networks to define how traffic is encrypted/decrypted through IPsec tunnels. It is typically built on firewall devices that perform packet filtering. IPsec tunnel encryption and decryption are added to the packet filtering and processing engine.

Incorrect Answers:

D: Point-to-Site connections do not require a VPN device or a public-facing IP address.

References:

<https://docs.microsoft.com/en-us/azure/vpn-gateway/create-routebased-vpn-gateway-portal>

<https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-connect-multiple-policybased-rm-ps>

## QUESTION 12

HOTSPOT

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

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

Subscription1 contains the virtual machines in the following table.

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

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

You add the peerings in the following table.

Virtual network	Peering network
VNet1	VNet3
VNet2	VNet3
VNet3	VNet1

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

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

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

**Correct Answer:**

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

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: Yes

Vnet1 and Vnet3 are peers.

Box 2: Yes

Vnet2 and Vnet3 are peers.

Box 3: No  
Peering connections are non-transitive.

References:

<https://docs.microsoft.com/en-us/azure/architecture/reference-architectures/hybrid-networking/hub-spoke>

**QUESTION 13**

You have an Azure subscription named Subscription1 that contains the resource groups shown in the following table.

Name	Region
RG1	East Asia
RG2	East US

In RG1, you create a virtual machine named VM1 in the East Asia location.

You plan to create a virtual network named VNET1.

You need to create VNET1, and then connect VM1 to VNET1.

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

**NOTE:** Each correct selection is worth one point.

- A. Create VNET1 in RG2, and then set East Asia as the location.
- B. Create VNET1 in a new resource group in the West US location, and then set West US as the location.
- C. Create VNET1 in RG1, and then set East US as the location.
- D. Create VNET1 in RG2, and then set East US as the location.
- E. Create VNET1 in RG1, and then set East Asia as the location.

**Correct Answer:** AE

**Section:** [none]

**Explanation**

**Explanation/Reference:**

**QUESTION 14**

You have an Azure subscription that contains a virtual network named VNet1. VNet1 contains four subnets named Gateway, Perimeter, NVA, and Production.

The NVA subnet contains two network virtual appliances (NVAs) that will perform network traffic inspection between the Perimeter subnet and the Production subnet.

You need to implement an Azure load balancer for the NVAs. The solution must meet the following requirements:

- The NVAs must run in an active-active configuration that uses automatic failover.
- The NVAs must load balance traffic to two services on the Production subnet. The services have different IP addresses.

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

**NOTE:** Each correct selection is worth one point.

- A. Add two load balancing rules that have HA Ports enabled and Floating IP disabled.

- B. Add a frontend IP configuration, two backend pools, and a health probe.
- C. Add two load balancing rules that have HA Ports and Floating IP enabled.
- D. Deploy a standard load balancer.
- E. Deploy a basic load balancer.
- F. Add a frontend IP configuration a backend pool, and a health probe.

**Correct Answer:** BCD

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

A standard load balancer is required for the HA ports.

Two backend pools are needed as there are two services with different IP addresses.

Floating IP rule is used where backend ports are reused.

Incorrect Answers:

F: HA Ports are not available for the basic load balancer.

References:

<https://docs.microsoft.com/en-us/azure/load-balancer/load-balancer-standard-overview>

<https://docs.microsoft.com/en-us/azure/load-balancer/load-balancer-multivip-overview>

## QUESTION 15

### SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g. copy and paste, ability to navigate to external websites) will not be possible by design.

Scoring is based on the outcome of performing the tasks stated in the lab. In other words, it doesn't matter how you accomplish the task, if you successfully perform it, you will earn credit for that task.

Labs are not timed separately, and this exam may have more than one lab that you must complete. You can use as much time as you would like to complete each lab. But, you should manage your time appropriately to ensure that you are able to complete the lab(s) and all other sections of the exam in the time provided.

Please note that once you submit your work by clicking the Next button within a lab, you will NOT be able to return to the lab.

You may now click next to proceed to the lab.

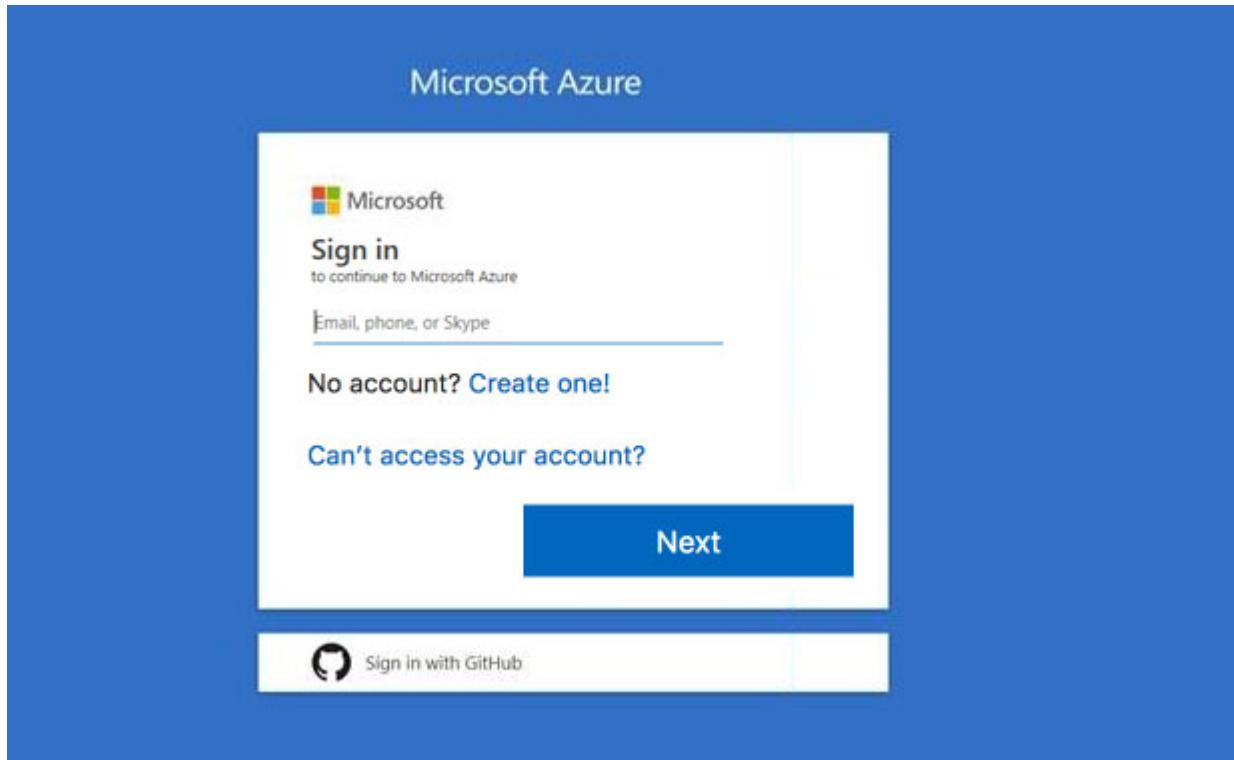
Use the following login credentials as needed:

**Azure Username:** XXXXXXXX

**Azure Password:** XXXXXXXX

The following information is for technical support purposes only:

**Lab Instance:** 9172796



## Task 1

Your on-premises network uses an IP address range of 131.107.2.0 to 131.107.2.255.

You need to ensure that only device from the on-premises network can connect to the rg1lod9172796n1 storage account.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Step 1: Navigate to the rg1lod9172796n1 storage account.

Step 2: Click on the settings menu called Firewalls and virtual networks.

Step 3: Ensure that you have elected to allow access from 'Selected networks'.

Step 4: To grant access to an internet IP range, enter the address range of 131.107.2.0 to 131.107.2.255 (in CIDR format) under Firewall, Address Ranges.

References:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-network-security>

## QUESTION 16 SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g, copy and paste, ability to navigate to external websites) will not be possible by design.

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You may now click next to proceed to the lab.

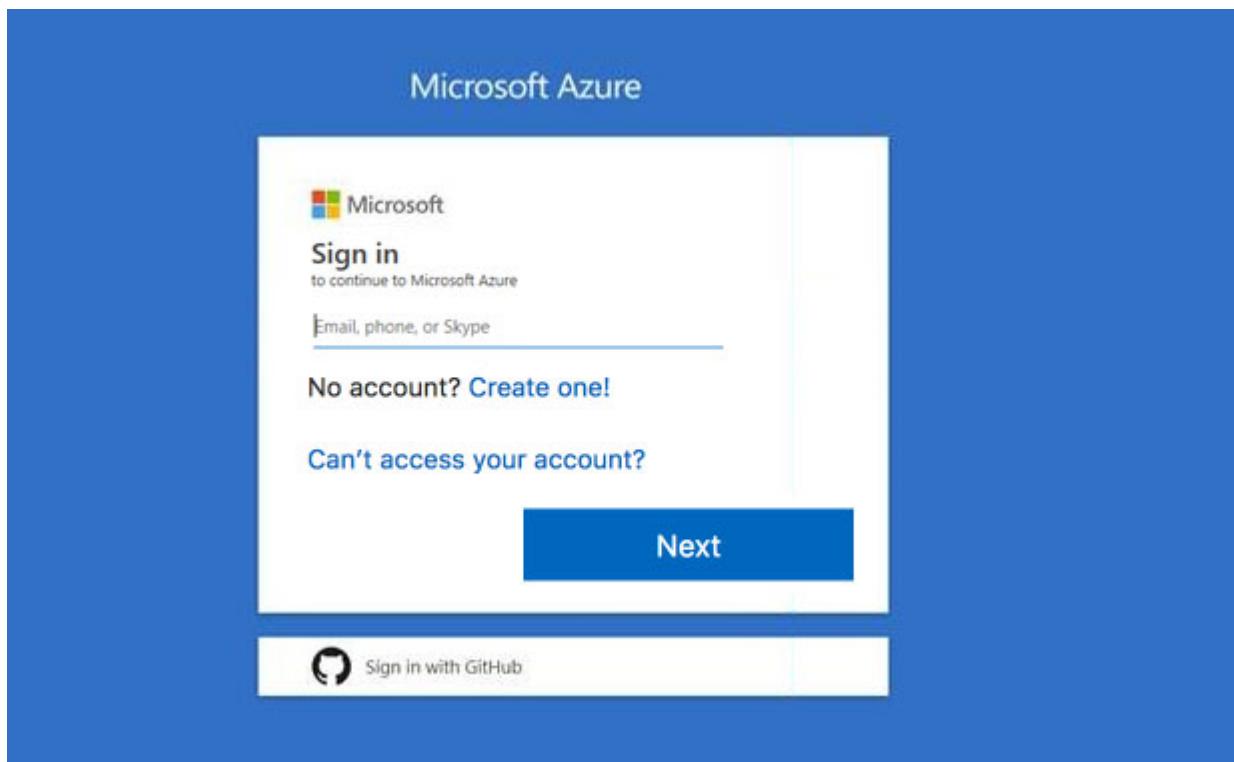
Use the following login credentials as needed:

**Azure Username:** XXXXXXX

**Azure Password:** XXXXXXX

The following information is for technical support purposes only:

**Lab Instance:** 9172796



#### Task 4

Another administrator attempts to establish connectivity between two virtual networks named VNET1 and VNET2.

The administrator reports that connections across the virtual networks fail.

You need to ensure that network connections can be established successfully between VNET1 and VNET2 as quickly as possible.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

You can connect one VNet to another VNet using either a Virtual network peering, or an Azure VPN Gateway.  
To create a virtual network gateway

Step 1: In the portal, on the left side, click +Create a resource and type 'virtual network gateway' in search. Locate Virtual network gateway in the search return and click the entry. On the Virtual network gateway page, click Create at the bottom of the page to open the Create virtual network gateway page.

Step 2: On the Create virtual network gateway page, fill in the values for your virtual network gateway.

**Create virtual network gateway** □ X

---

**\* Name**

**Gateway type** i  
 VPN  ExpressRoute

**VPN type** i  
 Route-based  Policy-based

**\* SKU** i  
 ▼

**Enable active-active mode** i

---

**\* Virtual network** i >  
*Choose a virtual network*

---

**\* Public IP address** i  
 Create new  Use existing

^ Configure public IP address

SKU

\* Assignment  
 Dynamic  Static

---

Configure BGP ASN ?

\* Subscription  
Windows Azure Internal Consumption

Resource group ?  
-

\* Location ?

---

**Create** [Automation options](#)

Name: Name your gateway. This is not the same as naming a gateway subnet. It's the name of the gateway object you are creating.

Gateway type: Select VPN. VPN gateways use the virtual network gateway type VPN.

Virtual network: Choose the virtual network to which you want to add this gateway. Click Virtual network to open the 'Choose a virtual network' page. Select the VNet. If you don't see your VNet, make sure the Location field is pointing to the region in which your virtual network is located.

Gateway subnet address range: You will only see this setting if you did not previously create a gateway subnet for your virtual network. If you previously created a valid gateway subnet, this setting will not appear.

Step 4: Select Create New to create a Gateway subnet.

**Add subnet**

RMVNet

\* Name  
GatewaySubnet

\* Address range (CIDR block) ⓘ  
192.168.0.0/26 ✓  
192.168.0.0 - 192.168.0.63 (59 + 5 Azure reserved addresses)

Route table >  
None

---

Service endpoints

Services ⓘ  
0 selected

Subnet delegation

Delegate subnet to a service ⓘ  
None

Step 5: Click Create to begin creating the VPN gateway. The settings are validated and you'll see the "Deploying Virtual network gateway" tile on the dashboard. Creating a gateway can take up to 45 minutes. You may need to refresh your portal page to see the completed status.

References:

<https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-howto-vnet-vnet-resource-manager-portal?>

**QUESTION 17**  
SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g, copy and paste, ability to navigate to external websites) will not be possible by design.

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use as much time as you would like to complete each lab. But, you should manage your time appropriately to ensure that you are able to complete the lab(s) and all other sections of the exam in the time provided.

Please note that once you submit your work by clicking the Next button within a lab, you will NOT be able to return to the lab.

You may now click next to proceed to the lab.

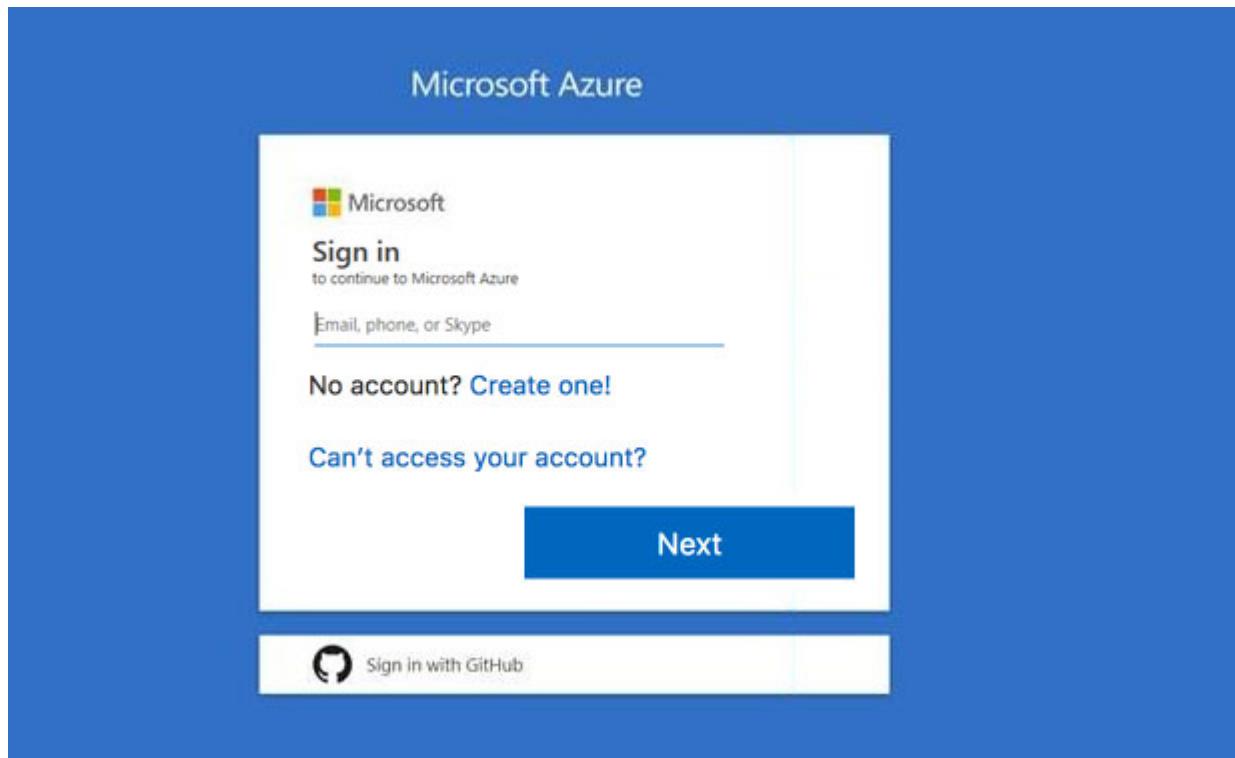
Use the following login credentials as needed:

**Azure Username:** XXXXXXX

**Azure Password:** XXXXXXX

The following information is for technical support purposes only:

**Lab Instance:** 9172796



## Task 5

You plan to configure VM1 to be accessible from the Internet.

You need to add a public IP address to the network interface used by VM1.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

You can add private and public IP addresses to an Azure network interface by completing the steps that follow.

Step 1: In Azure portal, click More services > type virtual machines in the filter box, and then click Virtual machines.

Step 2: In the Virtual machines pane, click the VM you want to add IP addresses to. Click Network interfaces in the virtual machine pane that appears, and then select the network interface you want to add the IP addresses to. In the example shown in the following picture, the NIC named myNIC from the VM named myVM is selected:

The screenshot shows the Azure portal interface. On the left, the 'Virtual machines' blade is open, displaying a list of subscriptions. A specific virtual machine named 'myVM' is selected and highlighted with a red box. On the right, a detailed view for 'myVM' is shown under the 'Network interfaces' tab. This view includes a search bar and a list of network interfaces. One interface, 'myNIC', is selected and highlighted with a red box. A table below lists the network interface details: NAME (myNIC), PUBLIC IP ADDRESS (52.161.29.217), and PRIVATE IP ADDRESS (10.0.0.4).

NAME	PUBLIC IP ADDRESS	PRIVATE IP ADDRESS
myNIC	52.161.29.217	10.0.0.4

Step 3: In the pane that appears for the NIC you selected, click IP configurations.

Step 4: Click Create public IP address.

Create public IP address

\* Name  
myPublicIp3

\* IP address assignment  
Dynamic Static

\* Idle timeout (minutes) 4

DNS name label .westcentralus.cloudapp.azure.com

\* Subscription [Subscription name]

\* Resource group Create new Use existing  
myResourceGroup

\* Location West Central US

Pin to dashboard

**Create** Automation options

The screenshot shows the 'Create public IP address' dialog box. The 'Name' field is filled with 'myPublicIp3'. The 'IP address assignment' section has 'Static' selected. The 'Idle timeout (minutes)' is set to 4. The 'DNS name label' is '.westcentralus.cloudapp.azure.com'. The 'Subscription' dropdown is set to '[Subscription name]'. The 'Resource group' dropdown shows 'myResourceGroup'. The 'Location' dropdown is set to 'West Central US'. At the bottom, there is a 'Pin to dashboard' checkbox and two buttons: 'Create' (highlighted with a red box) and 'Automation options'.

Step 5: In the Create public IP address pane that appears, enter a Name, select an IP address assignment type, a Subscription, a Resource group, and a Location, then click Create, as shown in the following picture:

References:

<https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-multiple-ip-addresses-portal>

#### QUESTION 18 SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g, copy and paste, ability to navigate to external websites) will not be possible by design.

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Please note that once you submit your work by clicking the Next button within a lab, you will NOT be able to return to the lab.

You may now click next to proceed to the lab.

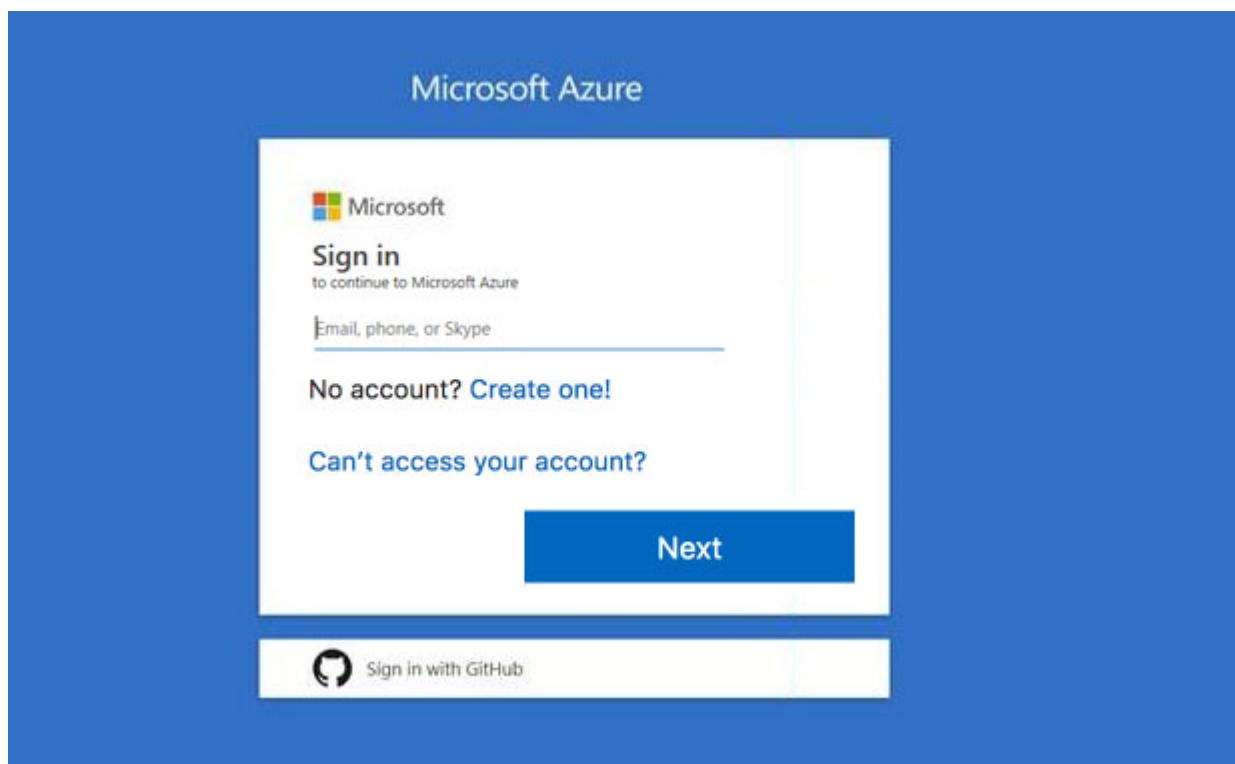
Use the following login credentials as needed:

**Azure Username:** XXXXXXX

**Azure Password:** XXXXXXX

The following information is for technical support purposes only:

**Lab Instance:** 9172796



## Task 6

You need to allow RDP connections over TCP port 3389 to VM1 from the Internet. The solution must prevent connections from the Internet over all other TCP ports.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

## Explanation

### Explanation/Reference:

Explanation:

Step 1: Create a new network security group

Step 2: Select your new network security group.

The screenshot shows the Azure portal interface for managing a Network Security Group (NSG). The top navigation bar displays the name of the NSG: "myNetworkSecurityGroup - Inbound security rules". Below the navigation bar, there are two main sections: a left sidebar and a right main content area.

**Left Sidebar:**

- A search bar labeled "Search (Ctrl+ /)".
- Links to other NSG management features:
  - Overview
  - Activity log
  - Access control (IAM)
  - Tags
  - Diagnose and solve problems
- A "SETTINGS" section with three links:
  - Inbound security rules (highlighted with a red box)
  - Outbound security rules
  - Network interfaces

**Right Main Content Area:**

- A search bar labeled "Search inbound security rules".
- A table header with columns: PRIORITY and NAME.
- A message indicating "No results."

Step 3: Select Inbound security rules. Under **Add inbound security rule**, enter the following

Destination: Select Network security group, and then select the security group you created previously.

Destination port ranges: 3389

Protocol: Select TCP

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINATION
65000	AllowVnetInBound	Any	Any	VirtualNet...	Virtual...
65001	AllowAzureLoadBalanc...	Any	Any	AzureLoad...	Any
65500	DenyAllInBound	Any	Any	Any	Any

References:

<https://docs.microsoft.com/en-us/azure/virtual-network/tutorial-filter-network-traffic>

**QUESTION 19**

**SIMULATION**

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g, copy and paste, ability to navigate to external websites) will not be possible by design.

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Please note that once you submit your work by clicking the Next button within a lab, you will NOT be able to return to the lab.

You may now click next to proceed to the lab.

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The screenshot shows the Microsoft Azure portal interface. On the left, there's a vertical navigation bar with icons for creating resources, Home, Dashboard, All services, Favorites (with items like All resources, Resource groups, App Services, Function App, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, Advisor, Security Center, Cost Management + B..., and Help + support), and a search bar at the top right.

The main content area has a header "Azure services" with a link to "See all (100+)" and a "Create a resource" button. Below this are several service icons: Virtual machines, App Services, Storage accounts, SQL databases, Azure Database for PostgreSQL servers, and Azure Cosmos. There are also three cards: "Microsoft Learn" (Learn Azure with free online training from Microsoft), "Azure Monitor" (Monitor your apps and infrastructure), and "Security Center" (Secure your apps and infrastructure).

Below these cards is a section titled "Recent resources" with links to "See all your recent resources" and "See all your resources". It features a large clock icon and the message "No recent resources to display". It also includes the text "As you visit resources, they'll be listed in Recently used resources for quick and easy access." and a "Create a resource" button.

## Task 5

You plan to create 100 Azure virtual machines on each of the following three virtual networks:

- VNET1005a
- VNET1005b
- VNET1005c

All the network traffic between the three virtual networks will be routed through VNET1005a.

You need to create the virtual networks, and then to ensure that all the Azure virtual machines can connect to other virtual machines by using their private IP address. The solution must **NOT** require any virtual network gateways and must minimize the number of peerings.

What should you do from the Azure portal before you configure IP routing?

**Correct Answer:** See solution below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Step 1: Click Create a resource in the portal.

Step 2: Enter Virtual network in the Search the Marketplace box at the top of the New pane that appears. Click Virtual network when it appears in the search results.

Step 3: Select Classic in the Select a deployment model box in the Virtual Network pane that appears, then click Create.

Step 4: Enter the following values on the Create virtual network (classic) pane and then click Create:  
Name: VNET1005a

Address space: 10.0.0.0/16

Subnet name: subnet0

Resource group: Create new

Subnet address range: 10.0.0.0/24

Subscription and location: Select your subscription and location.

Step 5: Repeat steps 3-5 for VNET1005b (10.1.0.0/16, 10.1.0.0/24), and for VNET1005c 10.2.0.0/16, 10.2.0.0/24).

References:

<https://docs.microsoft.com/en-us/azure/virtual-network/create-virtual-network-classic>

## QUESTION 20

### SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g, copy and paste, ability to navigate to external websites) will not be possible by design.

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You may now click next to proceed to the lab.

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Microsoft Azure

Search resources, services, and more

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All services

**FAVORITES**

- All resources
- Resource groups
- App Services
- Function App
- SQL databases
- Azure Cosmos DB
- Virtual machines
- Load balancers
- Storage accounts
- Virtual networks
- Azure Active Directory
- Monitor
- Advisor
- Security Center
- Cost Management + B...
- Help + support

Azure services See all (100+) > Create a resource >

Virtual machines App Services Storage accounts SQL databases Azure Database PostgreSQL service

Microsoft Learn Learn Azure with free online training from Microsoft

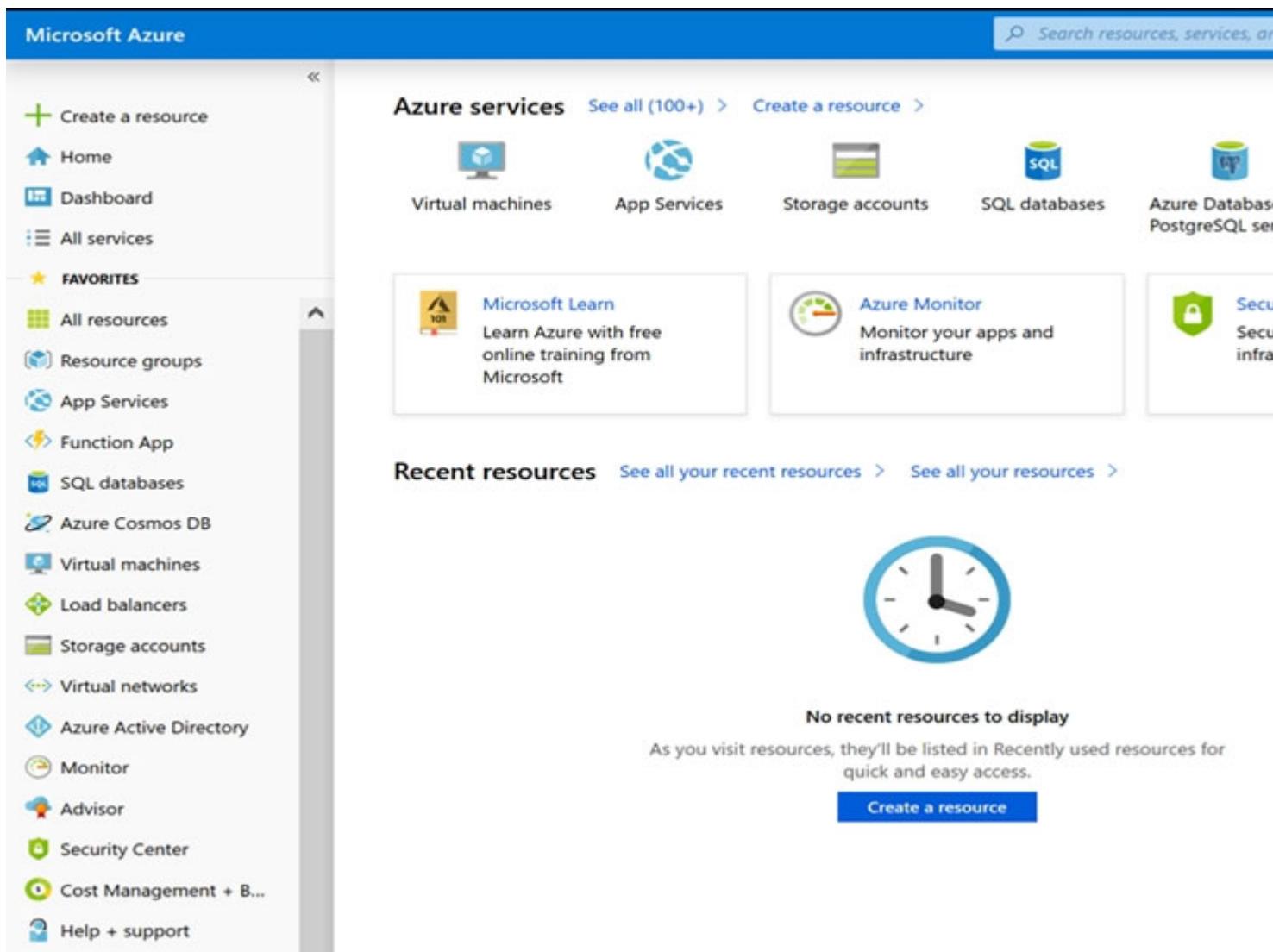
Azure Monitor Monitor your apps and infrastructure

Recent resources See all your recent resources > See all your resources >

No recent resources to display

As you visit resources, they'll be listed in Recently used resources for quick and easy access.

Create a resource



## Task 6

You plan to create several virtual machines in different availability zones, and then to configure the virtual machines for load balanced connections from the Internet.

You need to create an IP address resource named ip1006 to support the planned load balancing solution. The solution must minimize costs.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

We should create a public IP address.

Step 1: At the top, left corner of the portal, select + Create a resource.

Step 2: Enter public ip address in the Search the Marketplace box. When Public IP address appears in the

search results, select it.

Step 3: Under Public IP address, select Create.

Step 4: Enter, or select values for the following settings, under Create public IP address, then select Create:

Name: ip1006

SKU: Basic SKU

IP Version: IPv6

IP address assignment: Dynamic

Subscription: Select appropriate

Resource group: Select appropriate

References:

<https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-public-ip-address>

## QUESTION 21

### SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g. copy and paste, ability to navigate to external websites) will not be possible by design.

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You may now click next to proceed to the lab.

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**FAVORITES**

- All resources
- Resource groups
- App Services
- Function App
- SQL databases
- Azure Cosmos DB
- Virtual machines
- Load balancers
- Storage accounts
- Virtual networks
- Azure Active Directory
- Monitor
- Advisor
- Security Center
- Cost Management + B...
- Help + support

Azure services See all (100+) > Create a resource >

Virtual machines App Services Storage accounts SQL databases Azure Database for PostgreSQL servers Azure Cosmos

 Microsoft Learn  
Learn Azure with free online training from Microsoft

 Azure Monitor  
Monitor your apps and infrastructure

 Security Center  
Secure your apps and infrastructure

Recent resources See all your recent resources > See all your resources >

No recent resources to display

As you visit resources, they'll be listed in Recently used resources for quick and easy access.

Create a resource

## Task 8

You need to create a virtual network named VNET1008 that contains three subnets named subnet0, subnet1, and subnet2. The solution must meet the following requirements:

- Connections from any of the subnets to the Internet must be blocked.
- Connections from the Internet to any of the subnets must be blocked.
- The number of network security groups (NSGs) and NSG rules must be minimized.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Step 1: Click Create a resource in the portal.

Step 2: Enter Virtual network in the Search the Marketplace box at the top of the New pane that appears. Click Virtual network when it appears in the search results.

Step 3: Select Classic in the Select a deployment model box in the Virtual Network pane that appears, then click Create.

Step 4: Enter the following values on the Create virtual network (classic) pane and then click Create:

Name: VNET1008

Address space: 10.0.0.0/16

Subnet name: subnet0

Resource group: Create new

Subnet address range: 10.0.0.0/24

Subscription and location: Select your subscription and location.

Step 5: In the portal, you can create only one subnet when you create a virtual network. Click Subnets (in the SETTINGS section) on the Create virtual network (classic) pane that appears.

Click +Add on the VNET1008 - Subnets pane that appears.

Step 6: Enter subnet1 for Name on the Add subnet pane. Enter 10.0.1.0/24 for Address range. Click OK.

Step 7: Create the third subnet: Click +Add on the VNET1008 - Subnets pane that appears. Enter subnet2 for Name on the Add subnet pane. Enter 10.0.2.0/24 for Address range. Click OK.

References:

<https://docs.microsoft.com/en-us/azure/virtual-network/create-virtual-network-classic>

## QUESTION 22

**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 manage a virtual network named VNet1 that is hosted in the West US Azure region.

VNet1 hosts two virtual machines named VM1 and VM2 that run Windows Server.

You need to inspect all the network traffic from VM1 to VM2 for a period of three hours.

Solution: From Azure Network Watcher, you create a connection monitor.

Does this meet the goal?

A. Yes

B. No

**Correct Answer: A**

**Section: [none]**

**Explanation**

**Explanation/Reference:**

References:

<https://azure.microsoft.com/en-us/updates/general-availability-azure-network-watcher-connection-monitor-in-all-public-regions/>

## QUESTION 23

**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 manage a virtual network named VNet1 that is hosted in the West US Azure region.

VNet1 hosts two virtual machines named VM1 and VM2 that run Windows Server.

You need to inspect all the network traffic from VM1 to VM2 for a period of three hours.

Solution: From Azure Network Watcher, you create a packet capture.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Use the Connection Monitor feature of Azure Network Watcher.

References:

<https://azure.microsoft.com/en-us/updates/general-availability-azure-network-watcher-connection-monitor-in-all-public-regions/>

## **QUESTION 24**

HOTSPOT

Subscription1 contains the virtual machines in the following table.

Name	IP address	Availability set
VM1	Subnet11	AS1
VM2	Subnet11	AS1
VM3	Subnet11	<i>Not applicable</i>
VM4	Subnet11	<i>Not applicable</i>
VM5	Subnet12	<i>Not applicable</i>
VM6	Subnet12	<i>Not applicable</i>

In Subscription1, you create a load balancer that has the following configurations:

- Name: LB1
- SKU: Basic
- Type: Internal
- Subnet: Subnet12
- Virtual network: VNET1

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

**NOTE:** Each correct selection is worth one point.

Hot Area:

## Answer Area

Statements	Yes	No
LB1 can balance the traffic between VM1 and VM2.	<input type="radio"/>	<input type="radio"/>
LB1 can balance the traffic between VM3 and VM4.	<input type="radio"/>	<input type="radio"/>
LB1 can balance the traffic between VM5 and VM6.	<input type="radio"/>	<input type="radio"/>

Correct Answer:

## Answer Area

Statements	Yes	No
LB1 can balance the traffic between VM1 and VM2.	<input checked="" type="radio"/>	<input type="radio"/>
LB1 can balance the traffic between VM3 and VM4.	<input type="radio"/>	<input checked="" type="radio"/>
LB1 can balance the traffic between VM5 and VM6.	<input type="radio"/>	<input checked="" type="radio"/>

Section: [none]

Explanation

Explanation/Reference:

References:

<https://docs.microsoft.com/en-us/azure/load-balancer/load-balancer-standard-overview>

### QUESTION 25

You have an Azure subscription named Subscription1 that contains two Azure virtual networks named VNet1 and VNet2. VNet1 contains a VPN gateway named VPNGW1 that uses static routing. There is a site-to-site VPN connection between your on-premises network and VNet1.

On a computer named Client1 that runs Windows 10, you configure a point-to-site VPN connection to VNet1.

You configure virtual network peering between VNet1 and VNet2. You verify that you can connect to VNet2 from the on-premises network. Client1 is unable to connect to VNet2.

You need to ensure that you can connect Client1 to VNet2.

What should you do?

- A. Select **Allow gateway transit** on VNet2.
- B. Enable BGP on VPNGW1.
- C. Select **Allow gateway transit** on VNet1.

D. Download and re-install the VPN client configuration package on Client1.

**Correct Answer:** D

**Section:** [none]

**Explanation**

**Explanation/Reference:**

References:

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

## **QUESTION 26**

**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 manage a virtual network named VNet1 that is hosted in the West US Azure region.

VNet1 hosts two virtual machines named VM1 and VM2 that run Windows Server.

You need to inspect all the network traffic from VM1 to VM2 for a period of three hours.

Solution: From Performance Monitor, you create a Data Collector Set (DCS).

Does this meet the goal?

A. Yes

B. No

**Correct Answer:** B

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Use the Connection Monitor feature of Azure Network Watcher.

References:

<https://docs.microsoft.com/en-us/azure/network-watcher/network-watcher-monitoring-overview>

## **QUESTION 27**

HOTSPOT

You have a virtual network named VNet1 that has the configuration shown in the following exhibit.

```
PS C:\> Get-AzureRmVirtualNetwork -Name Vnet1 -ResourceGroupName Production
```

```
Name          : VNet1
ResourceGroupName : Production
Location       : westus
Id             : /subscriptions/14d26092-8e42-4ea7-b770-9dcef70fb1ea/resourceGroups/Production/providers/Microsoft.Network/virtualNetworks/VNet1
Etag           : W/"76f7edd6-d022-455b-aeae-376059318e5d"
ResourceGuid   : 562696cc-b2ba-4cc5-9619-0a735d6c34c7
ProvisioningState : Succeeded
Tags           :
AddressSpace    :
DhcpOptions    :
Subnets        :
VirtualNetworkPeerings : []
EnableDDoSProtection : false
EnableVmProtection  : false
```

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

Before a virtual machine on VNet1 can receive an IP address from 192.168.1.0/24, you must first

add a network interface
add a subnet
add an address space
delete a subnet
delete an address space

Before a virtual machine on VNet1 can receive an IP address from 10.2.1.0/24, you must first

add a network interface
add a subnet
add an address space
delete a subnet
delete an address space

**Correct Answer:**

## Answer Area

Before a virtual machine on VNet1 can receive an IP address from 192.168.1.0/24, you must first

add a network interface
add a subnet
add an address space
delete a subnet
delete an address space

Before a virtual machine on VNet1 can receive an IP address from 10.2.1.0/24, you must first

add a network interface
add a subnet
add an address space
delete a subnet
delete an address space

**Section: [none]**

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: add an address space

Your IaaS virtual machines (VMs) and PaaS role instances in a virtual network automatically receive a private IP address from a range that you specify, based on the address space of the subnet they are connected to. We need to add the 192.168.1.0/24 address space.

Box 2: add a network interface

The 10.2.1.0/24 network exists. We need to add a network interface.

References:

<https://docs.microsoft.com/en-us/office365/enterprise/designing-networking-for-microsoft-azure-iaas>

<https://docs.microsoft.com/en-us/azure/virtual-network/virtual-networks-static-ip-arm-portal>

**QUESTION 28**

HOTSPOT

You have an Azure subscription named Subscription1.

Subscription1 contains the virtual machines in the following table.

Name	IP address
VM1	10.0.1.4
VM2	10.0.2.4
VM3	10.0.3.4

Subscription1 contains a virtual network named VNet1 that has the subnets in the following table.

Name	Address space	Connected virtual machine
Subnet1	10.0.1.0/24	VM1
Subnet2	10.0.2.0/24	VM2
Subnet3	10.0.3.0/24	VM3

VM3 has multiple network adapters, including a network adapter named NIC3. IP forwarding is enabled on NIC3. Routing is enabled on VM3.

You create a route table named RT1 that contains the routes in the following table.

Address prefix	Next hop type	Next hop address
10.0.1.0/24	Virtual appliance	10.0.3.4
10.0.2.0/24	Virtual appliance	10.0.3.4

You apply RT1 to Subnet1 and Subnet2.

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
VM3 can establish a network connection to VM1.	<input type="radio"/>	<input type="radio"/>
If VM3 is turned off, VM2 can establish a network connection to VM1.	<input type="radio"/>	<input type="radio"/>
VM1 can establish a network connection to VM2	<input type="radio"/>	<input type="radio"/>

**Correct Answer:**

## Answer Area

Statements	Yes	No
VM3 can establish a network connection to VM1.	<input checked="" type="radio"/>	<input type="radio"/>
If VM3 is turned off, VM2 can establish a network connection to VM1.	<input type="radio"/>	<input checked="" type="radio"/>
VM1 can establish a network connection to VM2	<input checked="" type="radio"/>	<input type="radio"/>

Section: [none]

Explanation

Explanation/Reference:

Explanation:

IP forwarding enables the virtual machine a network interface is attached to:

- Receive network traffic not destined for one of the IP addresses assigned to any of the IP configurations assigned to the network interface.
- Send network traffic with a different source IP address than the one assigned to one of a network interface's IP configurations.

The setting must be enabled for every network interface that is attached to the virtual machine that receives traffic that the virtual machine needs to forward. A virtual machine can forward traffic whether it has multiple network interfaces or a single network interface attached to it.

Box 1: Yes

The routing table allows connections from VM3 to VM1 and VM2. And as IP forwarding is enabled on VM3, VM3 can connect to VM1.

Box 2: No

VM3, which has IP forwarding, must be turned on, in order for VM2 to connect to VM1.

Box 3: Yes

The routing table allows connections from VM1 and VM2 to VM3. IP forwarding on VM3 allows VM1 to connect to VM2 via VM3.

References:

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

<https://www.quora.com/What-is-IP-forwarding>

### QUESTION 29

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

Name	Type	Details
VNet1	Virtual network	<i>Not applicable</i>
Subnet1	Subnet	Hosted on VNet1
VM1	Virtual machine	On Subnet1
VM2	Virtual machine	On Subnet1

VM1 and VM2 are deployed from the same template and host line-of-business applications accessed by using Remote Desktop.

You configure the network security group (NSG) shown in the exhibit. (Click the **Exhibit** tab.)

→ Move    Delete    Refresh

Resource group ([change](#)) : RG1lod9053488      Custom security rules : 1 inbound, 0 outbound  
Location : East US      Associated with : 0 subnets, 0 virtual networks  
Subscription ([change](#)) : Microsoft AZ  
Subscription ID : ac344a74-f85a-4b2e-8057-642088faaf20  
Tags ([change](#)) : [Click here to add tags](#)

Inbound security rules

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DIRECTION
100	Port_80	80	TCP	Internet	Inbound
65000	AllowVnetInBound	Any	Any	VirtualNetwork	Inbound
65001	AllowAzureLoadBalancerInBound	Any	Any	AzureLoadBalancer	Inbound
65500	DenyAllInBound	Any	Any	Any	Inbound

Outbound security rules

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DIRECTION
100	⚠ DenyWebsites	80	TCP	Any	Internet
65000	AllowVnetOutBound	Any	Any	VirtualNetwork	Outbound
65001	AllowInternetOutBound	Any	Any	Any	Internet
65500	DenyAllOutBound	Any	Any	Any	Outbound

You need to prevent users of VM2 and VM2 from accessing websites on the Internet over TCP port 80.

What should you do?

- A. Change the DenyWebSites outbound security rule.
- B. Change the Port\_80 inbound security rule.
- C. Disassociate the NSG from a network interface.
- D. Associate the NSG to Subnet1.

**Correct Answer:** D

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

You can associate or dissociate a network security group from a network interface or subnet.

The NSG has the appropriate rule to block users from accessing the Internet. We just need to associate it with Subnet1.

References:

<https://docs.microsoft.com/en-us/azure/virtual-network/manage-network-security-group>

**QUESTION 30**

HOTSPOT

You are creating an Azure load balancer.

You need to add an IPv6 load balancing rule to the load balancer.

How should you complete the Azure PowerShell script? To answer, select the appropriate options in the answer area.

**NOTE:** Each correct selection is worth one point.

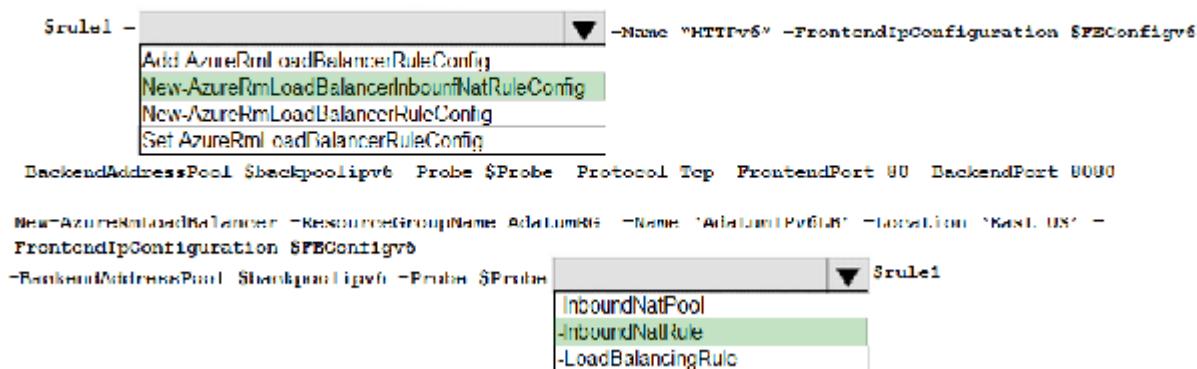
Hot Area:

Answer Area



Correct Answer:

Answer Area



Section: [none]

Explanation

**Explanation/Reference:**

References:

<https://docs.microsoft.com/en-us/azure/load-balancer/load-balancer-ipv6-internet-ps>

**QUESTION 31**

HOTSPOT

You have an Azure subscription named Subscription1 that contains a resource group named RG1.

In RG1, you create an internal load balancer named LB1 and a public load balancer named LB2.

You need to ensure that an administrator named Admin1 can manage LB1 and LB2. The solution must follow the principle of least privilege.

Which role should you assign to Admin1 for each task? To answer, select the appropriate options in the answer area.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

**Answer Area**

To add a backend pool to LB1:

Contributor on LB1
Network Contributor on LB1
Network Contributor on RG1
Owner on LB1

To add a health probe to LB2:

Contributor on LB2
Network Contributor on LB2
Network Contributor on RG1
Owner on LB2

**Correct Answer:**

## Answer Area

To add a backend pool to LB1:

Contributor on LB1
Network Contributor on LB1
Network Contributor on RG1
Owner on LB1

To add a health probe to LB2:

Contributor on LB2
Network Contributor on LB2
Network Contributor on RG1
Owner on LB2

**Section:** [none]

**Explanation**

**Explanation/Reference:**

### QUESTION 32

#### SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g, copy and paste, ability to navigate to external websites) will not be possible by design.

Scoring is based on the outcome of performing the tasks stated in the lab. In other words, it doesn't matter how you accomplish the task, if you successfully perform it, you will earn credit for that task.

Labs are not timed separately, and this exam may have more than one lab that you must complete. You can use as much time as you would like to complete each lab. But, you should manage your time appropriately to ensure that you are able to complete the lab(s) and all other sections of the exam in the time provided.

Please note that once you submit your work by clicking the Next button within a lab, you will NOT be able to return to the lab.

You may now click next to proceed to the lab.

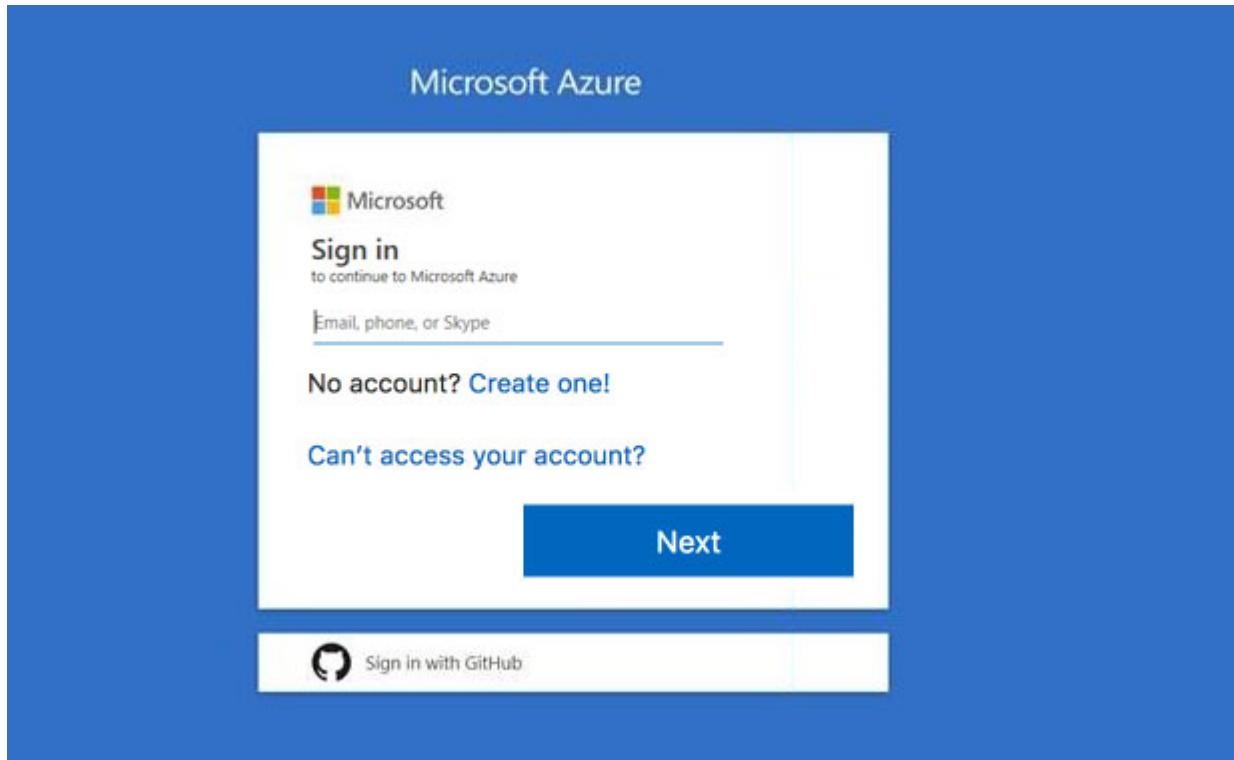
Use the following login credentials as needed:

**Azure Username:** XXXXXXXX

**Azure Password:** XXXXXXXX

The following information is for technical support purposes only:

**Lab Instance:** 9172796



## Task 7

You plan to allow connections between the VNET01-USSEA2 and VNET01-USWE2 virtual networks.

You need to ensure that virtual machines can communicate across both virtual networks by using their private IP address. The solution must **NOT** require any virtual network gateways.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Virtual network peering enables you to seamlessly connect two Azure virtual networks. Once peered, the virtual networks appear as one, for connectivity purposes.

Peer virtual networks

Step 1. In the Search box at the top of the Azure portal, begin typing VNET01-USSEA2. When VNET01-USSEA2 appears in the search results, select it.

Step 2. Select Peerings, under SETTINGS, and then select + Add, as shown in the following picture:

The screenshot shows the Azure portal interface for managing a virtual network. The left sidebar has a tree view with 'myVirtualNetwork1' selected. Under 'myVirtualNetwork1', 'Peerings' is highlighted with a red box. The main content area shows a table with one row: 'No results.'.

NAME	PEERING STATUS	PEER
No results.		

Step 3. Enter, or select, the following information, accept the defaults for the remaining settings, and then select OK.

Name: myVirtualNetwork1-myVirtualNetwork2 (for example)

Subscription: elect your subscription.

Virtual network: VNET01-USWE2 - To select the VNET01-USWE2 virtual network, select Virtual network, then select VNET01-USWE2. You can select a virtual network in the same region or in a different region.

Now we need to repeat steps 1-3 for the other network VNET01-USWE2:

Step 4. In the Search box at the top of the Azure portal, begin typing VNET01- USEA2. When VNET01- USEA2 appears in the search results, select it.

Step 5. Select Peerings, under SETTINGS, and then select + Add.

References:

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

## QUESTION 33

### SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g, copy and paste, ability to navigate to external websites) will not be possible by design.

Scoring is based on the outcome of performing the tasks stated in the lab. In other words, it doesn't matter how you accomplish the task, if you successfully perform it, you will earn credit for that task.

Labs are not timed separately, and this exam may have more than one lab that you must complete. You can use as much time as you would like to complete each lab. But, you should manage your time appropriately to ensure that you are able to complete the lab(s) and all other sections of the exam in the time provided.

Please note that once you submit your work by clicking the Next button within a lab, you will NOT be able to return to the lab.

You may now click next to proceed to the lab.

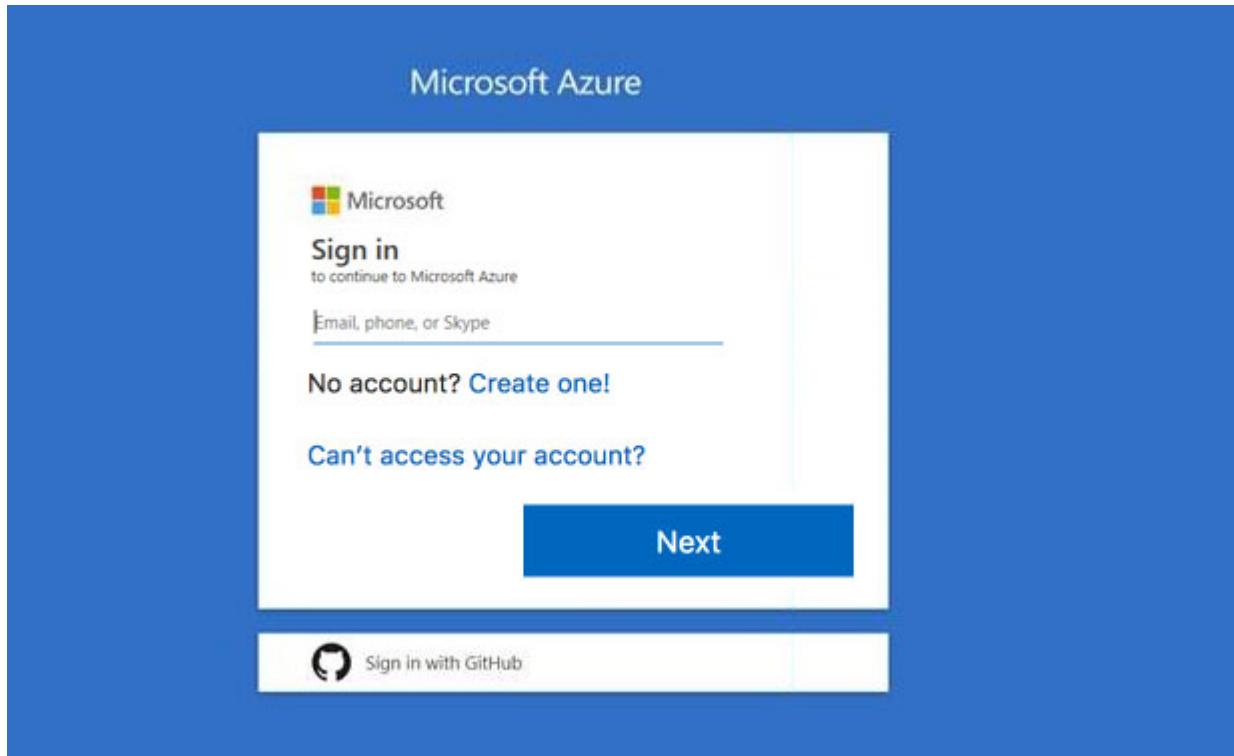
Use the following login credentials as needed:

**Azure Username:** XXXXXXXX

**Azure Password:** XXXXXXXX

The following information is for technical support purposes only:

**Lab Instance:** 9172796



Task 8

You plan to host several secured websites on Web01.

You need to allow HTTPS over TCP port 443 to Web01 and to prevent HTTP over TCP port 80 to Web01.

What should you do from the Azure portal?

**Correct Answer:** See solution below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

You can filter network traffic to and from Azure resources in an Azure virtual network with a network security group. A network security group contains security rules that allow or deny inbound network traffic to, or outbound network traffic from, several types of Azure resources.

A network security group contains security rules that allow or deny inbound network traffic to, or outbound network traffic from, several types of Azure resources.

Step A: Create a network security group

A1. Search for and select the resource group for the VM, choose Add, then search for and select Network security group.

A2. Select Create.

The screenshot shows the 'Create network security group' dialog box. It has fields for Name, Subscription, Resource group, and Location. At the bottom are 'Create' and 'Automation options' buttons.

Create network security group	
<b>* Name</b>	<input type="text"/>
<b>* Subscription</b>	<input type="text" value="&lt;subscription name&gt;"/>
<b>* Resource group</b>	<input type="text" value="SELECT EXISTING..."/> <a href="#">Create new</a>
<b>* Location</b>	<input type="text" value="West US"/>
<b>Create</b> <a href="#">Automation options</a>	

The Create network security group window opens.

A3. Create a network security group

Enter a name for your network security group.

Select or create a resource group, then select a location.

A4. Select Create to create the network security group.

Step B: Create an inbound security rule to allows HTTPS over TCP port 443

B1. Select your new network security group.

B2. Select Inbound security rules, then select Add.

B3. Add inbound rule

B4. Select Advanced.

From the drop-down menu, select HTTPS.

You can also verify by clicking Custom and selecting TCP port, and 443.

B5. Select Add to create the rule.

Repeat step B2-B5 to deny TCP port 80

B6. Select Inbound security rules, then select Add.

B7. Add inbound rule

B8. Select Advanced.

Clicking Custom and selecting TCP port, and 80.

B9. Select Deny.

Step C: Associate your network security group with a subnet

Your final step is to associate your network security group with a subnet or a specific network interface.

C1. In the Search resources, services, and docs box at the top of the portal, begin typing Web01. When the Web01 VM appears in the search results, select it.

C2. Under SETTINGS, select Networking. Select Configure the application security groups, select the Security Group you created in Step A, and then select Save, as shown in the following picture:

The screenshot shows the Azure portal interface for managing a virtual machine named 'myVmWeb'. The left sidebar has a 'SETTINGS' section with 'Networking' selected. The main pane shows the 'myVmWeb - Networking' configuration. Under 'APPLICATION SECURITY GROUPS', there is a button to 'Configure the application security groups'. Under 'INBOUND PORT RULES', a rule for 'Network security group myNsg' is listed, indicating it impacts 1 subnet and 0 network interfaces. A tooltip on the right side of the interface shows that the security group 'myAsgWebServer' is selected. The top navigation bar includes 'Home > myVmWeb - Networking' and a 'Save' button.

References:

<https://docs.microsoft.com/en-us/azure/virtual-network/tutorial-filter-network-traffic>

#### QUESTION 34

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.**

Your company registers a domain name of contoso.com.

You create an Azure DNS zone named contoso.com, and then you add an A record to the zone for a host named www that has an IP address of 131.107.1.10.

You discover that Internet hosts are unable to resolve www.contoso.com to the 131.107.1.10 IP address.

You need to resolve the name resolution issue.

Solution: You create a PTR record for www in the contoso.com zone.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Modify the Name Server (NS) record.

References:

<https://docs.microsoft.com/en-us/azure/dns/dns-delegate-domain-azure-dns>

### **QUESTION 35**

You have five Azure virtual machines that run Windows Server 2016. The virtual machines are configured as web servers.

You have an Azure load balancer named LB1 that provides load balancing services for the virtual machines.

You need to ensure that visitors are serviced by the same web server for each request.

What should you configure?

- A. Idle Time-out (minutes) to **20**
- B. Floating IP (direct server return) to **Disabled**
- C. Floating IP (direct server return) to **Enabled**
- D. Session persistence to **Client IP and protocol**

**Correct Answer:** C

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

You can set the sticky session in load balancer rules with setting the session persistence as the client IP and protocol. Client IP and Protocol specifies that successive requests from the same client IP address and protocol combinations will be handled by the same VM.

References:

<https://cloudopszone.com/configure-azure-load-balancer-for-sticky-sessions/>

**QUESTION 36**

You have a public load balancer that balances ports 80 and 443 across three virtual machines.

You need to direct all the Remote Desktop Protocol (RDP) connections to VM3 only.

What should you configure?

- A. an inbound NAT rule
- B. a load balancing rule
- C. a new public load balancer for VM3
- D. a frontend IP configuration

**Correct Answer:** A

**Section:** [none]

**Explanation**

**Explanation/Reference:**

References:

<https://docs.microsoft.com/en-us/azure/load-balancer/tutorial-load-balancer-port-forwarding-portal>

<https://pixelrobots.co.uk/2017/08/azure-load-balancer-for-rds/>

**QUESTION 37**

You have an Azure subscription that contains three virtual networks named VNet1, VNet2, and VNet3. VNet2 contains a virtual appliance named VM2 that operates as a router.

You are configuring the virtual networks in a hub and spoke topology that uses VNet2 as the hub network.

You plan to configure peering between VNet1 and VNet2 and between VNet2 and VNet3.

You need to provide connectivity between VNet1 and VNet3 through VNet2.

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

- A. On the peering connections, use remote gateways.
- B. On the peering connections, allow forwarded traffic.
- C. On the peering connections, allow gateway transit.
- D. Create route tables and assign the table to subnets.
- E. Create a route filter.

**Correct Answer:** AC

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Allow gateway transit: Check this box if you have a virtual network gateway attached to this virtual network and want to allow traffic from the peered virtual network to flow through the gateway.

The peered virtual network must have the Use remote gateways checkbox checked when setting up the peering from the other virtual network to this virtual network.

References:

<https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-manage-peering#requirements-and-constraints>

**QUESTION 38**

You have an Azure subscription named Subscription1 that contains an Azure virtual network named VNet1. VNet1 connects to your on-premises network by using Azure ExpressRoute.

You need to connect VNet1 to the on-premises network by using a site-to-site VPN. The solution must minimize cost.

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

**NOTE:** Each correct selection is worth one point.

- A. Create a gateway subnet.
- B. Create a VPN gateway that uses the Basic SKU.
- C. Create a connection.
- D. Create a local site VPN gateway.
- E. Create a VPN gateway that uses the VpnGw1 SKU.

**Correct Answer:** ABC

**Section:** [none]

**Explanation**

**Explanation/Reference:**

References:

<https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-howto-site-to-site-resource-manager-portal>

## Testlet 2

### Case study

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 questions in 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 section 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 in 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

Humongous Insurance is an insurance company that has three offices in Miami, Tokyo and Bangkok. Each office has 5,000 users.

#### Existing Environment

##### Active Directory Environment

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

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

##### Network Infrastructure

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

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

##### Active Directory Issue

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

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

##### Licensing Issue

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

You verify that the Azure subscription has the available licenses.

#### Requirements

##### Planned Changes

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

### **Planned Azure AD Infrastructure**

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

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

### **Planned Azure Networking Infrastructure**

You plan to create the following networking resources in a resource group named All\_Resources:

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

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

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

### **Planned Azure Computer Infrastructure**

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

### **Department Requirements**

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

- Web administrators will deploy Azure web apps for the marketing department. Each web app will be added to a separate resource group. The initial configuration of the web apps will be identical. The web administrators have permission to deploy web apps to resource groups.
- During the testing phase, auditors in the finance department must be able to review all Azure costs from the past week.

### **Authentication Requirements**

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

### **QUESTION 1**

HOTSPOT

You are evaluating the name resolution for the virtual machines after the planned implementation of the Azure networking infrastructure.

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

**Hot Area:**

## Answer Area

Statements	Yes	No
The virtual machines on Subnet1 will be able to resolve the hosts in the humongousinsurance.local zone.	<input type="radio"/>	<input type="radio"/>
The virtual machines on ClientSubnet will be able to register the hostname records in the humongousinsurance.local zone.	<input type="radio"/>	<input type="radio"/>
The virtual machines on Subnet4 will be able to register the hostname records in the humongousinsurance.local zone.	<input type="radio"/>	<input type="radio"/>

Correct Answer:

## Answer Area

Statements	Yes	No
The virtual machines on Subnet1 will be able to resolve the hosts in the humongousinsurance.local zone.	<input checked="" type="radio"/>	<input type="radio"/>
The virtual machines on ClientSubnet will be able to register the hostname records in the humongousinsurance.local zone.	<input checked="" type="radio"/>	<input type="radio"/>
The virtual machines on Subnet4 will be able to register the hostname records in the humongousinsurance.local zone.	<input type="radio"/>	<input checked="" type="radio"/>

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Box 1: Yes

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

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

Box 2: Yes

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

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

Box 3: No

Only VMs in the registration network, here the ClientResources-VNet, will be able to register hostname records.

References:

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

## Testlet 3

### Case study

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 questions in 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 section 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 in 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

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

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

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

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

#### Existing Environment

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

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

Contoso.com contains a user named User1.

All the offices connect by using private links.

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

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

Name	Role	Contains virtual machine
Server1	VMWare vCenter server	VM1
Server2	Hyper-V-host	VM2

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

The Azure subscription contains the resources in the following table.

Name	Type
VNet1	Virtual network
VM3	Virtual machine
VM4	Virtual machine

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

### Planned Changes

Contoso plans to implement the following changes:

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

### Technical requirements

Contoso must meet the following technical requirements:

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

### QUESTION 1

#### HOTSPOT

You need to meet the connection requirements for the New York office.

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

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

## Answer Area

From the Azure portal:

Create an ExpressRoute circuit only.
Create a virtual network gateway only.
Create a virtual network gateway and a local network gateway.
Create an ExpressRoute circuit and an on-premises data gateway.
Create a virtual network gateway and an on-premises data gateway.

In the New York office:

Deploy ExpressRoute.
Deploy a DirectAccess server.
Implement a Web Application Proxy.
Configure a site-to-site VPN connection.

Correct Answer:

## Answer Area

From the Azure portal:

Create an ExpressRoute circuit only.
Create a virtual network gateway only.
Create a virtual network gateway and a local network gateway.
Create an ExpressRoute circuit and an on-premises data gateway.
Create a virtual network gateway and an on-premises data gateway.

In the New York office:

Deploy ExpressRoute.
Deploy a DirectAccess server.
Implement a Web Application Proxy.
Configure a site-to-site VPN connection.

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Box 1: Create a virtual network gateway and a local network gateway.

Azure VPN gateway. The VPN gateway service enables you to connect the VNet to the on-premises network through a VPN appliance. For more information, see Connect an on-premises network to a Microsoft Azure virtual network. The VPN gateway includes the following elements:

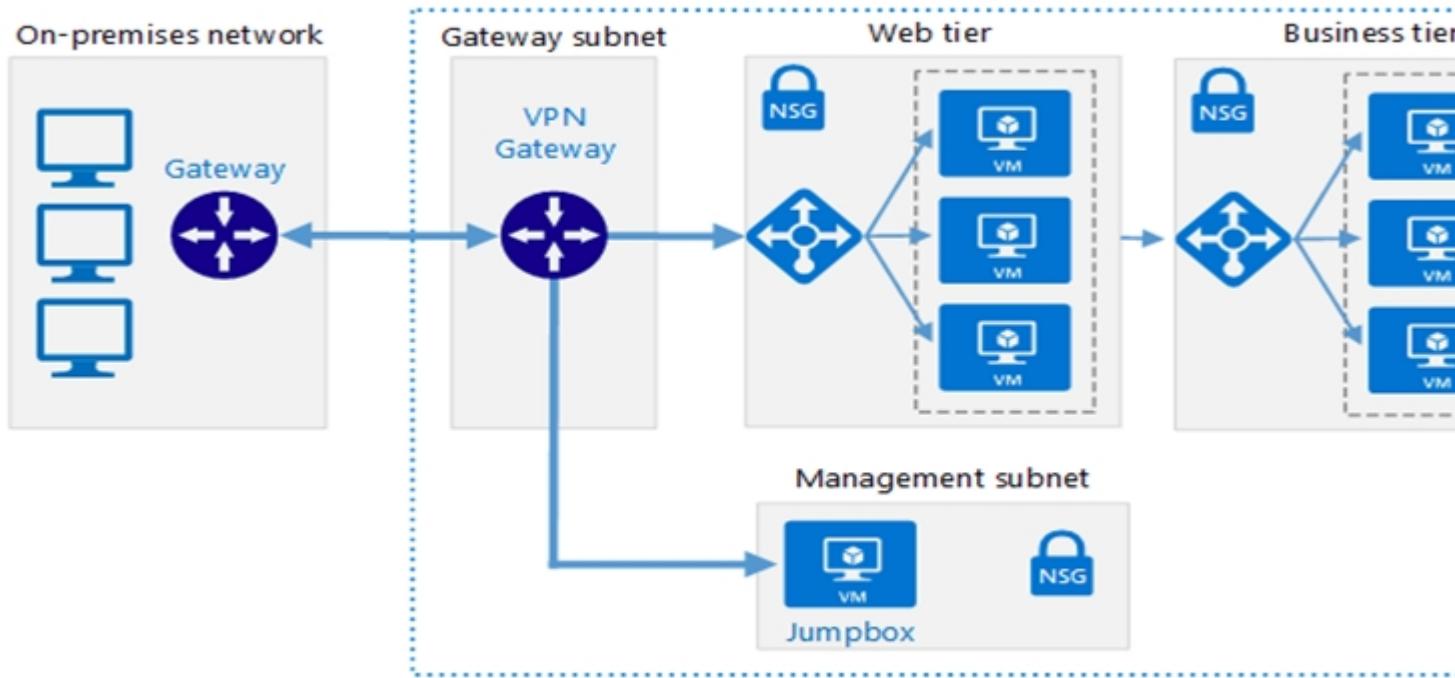
- Virtual network gateway. A resource that provides a virtual VPN appliance for the VNet. It is responsible for routing traffic from the on-premises network to the VNet.
- Local network gateway. An abstraction of the on-premises VPN appliance. Network traffic from the cloud

application to the on-premises network is routed through this gateway.

- Connection. The connection has properties that specify the connection type (IPSec) and the key shared with the on-premises VPN appliance to encrypt traffic.
- Gateway subnet. The virtual network gateway is held in its own subnet, which is subject to various requirements, described in the Recommendations section below.

#### Box 2: Configure a site-to-site VPN connection

On premises create a site-to-site connection for the virtual network gateway and the local network gateway.



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

Incorrect Answers:

Azure ExpressRoute: Established between your network and Azure, through an ExpressRoute partner. This connection is private. Traffic does not go over the internet.

References:

<https://docs.microsoft.com/en-us/azure/architecture/reference-architectures/hybrid-networking/vpn>

## Question Set 1

### QUESTION 1

You have an Azure Active Directory (Azure AD) tenant named contoso.onmicrosoft.com.

You hire a temporary vendor. The vendor uses a Microsoft account that has a sign-in of user1@outlook.com.

You need to ensure that the vendor can authenticate to the tenant by using user1@outlook.com.

What should you do?

- A. From the Azure portal, add a custom domain name, create a new Azure AD user, and then specify user1@outlook.com as the username.
- B. From Azure Cloud Shell, run the `New-AzureADUser` cmdlet and specify the `-UserPrincipalName user1@outlook.com` parameter.
- C. From the Azure portal, add a new guest user, and then specify user1@outlook.com as the email address.
- D. From Windows PowerShell, run the `New-AzureADUser` cmdlet and specify the `-UserPrincipalName user1@outlook.com` parameter.

**Correct Answer:** D

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

UserPrincipalName - contains the UserPrincipalName (UPN) of this user. The UPN is what the user will use when they sign in into Azure AD. The common structure is @, so for Abby Brown in Contoso.com, the UPN would be AbbyB@contoso.com

Example:

To create the user, call the `New-AzureADUser` cmdlet with the parameter values:

```
powershell New-AzureADUser -AccountEnabled $True -DisplayName "Abby Brown" -PasswordProfile  
$PasswordProfile -MailNickname "AbbyB" -UserPrincipalName "AbbyB@contoso.com"
```

References:

<https://docs.microsoft.com/bs-cyrl-ba/powershell/azure/active-directory/new-user-sample?view=azureadps-2.0>

### QUESTION 2

You have an Azure Active Directory (Azure AD) tenant named contosocloud.onmicrosoft.com.

Your company has a public DNS zone for contoso.com.

You add contoso.com as a custom domain name to Azure AD.

You need to ensure that Azure can verify the domain name.

Which type of DNS record should you create?

- A. MX
- B. SRV
- C. DNSKEY
- D. NSEC

**Correct Answer:** A

**Section:** [none]

**Explanation**

**Explanation/Reference:**

References:

<https://docs.microsoft.com/en-us/azure/dns/dns-web-sites-custom-domain>**QUESTION 3**

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

Admin1 accesses the Azure portal by using a web browser.

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

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

**Correct Answer:** A**Section:** [none]**Explanation****Explanation/Reference:****QUESTION 4**

DRAG DROP

You have an Azure Active Directory (Azure AD) tenant that has the initial domain name.

You have a domain name of contoso.com registered at a third-party registrar.

You need to ensure that you can create Azure AD users that have names containing a suffix of @contoso.com.

Which three actions should you perform in sequence? To answer, move the appropriate cmdlets from the list of cmdlets to the answer area and arrange them in the correct order.

**Select and Place:****Actions****Answer Area**

Add a record to the public contoso.com DNS zone

Verify the domain.

Configure company branding.



Add an Azure AD tenant.



Add a custom domain name.

Create an Azure DNS zone.

**Correct Answer:**

Actions	Answer Area
Add a record to the public contoso.com DNS zone	Add a custom domain name
Verify the domain.	Add a record to the public contoso.com DNS zone
Configure company branding.	Verify the domain
Add an Azure AD tenant.	
Add a custom domain name	
Create an Azure DNS zone.	

**Section: [none]**

**Explanation**

**Explanation/Reference:**

References:

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

**QUESTION 5**

Your company has a main office in London that contains 100 client computers.

Three years ago, you migrated to Azure Active Directory (Azure AD).

The company's security policy states that all personal devices and corporate-owned devices must be registered or joined to Azure AD.

A remote user named User1 is unable to join a personal device to Azure AD from a home network.

You verify that other users can join their devices to Azure AD.

You need to ensure that User1 can join the device to Azure AD.

What should you do?

- A. From the Device settings blade, modify the **Users may join devices to Azure AD** setting.
- B. From the Device settings blade, modify the **Maximum number of devices per user** setting.
- C. Create a point-to-site VPN from the home network of User1 to Azure.
- D. Assign the User administrator role to User1.

**Correct Answer: B**

**Section: [none]**

**Explanation**

**Explanation/Reference:**

Explanation:

The Maximum number of devices setting enables you to select the maximum number of devices that a user can have in Azure AD. If a user reaches this quota, they will not be able to add additional devices until one or more of the existing devices are removed.

Incorrect Answers:

A: The Users may join devices to Azure AD setting enables you to select the users who can join devices to Azure AD. Options are All, Selected and None. The default is All.

C: Azure AD Join enables users to join their devices to Active Directory from anywhere as long as they have connectivity with the Internet.

References:

<https://docs.microsoft.com/en-us/azure/active-directory/devices/device-management-azure-portal>

<http://techgenix.com/pros-and-cons-azure-ad-join/>

## QUESTION 6

You have an Azure DNS zone named adatum.com.

You need to delegate a subdomain named research.adatum.com to a different DNS server in Azure.

What should you do?

- A. Create an A record named \*.research in the adatum.com zone.
- B. Create a PTR record named research in the adatum.com zone.
- C. Modify the SOA record of adatum.com.
- D. Create an NS record named research in the adatum.com zone.

**Correct Answer:** D

**Section:** [none]

**Explanation**

### Explanation/Reference:

Explanation:

You need to create a name server (NS) record for the zone.

References:

<https://docs.microsoft.com/en-us/azure/dns/delegate-subdomain>

## QUESTION 7

### SIMULATION

Please wait while the virtual machine loads. Once loaded, you may proceed to the lab section. This may take a few minutes, and the wait time will not be deducted from your overall test time.

When the Next button is available, click it to access the lab section. In this section, you will perform a set of tasks in a live environment. While most functionality will be available to you as it would be in a live environment, some functionality (e.g, copy and paste, ability to navigate to external websites) will not be possible by design.

Scoring is based on the outcome of performing the tasks stated in the lab. In other words, it doesn't matter how you accomplish the task, if you successfully perform it, you will earn credit for that task.

Labs are not timed separately, and this exam may have more than one lab that you must complete. You can use as much time as you would like to complete each lab. But, you should manage your time appropriately to ensure that you are able to complete the lab(s) and all other sections of the exam in the time provided.

Please note that once you submit your work by clicking the Next button within a lab, you will NOT be able to return to the lab.

You may now click next to proceed to the lab.

# Microsoft Azure



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**FAVORITES**

- All resources
- Resource groups
- App Services
- Function App
- SQL databases
- Azure Cosmos DB
- Virtual machines
- Load balancers
- Storage accounts
- Virtual networks
- Azure Active Directory
- Monitor
- Advisor
- Security Center
- Cost Management + B...
- Help + support

Azure services See all (100+) > Create a resource >

Virtual machines App Services Storage accounts SQL databases Azure Data PostgreSQL

 Microsoft Learn  
Learn Azure with free online training from Microsoft

 Azure Monitor  
Monitor your apps and infrastructure

Recent resources See all your recent resources > See all your resources >

 No recent resources to display  
As you visit resources, they'll be listed in Recently used resources for quick and easy access.

Create a resource

## Task 7

You plan to deploy several Azure virtual machines and to connect them to a virtual network named VNET1007.

You need to ensure that future virtual machines on VNET1007 can register their name in an internal DNS zone named corp9172795.com. The zone must **NOT** be hosted on a virtual machine.

What should you do from Azure Cloud Shell?

**To complete this task, start Azure Cloud Shell and select PowerShell (Linux). Click Show Advanced Settings, and then enter corp9172795n1 in the Storage account text box and File1 in the File share text box. Click Create storage, and then complete the task.**

**Correct Answer:** See solution below.

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Step 1: New-AzureRMResourceGroup -name MyResourceGroup

Before you create the DNS zone, create a resource group to contain the DNS zone.

Step 2: New-AzureRmDnsZone -Name corp9172795.com -ResourceGroupName MyResourceGroup

A DNS zone is created by using the New-AzureRmDnsZone cmdlet. This creates a DNS zone called corp9172795.com in the resource group called MyResourceGroup.

References:

<https://docs.microsoft.com/en-us/azure/dns/dns-getstarted-powershell>

## QUESTION 8

HOTSPOT

You have an Azure Active Directory (Azure AD) tenant named adatum.com. Adatum.com contains the groups in the following table:

Name	Group Type	Membership type	Membership rule
Group1	Security	Dynamic user	(user.city -startsWith "m")
Group2	Microsoft Office 365	Dynamic user	(user.department -notIn ["human resources"])
Group3	Microsoft Office 365	Assigned	Not applicable

You create two user accounts that are configured as shown in the following table.

Name	City	Department	Office 365 license assigned
User1	Montreal	Human resources	Yes
User2	Melbourne	Marketing	No

To which groups do User1 and User2 belong? To answer, select the appropriate options in the answer area.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

## Answer Area

User1:

Group1 only
Group2 only
Group3 only
Group1 and Group2 only
Group1 and Group3 only
Group2 and Group3 only
Group1, Group2, and Group3

User2:

Group1 only
Group2 only
Group3 only
Group1 and Group2 only
Group1 and Group3 only
Group2 and Group3 only
Group1, Group2, and Group3

Correct Answer:

## Answer Area

User1:

Group1 only
Group2 only
Group3 only
Group1 and Group2 only
Group1 and Group3 only
Group2 and Group3 only
Group1, Group2, and Group3

User2:

Group1 only
Group2 only
Group3 only
Group1 and Group2 only
Group1 and Group3 only
Group2 and Group3 only
Group1, Group2, and Group3

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Box 1: Group 1 only

First rule applies

Box 2: Group1 and Group2 only

Both membership rules apply.

References:

<https://docs.microsoft.com/en-us/sccm/core/clients/manage/collections/create-collections>

### QUESTION 9

You have an Azure Active Directory (Azure AD) tenant named contoso.onmicrosoft.com.

The User administrator role is assigned to a user named Admin1.

An external partner has a Microsoft account that uses the user1@outlook.com sign in.

Admin1 attempts to invite the external partner to sign in to the Azure AD tenant and receives the following error message: "Unable to invite user user1@outlook.com – Generic authorization exception."

You need to ensure that Admin1 can invite the external partner to sign in to the Azure AD tenant.

What should you do?

- A. From the Roles and administrators blade, assign the Security administrator role to Admin1.
- B. From the Organizational relationships blade, add an identity provider.
- C. From the Custom domain names blade, add a custom domain.
- D. From the Users blade, modify the External collaboration settings.

**Correct Answer:** D

**Section:** [none]

**Explanation**

**Explanation/Reference:**

References:

<https://techcommunity.microsoft.com/t5/Azure-Active-Directory/Generic-authorization-exception-inviting-Azure-AD-gests/td-p/274742>

### QUESTION 10

Your company has an Azure Active Directory (Azure AD) tenant named contoso.com that is configured for hybrid coexistence with the on-premises Active Directory domain. The tenant contains the users shown in the following table.

Name	User Type	Source	Sign-in
User1	Member	Azure AD	User1@contoso.com
User2	Member	Windows Server Active Directory	User2@contoso.com
User3	Guest	Multiple	User3@outlook.com
User4	Guest	Multiple	User4@gmail.com

Whenever possible, you need to enable Azure Multi-Factor Authentication (MFA) for the users in contoso.com.

Which users should you enable for Azure MFA?

- A. User1 only
- B. User1, User2, and User3 only
- C. User1 and User2 only
- D. User1, User2, User3, and User4
- E. User2 only

**Correct Answer:** D

**Section:** [none]

**Explanation**

**Explanation/Reference:**

### QUESTION 11

You have two Azure Active Directory (Azure AD) tenants named contoso.com and fabrikam.com.

You have a Microsoft account that you use to sign in to both tenants.

You need to configure the default sign-in tenant for the Azure portal.

What should you do?

- A. From Azure Cloud Shell, run `Set-AzureRmSubscription`.
- B. From Azure Cloud Shell, run `Set-AzureRmContext`.
- C. From the Azure portal, configure the portal settings.
- D. From the Azure portal, change the directory.

**Correct Answer:** B

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

The `Set-AzureRmContext` cmdlet sets authentication information for cmdlets that you run in the current session. The context includes tenant, subscription, and environment information.

References:

<https://docs.microsoft.com/en-us/powershell/module/azurerm.profile/set-azurermcontext>

## QUESTION 12

You have an Azure Active Directory (Azure AD) tenant.

All administrators must enter a verification code to access the Azure portal.

You need to ensure that the administrators can access the Azure portal only from your on-premises network.

What should you configure?

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

**Correct Answer:** B

**Section:** [none]

**Explanation**

**Explanation/Reference:**

## QUESTION 13

You have an Active Directory forest named contoso.com.

You install and configure Azure AD Connect to use password hash synchronization as the single sign-on (SSO) method. Staging mode is enabled.

You review the synchronization results and discover that the Synchronization Service Manager does not display any sync jobs.

You need to ensure that the synchronization completes successfully.

What should you do?

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

**Correct Answer:** D

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

Staging mode must be disabled. If the Azure AD Connect server is in staging mode, password hash synchronization is temporarily disabled.

References:

<https://docs.microsoft.com/en-us/azure/active-directory/connect/active-directory-aadconnectsync-troubleshoot-password-hash-synchronization#no-passwords-are-synchronized-troubleshoot-by-using-the-troubleshooting-task>

#### **QUESTION 14**

You have an Azure Active Directory (Azure AD) tenant named contosocloud.onmicrosoft.com.

Your company has a public DNS zone for contoso.com.

You add contoso.com as a custom domain name to Azure AD.

You need to ensure that Azure can verify the domain name.

Which type of DNS record should you create?

- A. SRV
- B. PTR
- C. RRSIG
- D. TXT

**Correct Answer:** D

**Section:** [none]

**Explanation**

**Explanation/Reference:**

References:

<https://docs.microsoft.com/en-us/azure/active-directory/fundamentals/add-custom-domain>

#### **QUESTION 15**

You sign up for Azure Active Directory (Azure AD) Premium.

You need to add a user named admin1@contoso.com as an administrator on all the computers that will be joined to the Azure AD domain.

What should you configure in Azure AD?

- A. Providers from the MFA Server blade
- B. Device settings from the Groups blade
- C. General settings from the Groups blade
- D. User settings from the Users blade

**Correct Answer:** A

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

When you connect a Windows device with Azure AD using an Azure AD join, Azure AD adds the following security principles to the local administrators group on the device:

- The Azure AD global administrator role
- The Azure AD device administrator role
- The user performing the Azure AD join

In the Azure portal, you can manage the device administrator role on the Devices page. To open the Devices page:

1. Sign in to your Azure portal as a global administrator or device administrator.
2. On the left navbar, click Azure Active Directory.
3. In the Manage section, click Devices.
4. On the Devices page, click Device settings.
5. To modify the device administrator role, configure Additional local administrators on Azure AD joined devices.

References:

<https://docs.microsoft.com/en-us/azure/active-directory/devices/assign-local-admin>

## Testlet 2

### Case study

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.

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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 section 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 in 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

Contoso, Ltd. is a manufacturing company that has offices worldwide. Contoso works with partner organizations to bring products to market.

Contoso products are manufactured by using blueprint files that the company authors and maintains.

#### Existing Environment

Currently, Contoso uses multiple types of servers for business operations, including the following:

- File servers
- Domain controllers
- Microsoft SQL Server servers

Your network contains an Active Directory forest named contoso.com. All servers and client computers are joined to Active Directory.

You have a public-facing application named App1. App1 is comprised of the following three tiers:

- A SQL database
- A web front end
- A processing middle tier

Each tier is comprised of five virtual machines. Users access the web front end by using HTTPS only.

#### Requirements

#### Planned Changes

Contoso plans to implement the following changes to the infrastructure:

- Move all the tiers of App1 to Azure.
- Move the existing product blueprint files to Azure Blob storage.

- Create a hybrid directory to support an upcoming Microsoft Office 365 migration project.

## Technical Requirements

Contoso must meet the following technical requirements:

- Move all the virtual machines for App1 to Azure.
- Minimize the number of open ports between the App1 tiers.
- Ensure that all the virtual machines for App1 are protected by backups.
- Copy the blueprint files to Azure over the Internet.
- Ensure that the blueprint files are stored in the archive storage tier.
- Ensure that partner access to the blueprint files is secured and temporary.
- Prevent user passwords or hashes of passwprds from being stored in Azure.
- Use unmanaged standard storage for the hard disks of the virtual machines.
- Ensure that when users join devices to Azure Active Directory (Azure AD), the users use a mobile phone to verify their identity
- Minimize administrative effort whenever possible

## User Requirements

Contoso identifies the following requirements for users:

- Ensure that only users who are part of a group named Pilot can join devices to Azure AD.
- Designate a new user named Admin1 as the service admin for the Azure subscription.
- Admin1 must receive email alerts regarding service outages.
- Ensure that a new user named User3 can create network objects for the Azure subscription.

## QUESTION 1

### HOTSPOT

You need to configure the Device settings to meet the technical requirements and the user requirements.

Which two settings should you modify? To answer, select the appropriate settings in the answer area.

**Hot Area:**

## Answer Area

 Save  Discard

Users may join devices to Azure AD   All  Selected  None

Selected

No member selected



Additional local administrators on Azure AD joined devices   Selected  None

Selected

No member selected



Users may register their devices with Azure AD   All  None

Require Multi-Factor Auth to join devices   Yes  No

Maximum number of devices per user   

Users may sync settings and app data across devices   All  Selected  None

Selected

No member selected



**Correct Answer:**

## Answer Area

 Save  Discard

Users may join devices to Azure AD   All  Selected  None

Selected

No member selected



Additional local administrators on Azure AD joined devices   Selected  None

Selected

No member selected



Users may register their devices with Azure AD   All  None

Require Multi-Factor Auth to join devices   Yes  No

Maximum number of devices per user   

Users may sync settings and app data across devices   All  Selected  None

Selected

No member selected



### Section: [none]

#### Explanation

#### Explanation/Reference:

Explanation:

Box 1: Selected

Only selected users should be able to join devices

Box 2: Yes

Require Multi-Factor Auth to join devices.

From scenario:

- Ensure that only users who are part of a group named Pilot can join devices to Azure AD
- Ensure that when users join devices to Azure Active Directory (Azure AD), the users use a mobile phone to verify their identity.

## Testlet 3

### Case study

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.

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

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

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

#### Existing Environment

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

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

Contoso.com contains a user named User1.

All the offices connect by using private links.

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

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

Name	Role	Contains virtual machine
Server1	VMWare vCenter server	VM1
Server2	Hyper-V-host	VM2

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

The Azure subscription contains the resources in the following table.

Name	Type
VNet1	Virtual network
VM3	Virtual machine
VM4	Virtual machine

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

### Planned Changes

Contoso plans to implement the following changes:

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

### Technical requirements

Contoso must meet the following technical requirements:

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

### QUESTION 1

You need to recommend a solution to automate the configuration for the finance department users. The solution must meet the technical requirements.

What should you include in the recommendation?

- A. Azure AD B2C
- B. Azure AD Identity Protection
- C. an Azure logic app and the Microsoft Identity Management (MIM) client
- D. dynamic groups and conditional access policies

**Correct Answer:** D

**Section:** [none]

## Explanation

### Explanation/Reference:

Explanation:

Scenario: Ensure Azure Multi-Factor Authentication (MFA) for the users in the finance department only.

The recommendation is to use conditional access policies that can then be targeted to groups of users, specific applications, or other conditions.

References:

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

## QUESTION 2

### HOTSPOT

You need to implement Role1.

Which command should you run before you create Role1? To answer, select the appropriate options in the answer area.

**NOTE:** Each correct selection is worth one point.

Hot Area:

**Answer Area**

-Name "Reader"	
<input type="checkbox"/> Find-RoleCapability <input type="checkbox"/> Get-AzureADDirectoryRole <input type="checkbox"/> Get-AzureRmRoleAssignment <input type="checkbox"/> Get-AzureRmRoleDefinition	<input type="checkbox"/> ConvertFrom-Json <input type="checkbox"/> ConvertFrom-String <input type="checkbox"/> ConvertTo-Json <input type="checkbox"/> ConvertTo-Xml

Correct Answer:

**Answer Area**

-Name "Reader"	
<input checked="" type="checkbox"/> Find-RoleCapability <input checked="" type="checkbox"/> Get-AzureADDirectoryRole <input checked="" type="checkbox"/> Get-AzureRmRoleAssignment <input checked="" type="checkbox"/> Get-AzureRmRoleDefinition	<input checked="" type="checkbox"/> ConvertFrom-Json <input checked="" type="checkbox"/> ConvertFrom-String <input checked="" type="checkbox"/> ConvertTo-Json <input checked="" type="checkbox"/> ConvertTo-Xml

Section: [none]

Explanation

Explanation/Reference:

## Testlet 4

### Case study

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.

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#### To start the case study

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#### Overview

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

#### Existing Environment

##### Active Directory Environment

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

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

##### Network Infrastructure

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

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

##### Active Directory Issue

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

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

##### Licensing Issue

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

You verify that the Azure subscription has the available licenses.

## Requirements

### Planned Changes

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

### Planned Azure AD Infrastructure

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

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

### Planned Azure Networking Infrastructure

You plan to create the following networking resources in a resource group named All\_Resources:

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

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

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

### Planned Azure Computer Infrastructure

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

## Department Requirements

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

- Web administrators will deploy Azure web apps for the marketing department. Each web app will be added to a separate resource group. The initial configuration of the web apps will be identical. The web administrators have permission to deploy web apps to resource groups.
- During the testing phase, auditors in the finance department must be able to review all Azure costs from the past week.

## Authentication Requirements

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

### QUESTION 1

You need to prepare the environment to meet the authentication requirements.

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

**NOTE:** Each correct selection is worth one point.

- A. Install the Active Directory Federation Services (AD FS) role on a domain controller in the Miami office.
- B. Allow inbound TCP port 8080 to the domain controllers in the Miami office.
- C. Join the client computers in the Miami office to Azure AD.

- D. Add <http://autologon.microsoftazuread-sso.com> to the intranet zone of each client computer in the Miami office.
- E. Install Azure AD Connect on a server in the Miami office and enable Pass-through Authentication.

**Correct Answer:** DE

**Section:** [none]

**Explanation**

**Explanation/Reference:**

Explanation:

D: You can gradually roll out Seamless SSO to your users. You start by adding the following Azure AD URL to all or selected users' Intranet zone settings by using Group Policy in Active Directory: <https://autologon.microsoftazuread-sso.com>

E: Seamless SSO works with any method of cloud authentication - Password Hash Synchronization or Pass-through Authentication, and can be enabled via Azure AD Connect.

Incorrect Answers:

A: Seamless SSO is not applicable to Active Directory Federation Services (ADFS).

B: Azure AD connect does not port 8080. It uses port 443.

C: Seamless SSO needs the user's device to be domain-joined, but doesn't need for the device to be Azure AD Joined.

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

Planned Azure AD Infrastructure include: The on-premises Active Directory domain will be synchronized to Azure AD.

References:

<https://docs.microsoft.com/en-us/azure/active-directory/connect/active-directory-aadconnect-sso-quick-start>