Number: AZ-120
Passing Score: 800
Time Limit: 120
File Version: 21.0

Exam Code: AZ-120
Exam Name: Planning and Administering Microsoft Azure for SAP Workloads

01 - Migrate SAP Workloads to Azure

Case Study

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Overview

Litware, Inc. is an international manufacturing company that has 3,000 employees.

Litware has two main offices. The offices are located in Miami, FL, and Madrid, Spain.

Existing Environment

Infrastructure

Litware currently uses a third-party provider to host a datacenter in Miami and a disaster recovery datacenter in Chicago, IL.

The network contains an Active Directory domain named litware.com. Litware has two third-party applications hosted in Azure.

Litware already implemented a site-to-site VPN connection between the on-premises network and Azure.

SAP Environment

Litware currently runs the following SAP products:

Enhancement Pack6 for SAP ERP Central Component 6.0 (SAP ECC 6.0)

SAP Extended Warehouse Management (SAP EWM)

SAP Supply Chain Management (SAP SCM)

SAP NetWeaver Process Integration (PI)

SAP Business Warehouse (SAP BW)

SAP Solution Manager

All servers run on the Windows Server platform. All databases use Microsoft SQL Server. Currently, you have 20 production servers.

You have 30 non-production servers including five testing servers, five development servers, five quality assurance (QA) servers, and 15 pre-production servers.

Currently, all SAP applications are in the litware.com domain.

Problem Statements

The current version of SAP ECC has a transaction that, when run in batches overnight, takes eight hours to complete. You confirm that upgrading to SAP Business Suite on HANA will improve performance because of code changes and the SAP HANA database platform.

Litware is dissatisfied with the performance of its current hosted infrastructure vendor. Litware experienced several hardware failures and the vendor struggled to adequately support its 24/7 business operations.

Requirements

Business Goals

Litware identifies the following business goals:

Increase the performance of SAP ECC applications by moving to SAP HANA. All other SAP databases will remain on SQL Server.

Move away from the current infrastructure vendor to increase the stability and availability of the SAP services.

Use the new Environment, Health and Safety (EH&S) in Recipe Management function.

Ensure that any migration activities can be completed within a 48-hour period during a weekend.

Planned Changes

Litware identifies the following planned changes:

Migrate SAP to Azure.

Upgrade and migrate SAP ECC to SAP Business Suite on HANA Enhancement Pack 8.

Technical Requirements

Litware identifies the following technical requirements:
Implement automated backups.
Support load testing during the migration.
Identify opportunities to reduce costs during the migration.
Continue to use the litware.com domain for all SAP landscapes.
Ensure that all SAP applications and databases are highly available.
Establish an automated monitoring solution to avoid unplanned outages.
Remove all SAP components from the on-premises network once the migration is complete.
Minimize the purchase of additional SAP licenses. SAP HANA licenses were already purchased.
Ensure that SAP can provide technical support for all the SAP landscapes deployed to Azure.

QUESTION 1
You are evaluating which migration method Litware can implement based on the current environment and the business goals. Which migration method will cause the least amount of downtime?

A. Migrate SAP ECC to SAP Business Suite in HANA, and then migrate SAP to Azure.
B. Use Near-Zero Downtime (NZDT) to migrate to SAP HANA and Azure during the same maintenance window.
C. Use the Database Migration Option (DMO) to migrate to SAP HANA and Azure during the same maintenance window.
D. Migrate SAP to Azure, and then migrate SAP ECC to SAP Business Suite on HANA.

Correct Answer: C
Section:
Explanation:
The SAP Database Migration Option (DMO) with System Move option of SUM, used as part of the migration allows customer the options to perform the migration in a single step, from source system on-premises, or to the target system residing in Microsoft Azure, minimizing overall downtime.
Reference:
https://blogs.sap.com/2017/10/05/your-sap-on-azure-part-2-dmo-with-system-move/

02 - Migrate SAP Workloads to Azure
Case Study
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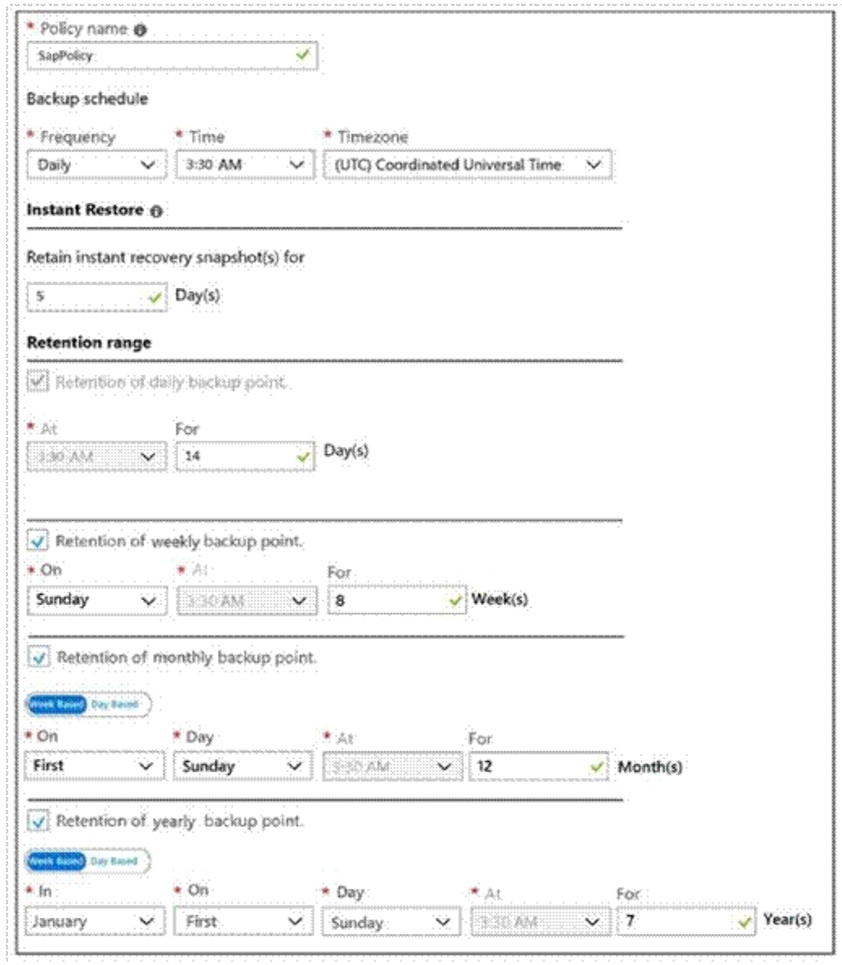
Overview
Contoso, Ltd. is a manufacturing company that has 15,000 employees.
The company uses SAP for sales and manufacturing.
Contoso has sales offices in New York and London and manufacturing facilities in Boston and Seattle.
Existing Environment
Active Directory
The network contains an on-premises Active Directory domain named ad.contoso.com. User email addresses use a domain name of contoso.com.
SAP Environment
The current SAP environment contains the following components:
SAP Solution Manager

SAP ERP Central Component (SAP ECC)
SAP Supply Chain Management (SAP SCM)
SAP application servers that run Windows Server 2008 R2
SAP HANA database servers that run SUSE Linux Enterprise Server 12 (SLES 12)
Problem Statements
Contoso identifies the following issues in its current environment:
The SAP HANA environment lacks adequate resources.
The Windows servers are nearing the end of support.
The datacenters are at maximum capacity.
Requirements
Planned Changes
Contoso identifies the following planned changes:
Deploy Azure Virtual WAN.
Migrate the application servers to Windows Server 2016.
Deploy ExpressRoute connections to all of the offices and manufacturing facilities.
Deploy SAP landscapes to Azure for development, quality assurance, and production.
All resources for the production landscape will be in a resource group named SAPProduction.
Business goals
Contoso identifies the following business goals:
Minimize costs whenever possible.
Migrate SAP to Azure without causing downtime.
Ensure that all SAP deployments to Azure are supported by SAP.
Ensure that all the production databases can withstand the failure of an Azure region.
Ensure that all the production application servers can restore daily backups from the last 21 days.
Technical Requirements
Contoso identifies the following technical requirements:
Inspect all web queries.
Deploy an SAP HANA cluster to two datacenters.
Minimize the bandwidth used for database synchronization.
Use Active Directory accounts to administer Azure resources.
Ensure that each production application server has four 1-TB data disks.
Ensure that an application server can be restored from a backup created during the last five days within 15 minutes. Implement an approval process to ensure that an SAP administrator is notified before another administrator attempts to make changes to the Azure virtual machines that host SAP.
It is estimated that during the migration, the bandwidth required between Azure and the New York office will be 1 Gbps. After the migration, a traffic burst of up to 3 Gbps will occur.
Proposed Backup Policy
An Azure administrator proposes the backup policy shown in the following exhibit.



Azure Resource Manager Template

An Azure administrator provides you with the Azure Resource Manager template that will be used to provision the production application servers.

```
{
  "apiVersion": "2017-03-30",
  "type": "Microsoft.Compute/virtualMachines",
  "name": "[parameters('vmname')]",

  "location": "EastUS",
  "dependsOn": [
    "[resourceId('Microsoft.Network/networkInterfaces/', parameters('vmname'))]"
  ],
  "properties":{
    "hardwareProfile": {
      "vmSize": "[parameters('vmSize')]"
  },
  "osProfile": {
    "computerName": "[parameters('vmname')]",
    "adminUsername": "[parameters('adminUsername')]",
    "adminPassword": "[parameters('adminPassword')]"
  },
  "storageProfile": {
    "ImageReference": {
      "publisher": "MicrosoftWindowsServer",
      "Offer" : "WindowsServer",
      "sku" : "2016-datacenter",
      "version" : "latest"
    },
    "osDisk": {
      "name": "[concat(parameters('vmname'), '-OS')]",
      "caching": "ReadWrite",
      "createOption": "FromImage",
      "diskSizeGB": 128,
      "managedDisk":{
            "storageAccountType": "[parameters('storageAccountType')]"
      }
    },
"copy": [
  {
    "name": "DataDisks",
    'count": "[parameters('diskCount')]",
    "input" : {
     "Caching" : "None",
     "diskSizeGB" : 1024,
     "lun": "[copyIndex('datadisks')]",
```

Vdumps

```
          "name": "[concat(parameters('vmname'), '-DD',copyIndex('datadisks'))]",
          "createOption": "Empty"
        }
      }
    ]
  },
  "networkProfile": {
   "networkInterfaces": [
      {
        "id": "[resourceId('Microsoft.Network/networkInterfaces', parameters('vmName'))]"
      }
    ]
  }
},
"resources": [
    {
      "apiVersion": "2017-03-30"
      "type": "Microsoft.Compute/virtualMachines/extensions",
      "name": "[concat(parameters('VMName'), '/joindomain')]",
      "location": "eastus",
      "properties": {
        "publisher": "Microsoft.Compute",
        "type": "JsonADDomainExtension",
        "typeHandlerVersion": "1.3",
        "autoUpgradeMinorVersion": true,
        "settings": {
            "Name": "[parameters('domainName')]",
            "User": "[parameters('domainusername')]",
            "Restart": "true",
            "Options": "3"
        },
        "protectedsettings": {
            "Password": "[parameters('domainPassword')]"
        }
      }
    }
  ]
}
```

QUESTION 1
HOTSPOT
You are evaluating the proposed backup policy.
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:

Statements	Yes	No
The backup policy meets the technical requirements.	○	○
The backup policy meets the business requirements.	○	○
If the backup policy is implemented, a deleted file can be restored to the running virtual machine one year after the file was deleted.	○	○

Answer Area:

Statements	Yes	No
The backup policy meets the technical requirements.	○	○
The backup policy meets the business requirements.	○	○
If the backup policy is implemented, a deleted file can be restored to the running virtual machine one year after the file was deleted.	○	○

Vdumps

Section:
Explanation:
Box 1: Yes
Scenario: Technical requirements: Ensure that an application server can be restored from a backup created during the last five days within 15 minutes.
Instant Restore has 'The instance recovery snapshot(s) for 5 Day(s)'.
Box 2: No
Scenario: Ensure that all the production application servers can restore daily backups from the last 21 days.
The Retention of daily backup point is set to for 14 days only.
Box 3: Yes
Reference:
https://docs.microsoft.com/en-us/azure/backup/backup-instant-restore-capability

QUESTION 2
HOTSPOT
You are planning replication of the SAP HANA database for the disaster recovery environment in Azure.
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:

Statements	Yes	No
You must use synchronous replication.	○	○
You must use delta data shipping for operation mode.	○	○
You must configure an Azure Directory (Azure AD) application to manage the failover.	○	○

Answer Area:

Statements	Yes	No
You must use synchronous replication.	○	○
You must use delta data shipping for operation mode.	○	○
You must configure an Azure Directory (Azure AD) application to manage the failover.	○	○

Section:
Explanation:
Box 1: No
SAP HANA Replication consists of one primary node and at least one secondary node. Changes to the data on the primary node are replicated to the secondary node synchronously or asynchronously.
Box 2: No
Since SPS11 SAP HANA system replication can be run in two different operation
modes:
delta_datashipping
logreplay
Box 3: Yes
Reference:
https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/sap-hana-high-availability-rhel
https://blogs.sap.com/2018/01/08/your-sap-on-azure-part-4-high-availability-for-sap-hana-using-system-replication/

QUESTION 3
HOTSPOT
You are evaluating the proposed backup policy.
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
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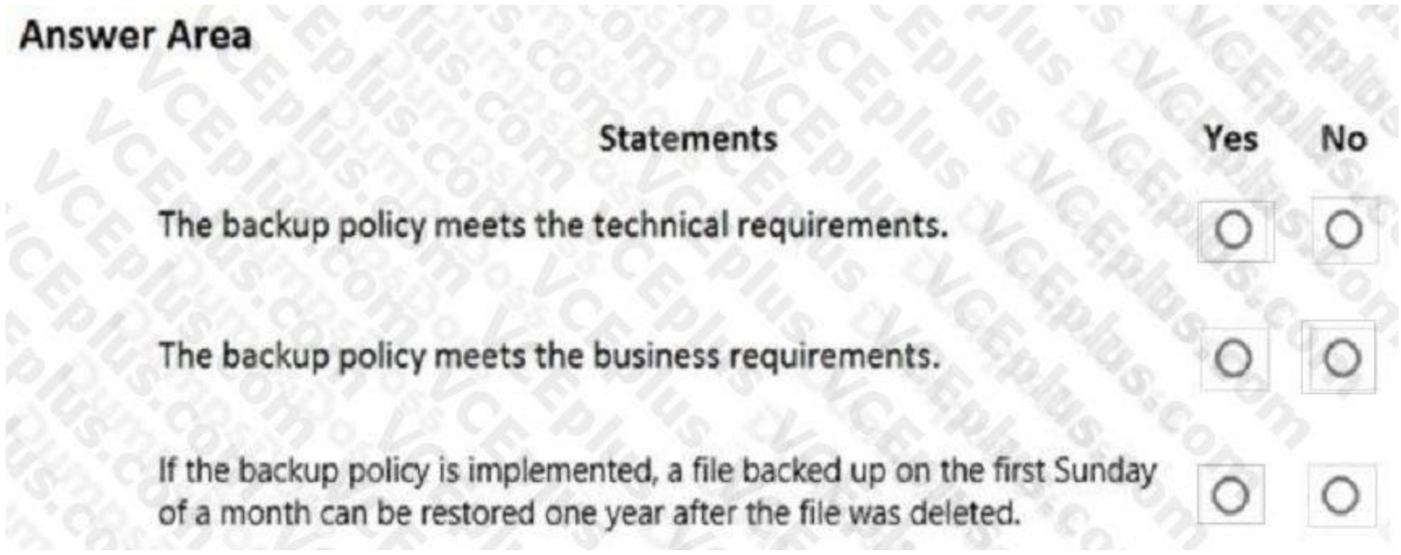
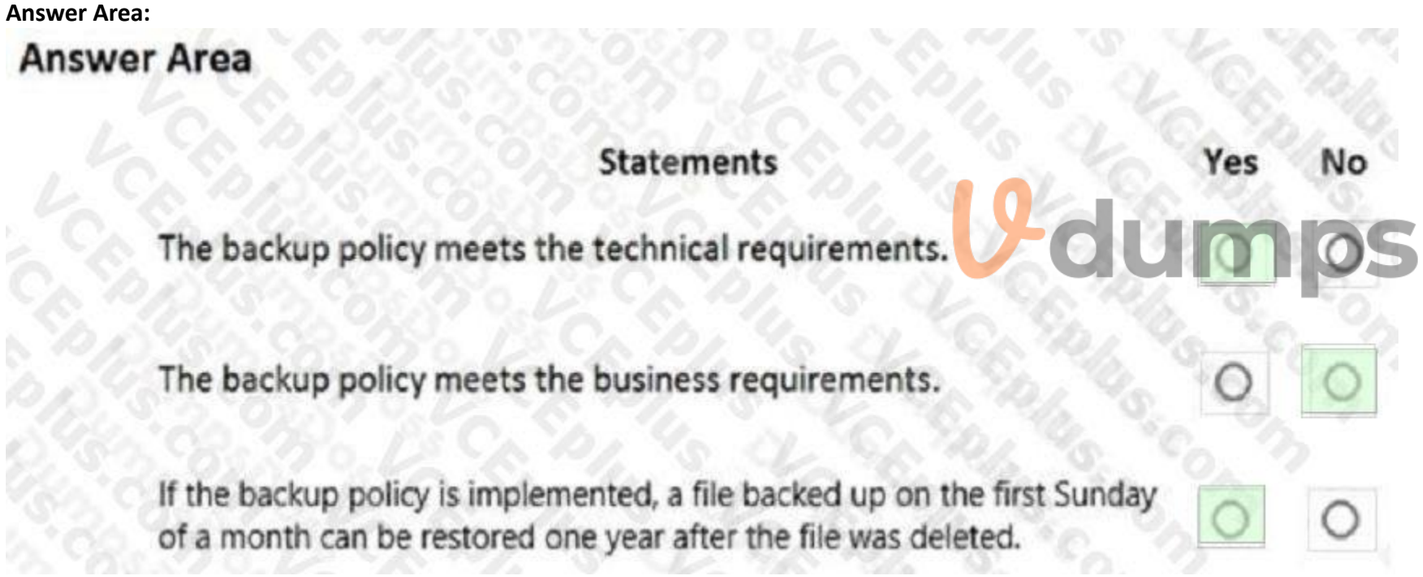
Hot Area:



Answer Area:



Section:
Explanation:
Box 1: Yes
Scenario: Technical requirements: Ensure that an application server can be restored from a backup created during the last five days within 15 minutes.
Instant Restore has 'The instance recovery snapshot(s) for 5 Day(s)'.
Box 2: No
Scenario: Ensure that all the production application servers can restore daily backups from the last 21 days. The Retention of daily backup point is set to for 14 days only.
Box 3: Yes
Yes, the early backups are retained for 7 years.
Reference:
https://docs.microsoft.com/en-us/azure/backup/backup-instant-restore-capability

02 - Build and Deploy Azure SAP Workloads
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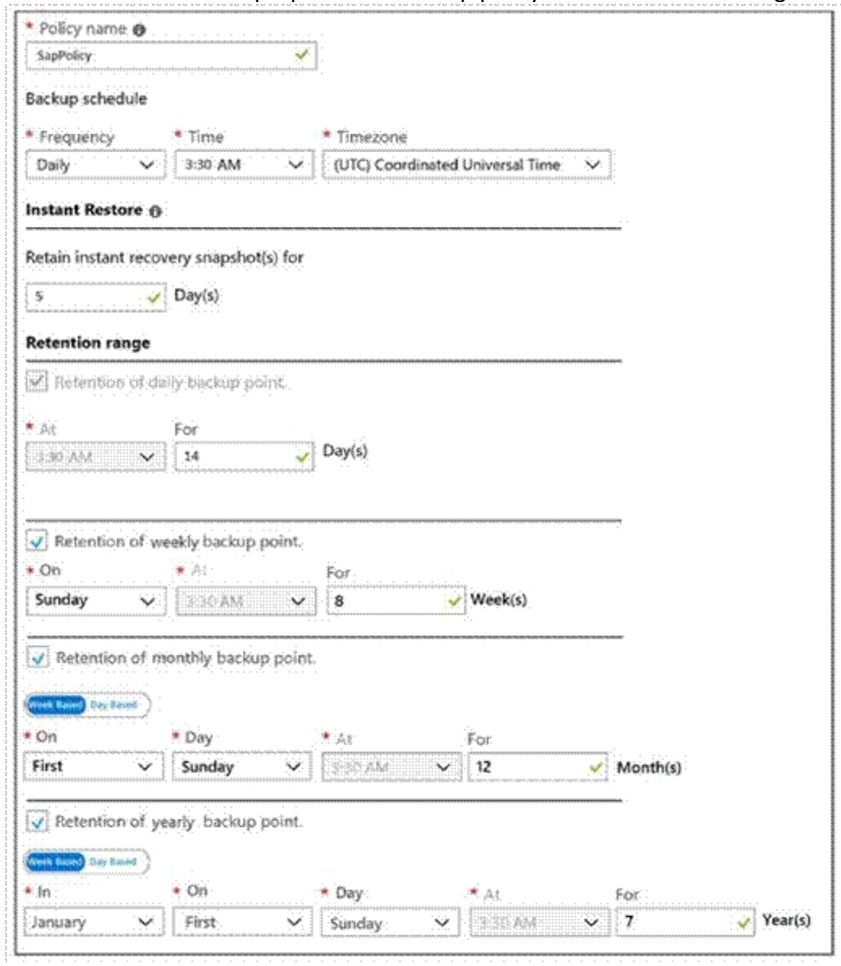
Proposed Backup Policy
An Azure administrator proposes the backup policy shown in the following exhibit.



Azure Resource Manager Template
An Azure administrator provides you with the Azure Resource Manager template that will be used to provision the production application servers.

```
{
  "apiVersion": "2017-03-30",
  "type": "Microsoft.Compute/virtualMachines",
  "name": "[parameters('vmname')]",

  "location": "EastUS",
  "dependsOn": [
    "[resourceId('Microsoft.Network/networkInterfaces/', parameters('vmname'))]"
  ],
  "properties":{
    "hardwareProfile": {
      "vmSize": "[parameters('vmSize')]"
  },
  "osProfile": {
    "computerName": "[parameters('vmname')]",
    "adminUsername": "[parameters('adminUsername')]",
    "adminPassword": "[parameters('adminPassword')]"
  },
  "storageProfile": {
    "ImageReference": {
      "publisher": "MicrosoftWindowsServer",
      "Offer" : "WindowsServer",
      "sku" : "2016-datacenter",
      "version" : "latest"
    },
    "osDisk": {
      "name": "[concat(parameters('vmname'), '-OS')]",
      "caching": "ReadWrite",
      "createOption": "FromImage",
      "diskSizeGB": 128,
      "managedDisk":{
            "storageAccountType": "[parameters('storageAccountType')]"
      }
  },
  "copy": [
    {
      "name": "DataDisks",
      'count": "[parameters('diskCount')]",
      "input" : {
       "Caching" : "None",
       "diskSizeGB" : 1024,
       "lun": "[copyIndex('datadisks')]",
```

Vdumps

```
          "name": "[concat(parameters('vmname'), '-DD',copyIndex('datadisks'))]",
          "createOption": "Empty"
        }
      }
    ]
  },
  "networkProfile": {
   "networkInterfaces": [
      {
        "id": "[resourceId('Microsoft.Network/networkInterfaces', parameters('vmName'))]"
      }
    ]
  }
},
"resources": [
    {
      "apiVersion": "2017-03-30"
      "type": "Microsoft.Compute/virtualMachines/extensions",
      "name": "[concat(parameters('VMName'), '/joindomain')]",
      "location": "eastus",
      "properties": {
        "publisher": "Microsoft.Compute",
        "type": "JsonADDomainExtension",
        "typeHandlerVersion": "1.3",
        "autoUpgradeMinorVersion": true,
        "settings": {
            "Name": "[parameters('domainName')]",
            "User": "[parameters('domainusername')]",
            "Restart": "true",
            "Options": "3"
        },
        "protectedsettings": {
            "Password": "[parameters('domainPassword')]"
        }
      }
    }
  ]
}
```

QUESTION 1
This question-requires that you evaluate the underlined text to determine if it is correct.
You are planning for the administration of resources in Azure.
To meet the technical requirements, you must first implement Active Directory Federation Services (AD FS). Instructions: Review the underlined text. If it makes the statement correct, select "No change is needed". If the statement is incorrect, select the answer choice that makes the statement correct.

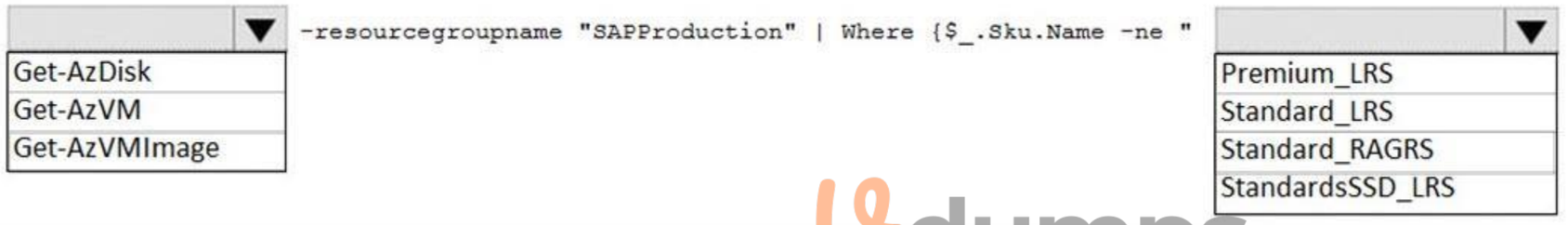
A. No change is needed
B. Azure AD Connect
C. Azure AD join
D. Enterprise State Roaming

Correct Answer: A
Section:

Explanation:
The SAP Cloud Platform Identity Authentication and Active Directory Federation Services enable you to implement SSO across applications or services that are protected by Azure AD (as an IdP) with SAP applications and services that are protected by SAP Cloud Platform Identity Authentication.
Scenario: Use Active Directory accounts to administer Azure resources.
Incorrect Answers:
Not D: With Windows 10, Azure Active Directory (Azure AD) users gain the ability to securely synchronize their user settings and application settings data to the cloud. Enterprise State Roaming provides users with a unified experience across their Windows devices and reduces the time needed for configuring a new device. Enterprise State Roaming operates similar to the standard consumer settings sync that was first introduced in Windows 8.
References: https://docs.microsoft.com/en-us/azure/active-directory/saas-apps/sap-hana-cloud-platform-identity-authentication-tutorial

QUESTION 2
HOTSPOT
Before putting the SAP environment on Azure into production, which command should you run to ensure that the virtual machine disks meet the business requirements? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.

Hot Area:



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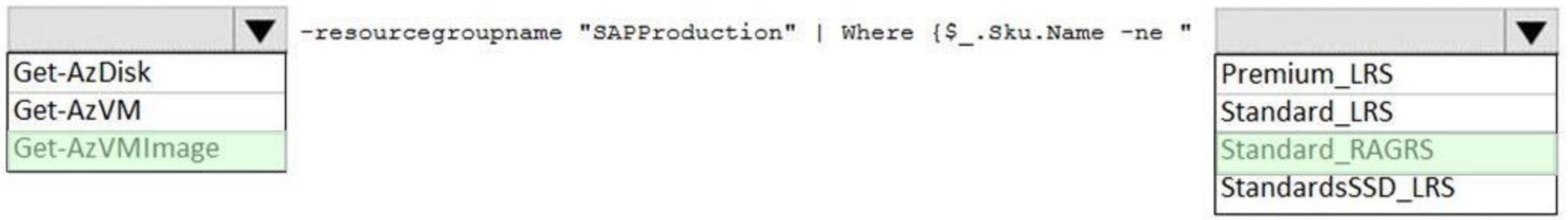
Answer Area:



Section:
Explanation:
Scenario: Ensure that all the production databases can withstand the failure of an Azure region.
References:
https://docs.microsoft.com/en-us/powershell/module/az.compute/get-azvmimage

QUESTION 3
HOTSPOT
You need to provide the Azure administrator with the values to complete the Azure Resource Manager template.
Which values should you provide for diskCount, StorageAccountType, and domainName? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.

Hot Area:

diskCount:

- 0
- 1
- 2
- 4

storageAccountType:

- Premium_LRS
- Standard_GRS
- Standard_LRS

domainName:

- ad.contoso.com
- ad.contoso.onmicrosoft.com
- contoso.com
- contoso.onmicrosoft.com

Answer Area:

diskCount:

- 0
- 1
- 2
- 4

storageAccountType:

- Premium_LRS
- Standard_GRS
- Standard_LRS

domainName:

- ad.contoso.com
- ad.contoso.onmicrosoft.com
- contoso.com
- contoso.onmicrosoft.com

Section:

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Explanation:
Box 1: 4
Scenario: the Azure Resource Manager template that will be used to provision the production application servers. Ensure that each production application server has four 1-TB data disks.
Box 2: Standard_LRS
Scenario: Minimize costs whenever possible.
Box 3: contoso.onmicrosoft.com
The network contains an on-premises Active Directory domain named ad.contoso.com.
The Initial domain: The default domain (onmicrosoft.com) in the Azure AD Tenant. For example, contoso.onmicrosoft.com.
References:
https://docs.microsoft.com/en-us/azure/active-directory/hybrid/plan-connect-userprincipalname

03 - Build and Deploy Azure SAP Workloads

QUESTION 1
You plan to deploy an SAP environment on Azure.
During a bandwidth assessment, you identify that connectivity between Azure and an on-premises datacenter requires up to 5 Gbps. You need to identify which connectivity method you must implement to meet the bandwidth requirement. The solution must minimize costs. Which connectivity method should you identify?

A. an ExpressRoute connection
B. an Azure site-to-site VPN that is route-based
C. an Azure site-to-site VPN that is policy-based
D. Global VNet peering

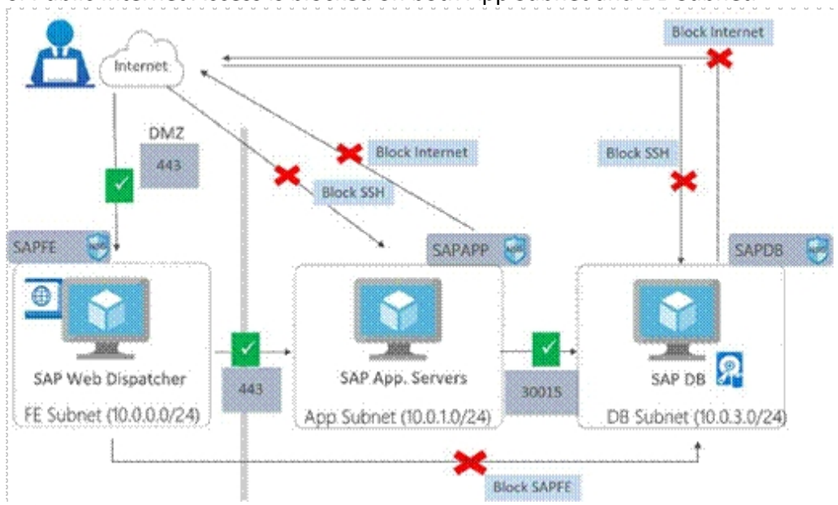
Correct Answer: B
Section:
Explanation:
Azure site-to-site VPN is cheaper.
Incorrect Answers:
A: ExpressRoute could be quite expensive.
C: Policy-based gateways use static routing, and only work with site-to-site connections.
References: https://docs.microsoft.com/en-us/azure/architecture/reference-architectures/hybrid-networking/vpn

QUESTION 2
You plan to migrate an SAP environment to Azure.
You need to create a design to facilitate end-user access to SAP applications over the Internet, while restricting user access to the virtual machines of the SAP application servers. What should you include in the design?

A. Configure a public IP address for each SAP application server
B. Deploy an internal Azure Standard Load Balancer for incoming connections
C. Use an SAP Web Dispatcher to route all incoming connections
D. Configure point-to-site VPN connections for each user

Correct Answer: C
Section:
Explanation:
1. A public internet user can reach the SAP Web-Dispatcher over port 443
2. The SAP Web-Dispatcher can reach the SAP Application server over port 443
3. The App Subnet accepts traffic on port 443 from 10.0.0.0/24
4. The SAP Application server sends traffic on port 30015 to the SAP DB server
5. The DB subnet accepts traffic on port 30015 from 10.0.1.0/24.

6. Public Internet Access is blocked on both App Subnet and DB Subnet.



References:
https://azure.microsoft.com/en-in/blog/sap-on-azure-architecture-designing-for-security/

QUESTION 3
You have an Azure subscription.
You deploy Active Directory domain controllers to Azure virtual machines.
You plan to deploy Azure for SAP workloads.
You plan to segregate the domain controllers from the SAP systems by using different virtual networks. You need to recommend a solution to connect the virtual networks. The solution must minimize costs.
What should you recommend?

A. a site-to-site VPN
B. virtual network peering
C. user-defined routing
D. ExpressRoute

Correct Answer: C
Section:
Explanation:
You can create custom, or user-defined, routes in Azure to override Azure's default system routes, or to add additional routes to a subnet's route table. In Azure, you create a route table, then associate the route table to zero or more virtual network subnets.
Incorrect Answers:
D: ExpressRoute is a costly solution.

QUESTION 4
You deploy an SAP environment on Azure.
Your company has a Service Level Agreement (SLA) of 99.99% for SAP.
You implement Azure Availability Zones that have the following components:
Redundant SAP application servers
ASCS/ERS instances that use a failover cluster
Database high availability that has a primary instance and a secondary instance
You need to validate the high availability configuration of the ASCS/ERS cluster.
What should you use?

A. SAP Web Dispatcher
B. Azure Traffic Manager
C. SAPControl
D. SAP Solution Manager

Correct Answer: C
Section:
Explanation:
Load balancers. These are used to distribute traffic to virtual machines in the application-tier subnet.For high availability, use the built-in SAP Web Dispatcher, Azure Load Balancer, or network appliances, depending on the traffic type (such as HTTP or SAPGUI) or the required network services, such as Secure Sockets Layer (SSL) termination.Reference:https://docs.microsoft.com/en-us/azure/architecture/reference-architectures/sap/sap-netweaver

QUESTION 5
You are deploying an SAP environment on Azure that will use an SAP HANA database server.
You provision an Azure virtual machine for SAP HANA by using the M64s virtual machine SKU.
You need to set the swap space by using the Microsoft Azure Linux Agent (waagent) configuration file. Which two settings should you configure? Each correct answer presents part of the solution.
NOTE: Each correct selection is worth one point.

A. ResourceDisk.EnableSwapEncryption=n
B. AutoUpdate.Enabled=n
C. ResourceDisk.SwapSizeMB=229376
D. ResourceDisk.EnableSwap=y

Correct Answer: C, D
Section:
Explanation:
To create a swap file in the directory that's defined by the ResourceDisk.MountPoint parameter, you can update the /etc/waagent.conf file by setting the following three parameters: ResourceDisk.Format=y ResourceDisk.EnableSwap=y ResourceDisk.SwapSizeMB=xx
Reference: https://support.microsoft.com/en-us/help/4010058/how-to-add-a-swap-file-in-linux-azure-virtual-machines

QUESTION 6
You plan to deploy an SAP environment on Azure.
You plan to store all SAP connection strings securely in Azure Key Vault without storing credentials on the Azure virtual machines that host SAP. What should you configure to allow the virtual machines to access the key vault?

A. Azure Active Directory (Azure AD) Privilege Identity Manager (PIM)
B. role-based access control (RBAC)
C. a Managed Service Identity (MSI)
D. the Custom Script Extension

Correct Answer: C
Section:
Explanation:
To reference a credential stored in Azure Key Vault, you need to:
1. Retrieve data factory managed identity
2. Grant the managed identity access to your Azure Key Vault
3. Create a linked service pointing to your Azure Key Vault.
4. Create data store linked service, inside which reference the corresponding secret stored in key vault.
Reference: https://docs.microsoft.com/bs-latn-ba/azure/data-factory/store-credentials-in-key-vault

QUESTION 7
You plan to deploy SAP application servers that run Windows Server 2016.
You need to use PowerShell Desired State Configuration (DSC) to configure the SAP application server once the servers are deployed. Which Azure virtual machine extension should you install on the servers?

A. the Azure DSC VM Extension
B. the Azure virtual machine extension
C. the Azure Chef extension
D. the Azure Enhanced Monitoring Extension for SAP

Correct Answer: A
Section:
Explanation:
The Azure Desired State Configuration (DSC) VM Extension is updated as-needed to support enhancements and new capabilities delivered by Azure, Windows Server, and the Windows Management Framework (WMF) that includes Windows PowerShell.
Reference:
https://docs.microsoft.com/en-us/powershell/scripting/dsc/getting-started/azuredscexthistory

QUESTION 8
You deploy an SAP environment on Azure by following the SAP workload on Azure planning and deployment checklist. You need to verify whether Azure Diagnostics is enabled.
Which cmdlet should you run?

A. Get-AzureVMAvailableExtension
B. Get-AzVmDiagnosticsExtension
C. Test-AzDeployment
D. Test-VMConfigForSAP

Vdumps

Correct Answer: B
Section:
Explanation:
The Get-AzVMDiagnosticsExtension cmdlet gets the settings of the Azure Diagnostics extension on a virtual machine. Incorrect Answers:
D: You can check the configuration of a virtual machine by calling the Test-VMConfigForSAP_GUI commandlet.
Reference:
https://docs.microsoft.com/en-us/powershell/module/az.compute/get-azvmdiagnosticsextension

QUESTION 9
This question-requires that you evaluate the underlined text to determine if it is correct.
You have an Azure resource group that contains the virtual machines for an SAP environment.
You must be assigned the Contributor role to grant permissions to the resource group.
Instructions: Review the underlined text. If it makes the statement correct, select "No change is needed". If the statement is incorrect, select the answer choice that makes the statement correct.

A. No change is needed
B. User Access Administrator
C. Managed Identity Contributor
D. Security Admin

Correct Answer: B
Section:
Explanation:

Contributor - Can create and manage all types of Azure resources but can't grant access to others. User Access Administrator - Lets you manage user access to Azure resources.
Reference:
https://docs.microsoft.com/en-us/azure/role-based-access-control/overview

QUESTION 10
You plan to migrate an SAP environment to Azure.
You need to design an Azure network infrastructure to meet the following requirements:
Prevent end users from accessing the database servers.
Isolate the application servers from the database servers.
Ensure that end users can access the SAP systems over the Internet.
Minimize the costs associated to the communications between the application servers and database servers. Which two actions should you include in the solution? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

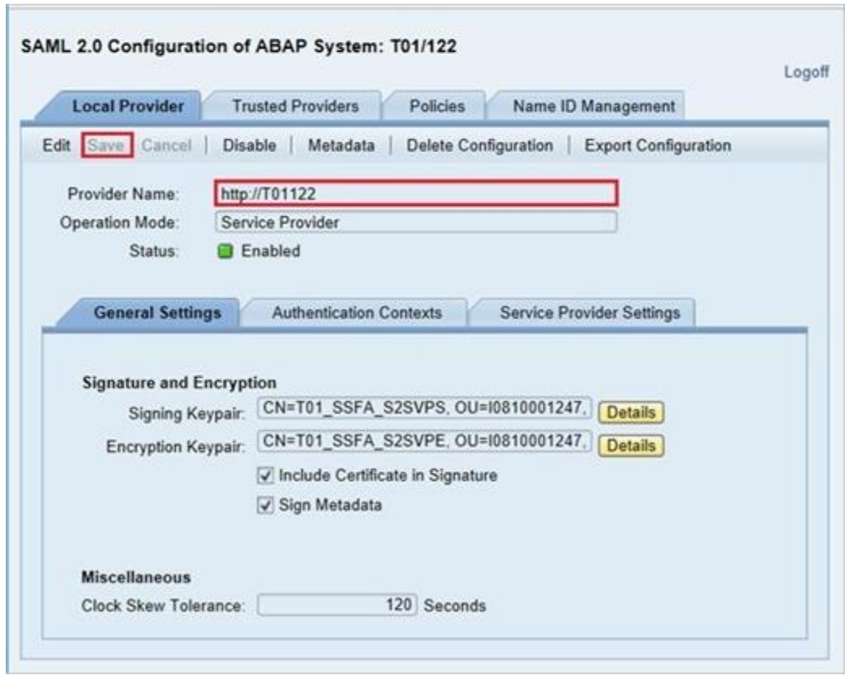
A. In the same Azure virtual network, segregate the SAP application servers and database servers by using different subnets and network security groups.
B. Segregate the SAP application servers and database servers by using Azure virtual networks.
C. Create a site-to-site VPN between the on-premises network and Azure.
D. Configure an internal Azure Standard Load Balancer for incoming connections.
E. Configure Azure Traffic Manager to route incoming connections.

Correct Answer: A, C
Section:

QUESTION 11
You are deploying SAP Fiori to an SAP environment on Azure.
You are configuring SAML 2.0 for an SAP Fiori instance named FPP that uses client 100 to authenticate to an Azure Active Directory (Azure AD) tenant. Which provider named should you use to ensure that the Azure AD tenant recognizes the SAP Fiori instance?

A. https://FPP
B. ldap://FPP
C. https://FPP100
D. ldap://FPP-100

Correct Answer: C
Section:
Explanation:
By default, the provider name is in the format <sid><client>. Azure AD expects the name in the format <protocol>://<name>. We recommend that you maintain the provider name as https://<sid><client> so you can configure multiple SAP Fiori ABAP engines in Azure AD.
Example:



Reference:
https://docs.microsoft.com/en-us/azure/active-directory/saas-apps/sap-fiori-tutorial

QUESTION 12
You have an SAP environment on Azure.
Your on-premises network connects to Azure by using a site-to-site VPN connection.
You need to alert technical support if the network bandwidth usage between the on-premises network and Azure exceeds 900 Mbps for 10 minutes. What should you use?

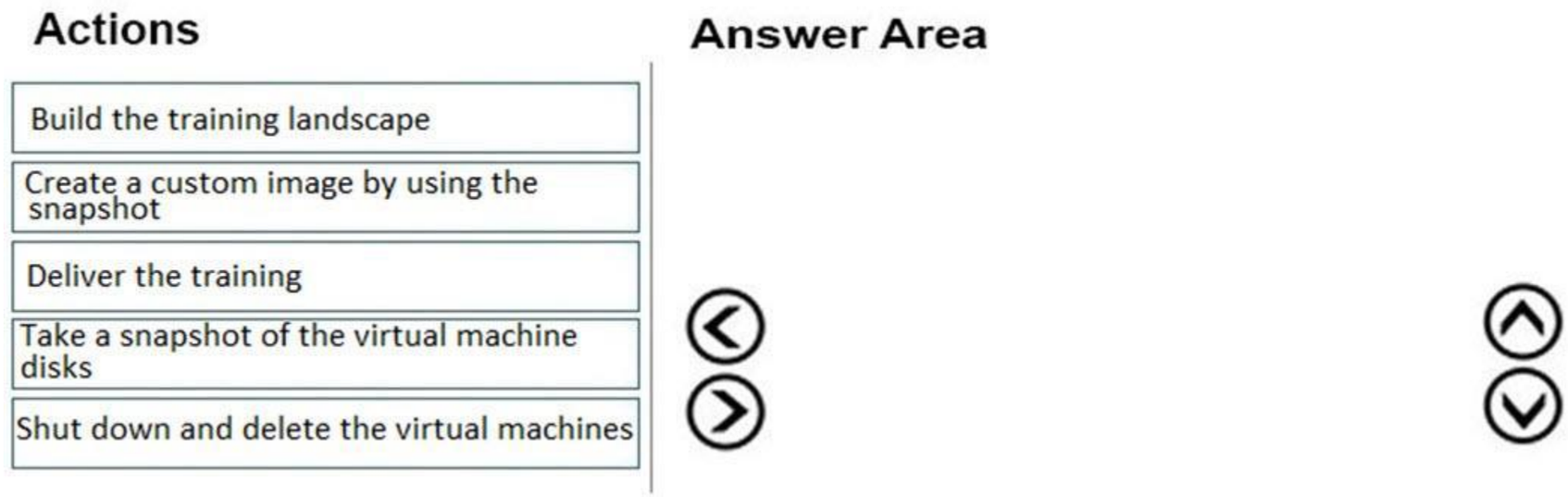
A. NIPING
B. Azure Enhanced Monitoring for SAP
C. Azure Network Watcher
D. Azure Monitor

Correct Answer: D
Section:
Explanation:
You set up alerts on Azure VPN Gateway metrics. Azure Monitor provides the ability to set up alerts for Azure resources. You can set up alerts for virtual network gateways of the "VPN" type. Metric: AverageBandwidth: Average combined bandwidth utilization of all site-to-site connections on the gateway.
Reference:
https://docs.microsoft.com/bs-latn-ba/azure/vpn-gateway/vpn-gateway-howto-setup-alerts-virtual-network-gateway-metric

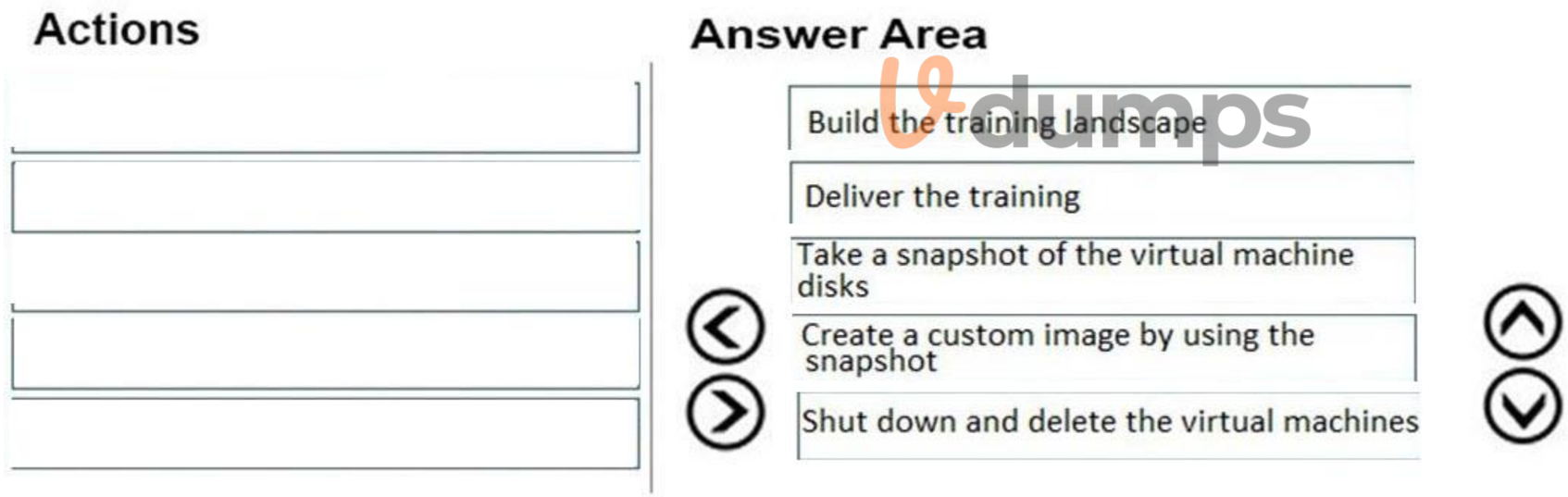
QUESTION 13
DRAG DROP
You have an SAP environment on Azure.
You are designing a training landscape that will be used 10 times a year.
You need to recommend a solution to create the training landscape. The solution must meet the following requirements:
Minimize the effort to build the training landscape.
Minimize costs.

In which order should you recommend the actions be performed for the first training session? To answer, move all actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:



Correct Answer:



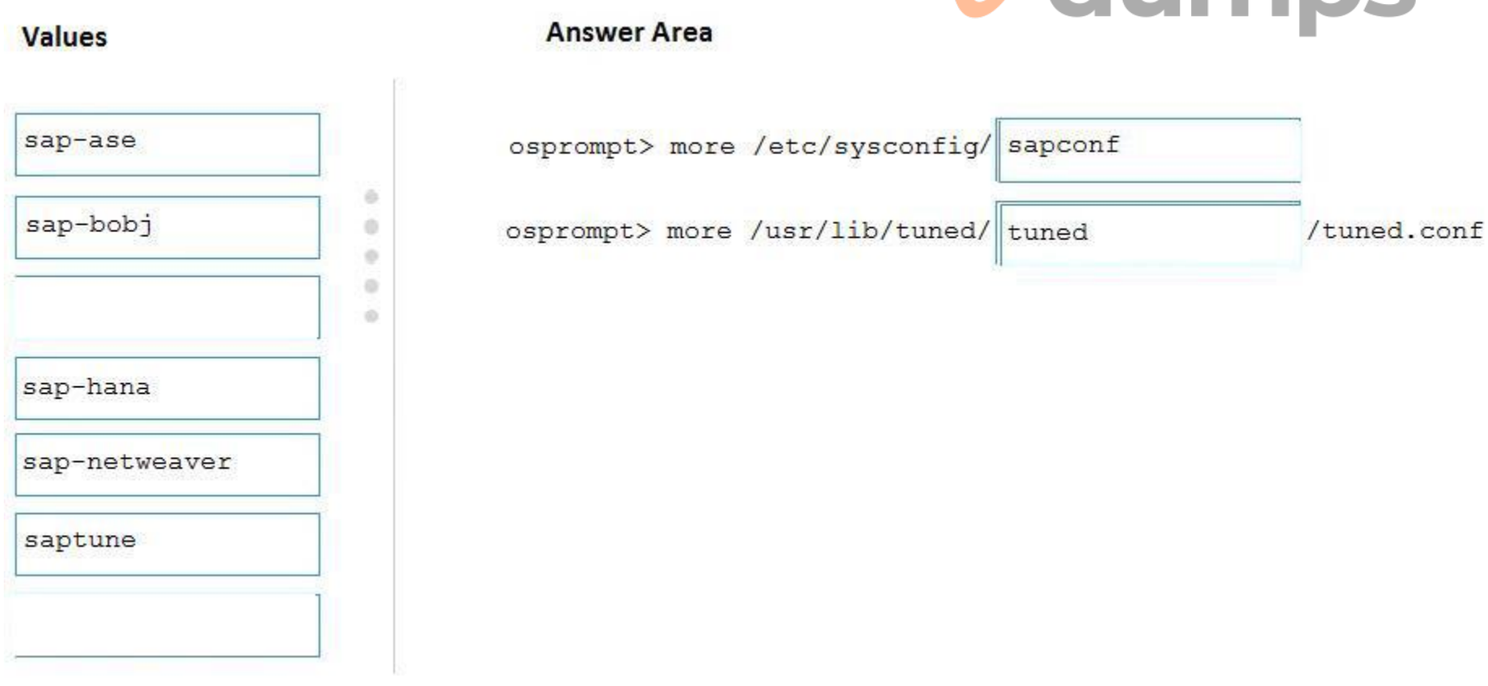
Section:
Explanation:
Reference:
https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/planning-guide

QUESTION 14
DRAG DROP
You are validating an SAP HANA on Azure (Large Instances) deployment.
You need to ensure that sapconf is installed and the kernel parameters are set appropriately for the active profile.
How should you complete the commands? 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:

Correct Answer:



Section:
Explanation:

Box 1: sapconf
The configuration is split into two parts:
/etc/sysconfig/sapconf
/usr/lib/tuned//tuned.conf
Box 2: tuned
References:
https://www.suse.com/c/sapconf-a-way-to-prepare-a-sles-system-for-sap-workload-part-2/

QUESTION 15
HOTSPOT
You have the following Azure Resource Manager template.

```
{
  "$schema": "https://schema.management.azure.com/schemas/2015-01-01/deploymentTemplate.json#",
  "contentVersion": "1.0.0.0",
  "parameters": {},
  "resources": [
    {
      "apiVersion": "2016-01-01",
      "type": "Microsoft.Storage/storageAccounts",
      "name": "[concat(copyIndex(), 'storage', uniqueString(resourceGroup().id))]",
      "location": "[resourceGroup().location]",
      "sku": {
        "name": "Premium_LRS"
      },
      "kind": "Storage",
      "properties":{},
      "copy": {
        "name": "storagecopy",
        "count": 6,
        "mode": "Serial",
        "batchSize": 1
      }
    }
  ]
}
```

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:

Statements	Yes	No
Six storage accounts will be created.	○	○
The storage accounts will be created in parallel.	○	○
The storage accounts will be replicated to multiple regions.	○	○

Answer Area:

Statements	Yes	No
Six storage accounts will be created.	○	○
The storage accounts will be created in parallel.	○	○
The storage accounts will be replicated to multiple regions.	○	○

Section:
Explanation:
Box 1: Yes
Count is 6.
Box 2: No
Mode is serial.
Box 3: Yes
Reference:
https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/copy-resources

QUESTION 16
HOTSPOT
You deploy SAP HANA by using SAP HANA on Azure (Large Instances).
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:

Statements	Yes	No
You can use SAP HANA Studio to monitor CPU, memory, network, and storage usage for SAP HANA on Azure (Large Instances).	○	○
Azure Enhanced Monitoring is required to monitor the performance of SAP HANA on Azure (Large Instances).	○	○
You can use the SAP HANA HW Configuration Check Tool (HWCCT) to monitor SAP HANA running on SAP HANA on Azure (Large Instances).	○	○

Answer Area:

Vdumps

Statements	Yes	No
You can use SAP HANA Studio to monitor CPU, memory, network, and storage usage for SAP HANA on Azure (Large Instances).	○	○
Azure Enhanced Monitoring is required to monitor the performance of SAP HANA on Azure (Large Instances).	○	○
You can use the SAP HANA HW Configuration Check Tool (HWCCT) to monitor SAP HANA running on SAP HANA on Azure (Large Instances).	○	○

Section:
Explanation:
Box 1: No
Box 2: Yes
The SAP Azure Enhanced Monitoring Extension allows for collecting diagnostic data including OS and Application performance counters from Azure VMs running SAP workloads.
Box 3: No
Reference:
http://www.deployazure.com/compute/virtual-machines/sap-azure-enhanced-monitoring-extension/

QUESTION 17
DRAG DROP
You need to connect SAP HANA on Azure (Large Instances) to an Azure Log Analytics workspace.
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:

Vdumps

Actions

- Install the Azure Enhanced Monitoring Extension for SAP on SAP HANA on Azure (Large Instances).
- On the gateway, run Import-Module OMSGateway and Add-OMSGatewayAllowedHost.
- Configure a Log Analytics gateway on the virtual network that has connectivity to the SAP HANA on Azure (Large Instances) instance.
- Install the Log Analytics client on the SAP HANA on Azure (Large Instances) instance.
- Configure a Log Analytics gateway server as a proxy for the Log Analytics client on SAP HANA on Azure (Large Instances).

Answer Area

Correct Answer:

Actions

- Configure a Log Analytics gateway server as a proxy for the Log Analytics client on SAP HANA on Azure (Large Instances).

Answer Area

- Install the Azure Enhanced Monitoring Extension for SAP on SAP HANA on Azure (Large Instances).
- Install the Log Analytics client on the SAP HANA on Azure (Large Instances) instance.
- Configure a Log Analytics gateway on the virtual network that has connectivity to the SAP HANA on Azure (Large Instances) instance.
- On the gateway, run Import-Module OMSGateway and Add-OMSGatewayAllowedHost.

Section:
Explanation:

Vdumps

Step 1: Install the Azure Enhanced Monitoring.
The SAP Azure Enhanced Monitoring Extension allows for collecting diagnostic data including OS and Application performance counters from Azure VMs running SAP workloads.
Step 2: Install the Log Analytics client on the SAP HANA on Azure (Large Instances) instance.
Step 3: Configure a Log Analytics gateway on the virtual network.
Step 4: On the gateway, run.
Reference:
http://www.deployazure.com/compute/virtual-machines/sap-azure-enhanced-monitoring-extension/
https://docs.microsoft.com/en-us/azure/azure-monitor/platform/gateway

QUESTION 18
HOTSPOT
You are planning the Azure network infrastructure for an SAP environment.
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:

Statements	Yes	No
You can segregate the SAP application layer and the DBMS layer into different virtual networks that are peered by using Global Vnet peering.	○	○
You can segregate the SAP application layer and the DBMS layer into different subnets in the same virtual network.	○	○
If you segregate the SAP application layer and the DBMS layer into different peered virtual networks, you will incur costs for the data transferred between the virtual networks.	○	○

Vdumps

Answer Area:

Statements	Yes	No
You can segregate the SAP application layer and the DBMS layer into different virtual networks that are peered by using Global Vnet peering.	○	○
You can segregate the SAP application layer and the DBMS layer into different subnets in the same virtual network.	○	○
If you segregate the SAP application layer and the DBMS layer into different peered virtual networks, you will incur costs for the data transferred between the virtual networks.	○	○

Section:
Explanation:
Box 1: Yes

Box 2: No
A design that's not supported is the segregation of the SAP application layer and the DBMS layer into different Azure virtual networks that aren't peered with each other. We recommend that you segregate the SAP application layer and DBMS layer by using subnets within an Azure virtual network instead of by using different Azure virtual networks.
Box 3: Yes
Be aware that network traffic between two peered Azure virtual networks is subject to transfer costs. Huge data volume that consists of many terabytes is exchanged between the SAP application layer and the DBMS layer. You can accumulate substantial costs if the SAP application layer and DBMS layer are segregated between two peered Azure virtual networks.
Reference:
https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/dbms_guide_general

QUESTION 19
DRAG DROP
You plan to deploy multiple SAP HANA virtual machines to Azure by using an Azure Resource Manager template.
How should you configure Accelerated Networking and Write Accelerator in the template? 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

- "false",
- "none",
- "true",

Answer Area

```
[
  "apiVersion": "2017-06-01",
  "type": "Microsoft.Network/networkInterfaces",
  "name": "[concat(parameters('vmName'), '-static')]",
  "location": "[resourceGroup().location]",
  "properties": {
       "enableAcceleratedNetworking":  Value

       "ipConfigurations": [
            {
                 "name": "ipconfig1",
                 "properties": {
                      "privateIPAllocationMethod": "Static",
                      "privateIPAddress": "[parameters('StaticIP')]",
                      "subnet": {
                           "id": "[variables('subnetRef')]"
                 }
             }
          }
       ]
  },
  {
   "apiVersion": "2014-12-01",
   "type": "Microsoft.Compute/virtualMachines",
   "name": "[parameters('vmName')]",
   "location": "[resourceGroup().location]",
   "dependsOn": [
   ],
   "properties": {
        "availabilitySet": {
          "id": "[resourceId('Microsoft.Compute/availabilitySets',parameters('AvailSetName'))]"
        },
        "hardwareProfile": {
             "vmSize": "Standard_M64ms"
        },
        "osProfile": {
             "computerName": "[parameters('vmName')]",
             "adminUsername": "[parameters('vmUserName')]",
             "adminPassword": "[parameters('vmPassword')]"
        },
        "storageProfile": {
             "imageReference": {
                  "publisher": "RedHat",
                  "offer": "RHEL-SAP-HANA",
                  "sku": "7.2",
                  "version": "latest"
             },
             "osDisk": {
                  "createOption": "FromImage"
             },
             "dataDisks": [
                  {
                       "lun": 7,
                       "name" : "[concat(parameters('vmName'), '-log')]",
                       "createOption": "Empty",
                       "writeAcceleratorEnabled":  Value

                       "diskSizeGB" : 2048,
                       "managedDisk" : {
                            "storageAccountType" : "Premium_LRS"
                       }
                  }
             ]
        },
        "networkProfile": {
          "networkInterfaces": [
              {
                "id":"[resourceId('Microsoft.Network/networkInterfaces',concat(parameters('vmName'), '-static'))]"
              }
          ]
        }
    }
]
```

Correct Answer:

Values

"false",

"none",

"true",

Answer Area

```
[
  "apiVersion": "2017-06-01",
  "type": "Microsoft.Network/networkInterfaces",
  "name": "[concat(parameters('vmName'), '-static')]",
  "location": "[resourceGroup().location]",
  "properties": {
       "enableAcceleratedNetworking": "true",

       "ipConfigurations": [
            {
                 "name": "ipconfig1",
                 "properties": {
                      "privateIPAllocationMethod": "Static",
                      "privateIPAddress": "[parameters('StaticIP')]",
                      "subnet": {
                           "id": "[variables('subnetRef')]"
                 }
             }
          }
       ]
 },
 {
  "apiVersion": "2014-12-01",
  "type": "Microsoft.Compute/virtualMachines",
  "name": "[parameters('vmName')]",
  "location": "[resourceGroup().location]",
  "dependsOn": [
  ],
  "properties": {
       "availabilitySet": {
          "id": "[resourceId('Microsoft.Compute/availabilitySets',parameters('AvailSetName'))]"
       },
       "hardwareProfile": {
            "vmSize": "Standard_M64ms"
       },
       "osProfile": {
            "computerName": "[parameters('vmName')]",
            "adminUsername": "[parameters('vmUserName')]",
            "adminPassword": "[parameters('vmPassword')]"
       },
       "storageProfile": {
            "imageReference": {
                 "publisher": "RedHat",
                 "offer": "RHEL-SAP-HANA",
                 "sku": "7.2",
                 "version": "latest"
            },
            "osDisk": {
                 "createOption": "FromImage"
            },
            "dataDisks": [
                 {
                      "lun": 7,
                      "name" : "[concat(parameters('vmName'), '-log')]",
                      "createOption": "Empty",

                      "writeAcceleratorEnabled": "true",

                      "diskSizeGB" : 2048,
                      "managedDisk" : {
                           "storageAccountType" : "Premium_LRS"
                      }
                 }
            ]
       },
       "networkProfile": {
         "networkInterfaces": [
            {
              "id":"[resourceId('Microsoft.Network/networkInterfaces',concat(parameters('vmName'), '-static'))]"
            }
         ]
       }
  }
]
```

Section:
Explanation:
Box 1: true
enableAcceleratedNetworking: If the network interface is accelerated networking enabled.
To further reduce network latency between Azure VMs, we [Micorosoft] recommend that you choose Azure Accelerated Networking. Use it when you deploy Azure VMs for an SAP workload, especially for the SAP application layer and the SAP DBMS layer.
Box 2: true
Write Accelerator should be used for the volumes that contain the transaction log or redo logs of a DBMS. It is not recommended to use Write Accelerator for the data volumes of a DBMS as the feature has been optimized to be used against log disks.
Reference:
https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/dbms_guide_general

QUESTION 20
HOTSPOT
Your on-premises network contains SAP and non-SAP applications.

You have JAVA-based SAP systems that use SPNEGO for single-sign on (SSO) authentication.
Your external portal uses multi-factor authentication (MFA) to authenticate users.
You plan to extend the on-premises authentication features to Azure and to migrate the SAP applications to Azure.
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:

Statements	Yes	No
Azure Active Directory (Azure AD) pass-through authentication can be used to enable MFA for on-premises users.	○	○
Azure Active Directory (Azure AD) password hash synchronization ensures that users can use on their on-premise credentials to authenticate to ABAP-based SAP systems on Azure.	○	○
Active Directory Federation Services (AD FS) can be used to enable MFA for on-premises users.	○	○

Answer Area:

Statements	Yes	No
Azure Active Directory (Azure AD) pass-through authentication can be used to enable MFA for on-premises users.	○	○
Azure Active Directory (Azure AD) password hash synchronization ensures that users can use on their on-premise credentials to authenticate to ABAP-based SAP systems on Azure.	○	○
Active Directory Federation Services (AD FS) can be used to enable MFA for on-premises users.	○	○

Section:
Explanation:
Box 1: No
Need AD FS for MFA. See box 3.
Note: Azure Active Directory (Azure AD) Pass-through Authentication allows your users to sign in to both on-premises and cloud-based applications using the same passwords. This feature is an alternative to Azure AD Password Hash Synchronization (see Box 2).
Box 2: Yes
Password hash synchronization is one of the sign-in methods used to accomplish hybrid identity. Azure AD Connect synchronizes a hash, of the hash, of a users password from an on-premises Active Directory instance to a cloud-based Azure AD instance.
Password hash synchronization is an extension to the directory synchronization feature implemented by Azure AD Connect sync. You can use this feature to sign in to Azure AD services like Office 365. You sign in to the service by using the same password you use to sign in to your on-premises Active Directory instance.
Box 3: Yes
If your organization is federated with Azure AD, you can use Azure Multi-Factor Authentication to secure AD FS resources, both on-premises and in the cloud. Azure MFA enables you to eliminate passwords and provide a more secure way to authenticate.
Reference:
https://docs.microsoft.com/en-us/azure/active-directory/hybrid/whatis-phs
https://docs.microsoft.com/en-us/windows-server/identity/ad-fs/operations/configure-ad-fs-and-azure-mfa

QUESTION 21

HOTSPOT
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:

Statements	Yes	No
Azure AD Connect is required to sign into Linux virtual machines hosted in Azure.	○	○
An SAP application server that runs on a Linux virtual machine in Azure must be joined to Active Directory.	○	○
Before you can sign into an SAP application server that runs on a Linux virtual machine in Azure, you must create a Managed Service Identity (MSI).	○	○

Answer Area:

Statements	Yes	No
Azure AD Connect is required to sign into Linux virtual machines hosted in Azure.	○	○
An SAP application server that runs on a Linux virtual machine in Azure must be joined to Active Directory.	○	○
Before you can sign into an SAP application server that runs on a Linux virtual machine in Azure, you must create a Managed Service Identity (MSI).	○	○

Section:
Explanation:
Box 1: No
To log in to a Linux VM with Azure AD credentials, install the Azure Active Directory login VM extension.
Note: Azure AD Connect is the Microsoft tool designed to meet and accomplish your hybrid identity goals.
Box 2: Yes
If you deploy SAP VMs in a cross-premises scenario, where on-premises Active Directory and DNS are extended in Azure, it is expected that the VMs are joining an on-premises domain.
Box 3: No
Reference:
https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/deployment-guide

QUESTION 22
HOTSPOT
You are integrating SAP HANA and Azure Active Directory (Azure AD).
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.

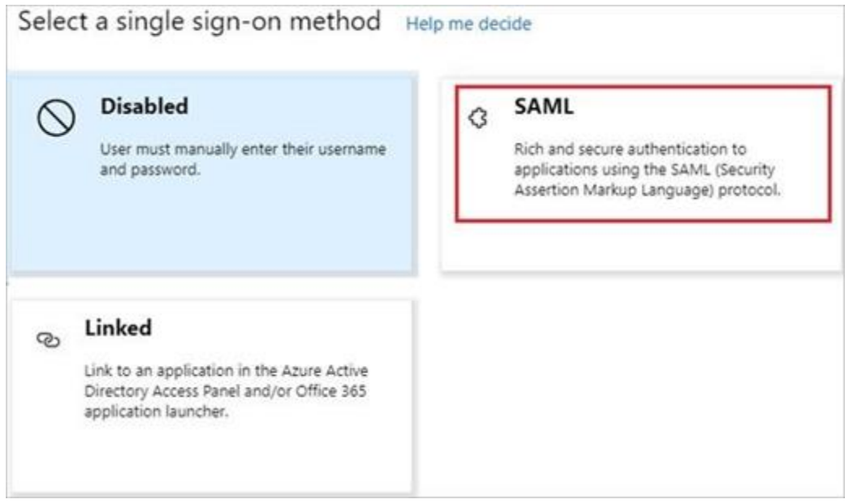
Hot Area:

Statements	Yes	No
SAP HANA supports SAML authentication for single-sign on (SSO).	○	○
SAP HANA supports OAuth2 authentication for single-sign on (SSO).	○	○
You can use Azure role-based access control (RBAC) to provide users with the ability to sign in to SAP HANA.	○	○

Answer Area:

Statements	Yes	No
SAP HANA supports SAML authentication for single-sign on (SSO).	○	○
SAP HANA supports OAuth2 authentication for single-sign on (SSO).	○	○
You can use Azure role-based access control (RBAC) to provide users with the ability to sign in to SAP HANA.	○	○

Section:
Explanation:
Box 1: Yes
To configure Azure AD single sign-on with SAP HANA, perform the following steps:
1. In the Azure portal, on the SAP HANA application integration page, select Single sign-on.
2. On the Select a Single sign-on method dialog, select SAML/WS-Fed mode to enable single sign-on.



Box 2: No
Box 3: No
Key security considerations for deploying SAP on Azure
Reference:
https://docs.microsoft.com/en-us/azure/active-directory/saas-apps/saphana-tutorial

QUESTION 23
HOTSPOT
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:

Statements	Yes	No
The Azure Enhanced Monitoring Extension for SAP stores performance data in an Azure Storage account.	○	○
You can enable the Azure Enhanced Monitoring Extension for SAP on a SUSE Linux Enterprise Server 12 (SLES 12) server by running the Set-AzVMAEMExtension cmdlet.	○	○
You can enable the Azure Enhanced Monitoring Extension for SAP on a server that runs Windows Server 2016 by running the Set-AzVMAEMExtension cmdlet.	○	○

Answer Area:

Statements	Yes	No
The Azure Enhanced Monitoring Extension for SAP stores performance data in an Azure Storage account.	○	○
You can enable the Azure Enhanced Monitoring Extension for SAP on a SUSE Linux Enterprise Server 12 (SLES 12) server by running the Set-AzVMAEMExtension cmdlet.	○	○
You can enable the Azure Enhanced Monitoring Extension for SAP on a server that runs Windows Server 2016 by running the Set-AzVMAEMExtension cmdlet.	○	○

Section:
Explanation:
Box 1: Yes
The SAP Azure Enhanced Monitoring Extension builds on top of the Azure Diagnostic extension, which stores its data in an Azure Storage account that you specify.
Box 2: Yes
The Set-AzVMAEMExtension cmdlet updates the configuration of a virtual machine to enable or update the support for monitoring for SAP systems that are installed on the virtual machine. The cmdlet installs the Azure Enhanced Monitoring (AEM) extension that collects the performance data and makes it discoverable for the SAP system. The -OSType specifies the OS. Either Windows or Linux.
Box 3: Yes
Reference:
https://docs.microsoft.com/en-us/azure/azure-monitor/platform/diagnostics-extension-overview
https://docs.microsoft.com/en-us/powershell/module/az.compute/set-azvmaemextension

QUESTION 24
DRAG DROP
You deploy an SAP environment on Azure.
You need to grant an SAP administrator read-only access to the Azure subscription. The SAP administrator must be prevented from viewing network information.
How should you configure the role-based access control (RBAC) role definition? 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:

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Values

- "*/read"
- "Microsoft.Authorization/*/read"
- "Microsoft.Compute/*/read"
- "Microsoft.Insights/*/read"
- "Microsoft.Management/managementGroups/read"
- "Microsoft.Network/*/read"
- "Microsoft.Resources/*/read"
- "Microsoft.Storage/*/read"

Answer Area

```
{
"Name": "CustomRole001",
"IsCustom": true,
"Description": "",
"Actions": [ ],
"NotActions": [ ],
"DataCtions": [],
"AssignableScopes": ["/subscriptions/ 0eaef253-d1ee-423e-a95a-418939ee14ae"]
}
```

Correct Answer:

Values

- "Microsoft.Authorization/*/read"
- "Microsoft.Compute/*/read"
- "Microsoft.Insights/*/read"
- "Microsoft.Management/managementGroups/read"
- "Microsoft.Resources/*/read"
- "Microsoft.Storage/*/read"

Answer Area

```
{
"Name": "CustomRole001",
"IsCustom": true,
"Description": "",
"Actions": [ "*/read" ],
"NotActions": [ "Microsoft.Network/*/read" ],
"DataCtions": [],
"AssignableScopes": ["/subscriptions/ 0eaef253-d1ee-423e-a95a-418939ee14ae"]
}
```

Section:

Explanation:

Box 1: "*/read"

"*/read" allows you to view everything in the subscription.

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You need to grant an SAP administrator read-only access to the Azure subscription
Box 2: "Microsoft.Network/*/read"
The SAP administrator must be prevented from viewing network information.

QUESTION 25
You have an SAP Cloud Platform subscription and an Azure Active Directory (Azure AD) tenant.
You need to ensure that Azure AD users can access SAP Cloud App by using their Azure AD credentials.
What should you configure?

A. Active Directory Domain Services (AD DS)
B. SAP Cloud Platform Identity Authentication
C. A conditional access policy
D. SAP Cloud Connector

Correct Answer: B
Section:
Explanation:
When you integrate SAP Cloud Platform Identity Authentication with Azure AD, you can:
Control in Azure AD who has access to SAP Cloud Platform Identity Authentication.
Enable your users to be automatically signed-in to SAP Cloud Platform Identity Authentication with their Azure AD accounts. Manage your accounts in one central location - the Azure portal.
Reference:
https://docs.microsoft.com/en-us/azure/active-directory/saas-apps/sap-hana-cloud-platform-identity-authentication-tutorial

QUESTION 26
You migrate an SAP environment to Azure.
You need to inspect all the outbound traffic from the SAP application servers to the Internet.
Which two Azure resources should you use? Each correct answer presents part of the solution.
NOTE: Each correct selection is worth one point.

A. Azure Traffic Manager
B. Azure Firewall
C. Network Performance Monitor
D. Azure user-defined routes
E. Azure Load Balancer NAT rules
F. a Web Application Firewall (WAF) for Azure Application Gateway

Correct Answer: A, F
Section:
Explanation:

01 - Design an Azure Solution to Support SAP Workloads
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
Litware, Inc. is an international manufacturing company that has 3,000 employees.
Litware has two main offices. The offices are located in Miami, FL, and Madrid, Spain.
Existing Environment
Infrastructure
Litware currently uses a third-party provider to host a datacenter in Miami and a disaster recovery datacenter in Chicago, IL.
The network contains an Active Directory domain named litware.com. Litware has two third-party applications hosted in Azure.
Litware already implemented a site-to-site VPN connection between the on-premises network and Azure.
SAP Environment
Litware currently runs the following SAP products:
Enhancement Pack6 for SAP ERP Central Component 6.0 (SAP ECC 6.0)
SAP Extended Warehouse Management (SAP EWM)
SAP Supply Chain Management (SAP SCM)
SAP NetWeaver Process Integration (PI)
SAP Business Warehouse (SAP BW)
SAP Solution Manager
All servers run on the Windows Server platform. All databases use Microsoft SQL Server. Currently, you have 20 production servers.
You have 30 non-production servers including five testing servers, five development servers, five quality assurance (QA) servers, and 15 pre-production servers.
Currently, all SAP applications are in the litware.com domain.
Problem Statements
The current version of SAP ECC has a transaction that, when run in batches overnight, takes eight hours to complete. You confirm that upgrading to SAP Business Suite on HANA will improve performance because of code changes and the SAP HANA database platform.
Litware is dissatisfied with the performance of its current hosted infrastructure vendor. Litware experienced several hardware failures and the vendor struggled to adequately support its 24/7 business operations.
Requirements
Business Goals
Litware identifies the following business goals:
Increase the performance of SAP ECC applications by moving to SAP HANA. All other SAP databases will remain on SQL Server. Move away from the current infrastructure vendor to increase the stability and availability of the SAP services. Use the new Environment, Health and Safety (EH&S) in Recipe Management function.
Ensure that any migration activities can be completed within a 48-hour period during a weekend.
Planned Changes
Litware identifies the following planned changes:
Migrate SAP to Azure.
Upgrade and migrate SAP ECC to SAP Business Suite on HANA Enhancement Pack 8.
Technical Requirements
Litware identifies the following technical requirements:
Implement automated backups.
Support load testing during the migration.
Identify opportunities to reduce costs during the migration.
Continue to use the litware.com domain for all SAP landscapes.
Ensure that all SAP applications and databases are highly available.
Establish an automated monitoring solution to avoid unplanned outages.
Remove all SAP components from the on-premises network once the migration is complete.
Minimize the purchase of additional SAP licenses. SAP HANA licenses were already purchased.
Ensure that SAP can provide technical support for all the SAP landscapes deployed to Azure.

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QUESTION 1
You are evaluating the migration plan.
Licensing for which SAP product can be affected by changing the size of the virtual machines?

A. SAP ECC
B. SAP Solution Manager
C. PI
D. SAP SCM

Correct Answer: A
Section:
Explanation:
Scenario: Increase the performance of SAP ECC applications by moving to SAP HANA.
References:
https://azure.microsoft.com/en-us/pricing/details/virtual-machines/rhel-sap-hana/

02 - Design an Azure Solution to Support SAP Workloads

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 deploy SAP HANA on Azure (Large Instances).
You need to back up the SAP HANA database to Azure.
Solution: You create a Recovery Services vault and a backup policy.
Does this meet the goal?

A. Yes
B. No

Correct Answer: A
Section:
Explanation:
Backup architecture
The backup process begins by creating a Recovery services vault in Azure. This vault will be used to store the backups and recovery points created over time. The Azure VM running SAP HANA server is registered with the vault, and the databases to be backed-up are discovered. To enable the Azure Backup service to discover databases, a preregistration script must be run on the HANA server as a root user.
This script creates AZUREWLBACKUPHANAUSER DB user and a corresponding key with the same name in hdbuserstore. Refer to the setting up permissions section to understand more about what the script does. Azure Backup Service now installs the Azure Backup Plugin for HANA on the registered SAP HANA server. The AZUREWLBACKUPHANAUSER DB user created by the preregistration script is used by the Azure Backup Plugin for HANA to perform all backup and restore operations. If you attempt to configure backup for SAP HANA DBs without running this script, you might receive the following error: UserErrorHanaScriptNotRun.
To configure backup on the databases that are discovered, choose the required backup policy and enable backups. Once the backup is configured, Azure Backup service sets up the Backint parameters at the DATABASE level on the protected SAP HANA server. The Azure Backup Plugin for HANA maintains all the backup schedules and policy details. It triggers the scheduled backups and communicates with the HANA Backup Engine through the Backint APIs. The HANA Backup Engine returns a Backint stream with the data to be backed up.
All the scheduled backups and on-demand backups (triggered from the Azure portal) that are either full or differential are initiated by the Azure Backup Plugin for HANA. However, log backups are managed and triggered by HANA Backup Engineitself.
Reference:
https://docs.microsoft.com/en-us/azure/backup/sap-hana-db-about
https://docs.microsoft.com/en-us/azure/backup/backup-azure-sap-hana-database#configure-backup

QUESTION 2
You have an SAP environment on Azure that uses multiple subscriptions.

To meet GDPR requirements, you need to ensure that virtual machines are deployed only to the West Europe and North Europe Azure regions. Which Azure components should you use?

A. Azure resource locks and the Compliance admin center
B. Azure resource groups and role-based access control (RBAC)
C. Azure management groups and Azure Policy
D. Azure Security Center and Azure Active Directory (Azure AD) groups

Correct Answer: C
Section:
Explanation:
Azure Policy enables you to set policies to conform to the GDPR. Azure Policy is generally available today at no additional cost to Azure customers. You can use Azure Policy to define and enforce policies that help your cloud environment become compliant with internal policies as well as external regulations.
Azure Policy is deeply integrated into Azure Resource Manager and applies across all resources in Azure. Individual policies can be grouped into initiatives to quickly implement multiple rules. You can also use Azure Policy in a wide range of compliance scenarios, such as ensuring that your data is encrypted or remains in a specific region as part of GDPR compliance. Microsoft is the only hyperscale cloud provider to offer this level of policy integration built in to the platform for no additional charge.
References: https://azure.microsoft.com/de-de/blog/new-capabilities-to-enable-robust-gdpr-compliance/

QUESTION 3
A customer that has a large enterprise SAP environment plans to migrate to Azure. The environment uses servers that run Windows Server 2016 and Microsoft SQL Server.
The environment is critical and requires a comprehensive business continuity and disaster recovery (BCDR) strategy that minimizes the recovery point objective (RPO) and the recovery time objective (RTO).
The customer wants a resilient environment that has a secondary site that is at least 250 kilometers away.
You need to recommend a solution for the customer.
Which two solutions should you recommend? Each correct answer presents part of the solution.
NOTE: Each correct selection is worth one point.

A. warm standby virtual machines in paired regions
B. Azure Traffic Manager to route incoming traffic
C. warm standby virtual machines in an Azure Availability Set that uses geo-redundant storage (GRS)
D. an internal load balancer to route Internet traffic
E. warm standby virtual machines in Azure Availability Zones

Correct Answer: A, C
Section:
Explanation:
A: An Azure Region Pair is a relationship between two Azure Regions within the same geographic region for disaster recovery purposes. If one of the regions were to experience a disaster or failure, then the services in that region will automatically failover to that regions secondary region in the pair.
C: For increased availability, you can deploy two VMs with two HANA instances within an Azure availability set that uses HANA system replication for availability. References: https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/sap-hana-availability-one-region

QUESTION 4
You plan to deploy an SAP environment on Azure that will use Azure Availability Zones.
Which load balancing solution supports the deployment?

A. Azure Basic Load Balancer
B. Azure Standard Load Balancer
C. Azure Application Gateway v1 SKU

Correct Answer: B

Section:
Explanation:
When you deploy Azure VMs across Availability Zones and establish failover solutions within the same Azure region, some restrictions apply:
You can't use an Azure Basic Load Balancer to create failover cluster solutions based on Windows Server Failover Clustering or Linux Pacemaker. Instead, you need to use the Azure Standard Load Balancer SKU. References:
https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/sap-ha-availability-zones

QUESTION 5
You have an Azure subscription.
Your company has an SAP environment that runs on SUSE Linux Enterprise Server (SLES) servers and SAP HANA. The environment has a primary site and a disaster recovery site. Disaster recovery is based on SAP HANA system replication. The SAP ERP environment is 4 TB and has a projected growth of 5% per month.
The company has an uptime Service Level Agreement (SLA) of 99.99%, a maximum recovery time objective (RTO) of four hours, and a recovery point objective (RPO) of 10 minutes. You plan to migrate to Azure.
You need to design an SAP landscape for the company.
Which options meet the company's requirements?

A. Azure virtual machines and SLES for SAP application servers
SAP HANA on Azure (Large Instances) that uses SAP HANA system replication for high availability and disaster recovery
B. ASCS/ERS and SLES clustering that uses the Pacemaker fence agent
SAP application servers deployed to an Azure Availability Zone
SAP HANA on Azure (Large Instances) that uses SAP HANA system replication for database high availability and disaster recovery
C. SAP application instances deployed to an Azure Availability Set
SAP HANA on Azure (Large Instances) that uses SAP HANA system replication for database high availability and disaster recovery
D. ASCS/ERS and SLES clustering that uses the Azure fence agent
SAP application servers deployed to an Azure Availability Set
SAP HANA on Azure (Large Instances) that uses SAP HANA system replication for database high availability and disaster recovery

Correct Answer: B
Section:
Explanation:
With Availability Zones, Azure offers industry best 99.99% VM uptime SLA.
References: https://docs.microsoft.com/en-us/azure/traffic-manager/traffic-manager-faqs

QUESTION 6
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 deploy SAP HANA on Azure (Large Instances).
You need to back up the SAP HANA database to Azure.
Solution: You configure DB13 to back up directly to a local disk.
Does this meet the goal?

A. Yes
B. No

Correct Answer: B
Section:
Explanation:
You need to back up the SAP HANA database to Azure, not to a local disk.
References: https://docs.microsoft.com/en-us/azure/backup/sap-hana-db-about https://docs.microsoft.com/en-us/azure/backup/backup-azure-sap-hana-database#configure-backup

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 plan to migrate an SAP HANA instance to Azure.
You need to gather CPU metrics from the last 24 hours from the instance.
Solution: You use Monitoring from the SAP HANA Cockpit.
Does this meet the goal?

A. Yes
B. No

Correct Answer: A
Section:
Explanation:
The SAP HANA cockpit provides a single point of access to a range of SAP HANA administration and monitoring tasks. It is used to monitor and ensure the overall health of the system. The HANA Monitoring dashboard also visualizes key HANA Metrics of SAP HANA system.
Reference: https://developers.sap.com/tutorials/dt-monitoring-hana-part1.html https://help.sap.com/viewer/afa922439b204e9caf22c78b6b69e4f2/2.10.0.0/en-US https://www.hanatutorials.com/p/hana-monitoring-dashboard.html

QUESTION 8
You deploy an SAP environment on Azure.
You need to validate the load distribution to the application servers.
What should you use?

A. SAPControl
B. SAP Solution Manager
C. Azure Monitor
D. SAP Web Dispatcher

Correct Answer: D
Section:
Explanation:
Load balancers. These are used to distribute traffic to virtual machines in the application-tier subnet. For high availability, use the built-in SAP Web Dispatcher, Azure Load Balancer, or network appliances, depending on the traffic type (such as HTTP or SAPGUI) or the required network services, such as Secure Sockets Layer (SSL) termination.
Reference: https://docs.microsoft.com/en-us/azure/architecture/reference-architectures/sap/sap-netweaver

QUESTION 9
HOTSPOT
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:

Statements	Yes	No
SAP HANA certification for M-Series Azure virtual machines requires that Write Accelerator be enabled on the /hana/data volume.	○	○
SAP HANA certification for M-Series Azure virtual machines requires that Write Accelerator be enabled on the /hana/log volume.	○	○
To enable Write Accelerator, you must use Azure Premium managed disks.	○	○

Answer Area:

Statements	Yes	No
SAP HANA certification for M-Series Azure virtual machines requires that Write Accelerator be enabled on the /hana/data volume.	○	○
SAP HANA certification for M-Series Azure virtual machines requires that Write Accelerator be enabled on the /hana/log volume.	○	○
To enable Write Accelerator, you must use Azure Premium managed disks.	○	○

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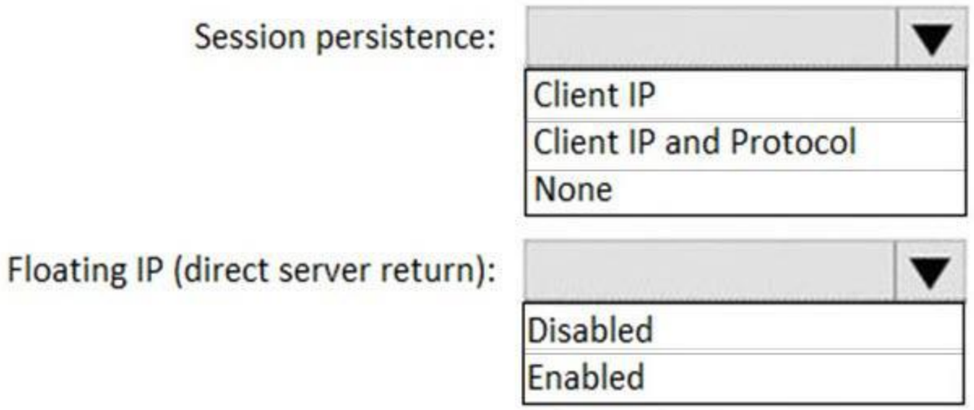
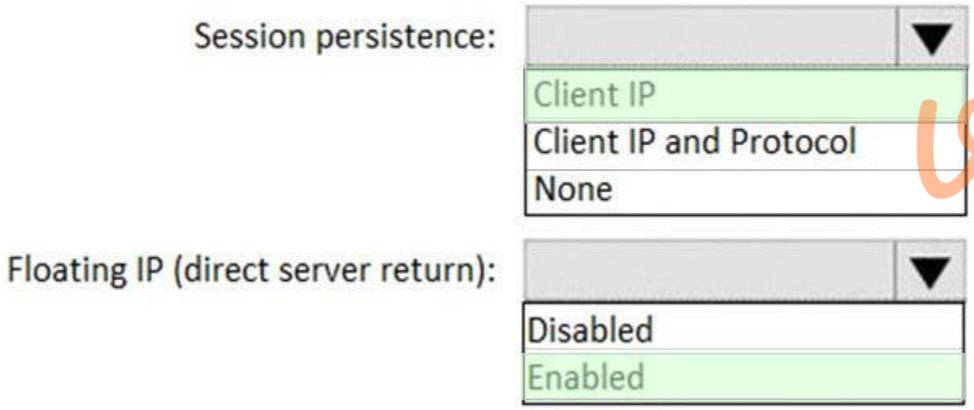
Section:
Explanation:
Box 1: No
Box 2: Yes
The minimum SAP HANA certified conditions for the different storage types are:
Azure Premium SSD - /hana/log is required to be cached with Azure Write Accelerator. The /hana/data volume could be placed on Premium SSD without Azure Write Accelerator or on Ultra disk
Box 3: Yes
References:
https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/hana-vm-operations-storage

QUESTION 10
HOTSPOT
You plan to deploy a highly available ASCS instance to SUSE Linux Enterprise Server (SLES) virtual machines in Azure.
You are configuring an internal Azure Standard Load Balancer for the ASCS instance.
How should you configure the internal Standard Load Balancer? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.

Hot Area:



Answer Area:



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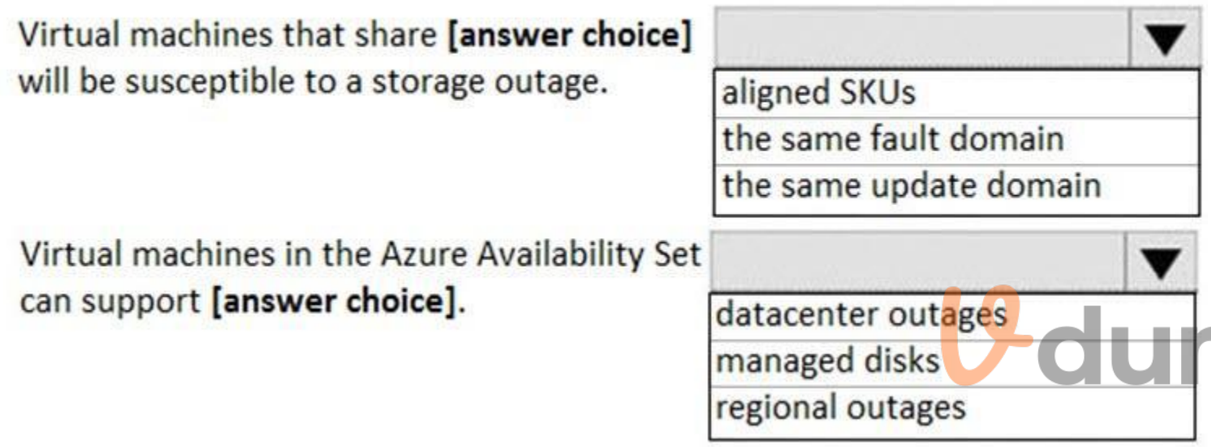
Section:
Explanation:
Box 1: Client IP
The standard load balancer allows stateful sessions to remain as there are no IP address changes with this method.
Box 2: Enabled
Make sure to enable Floating IP.
References:
https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/high-availability-guide-suse

QUESTION 11
HOTSPOT
You have an Azure Availability Set that is configured as shown in the following exhibit.

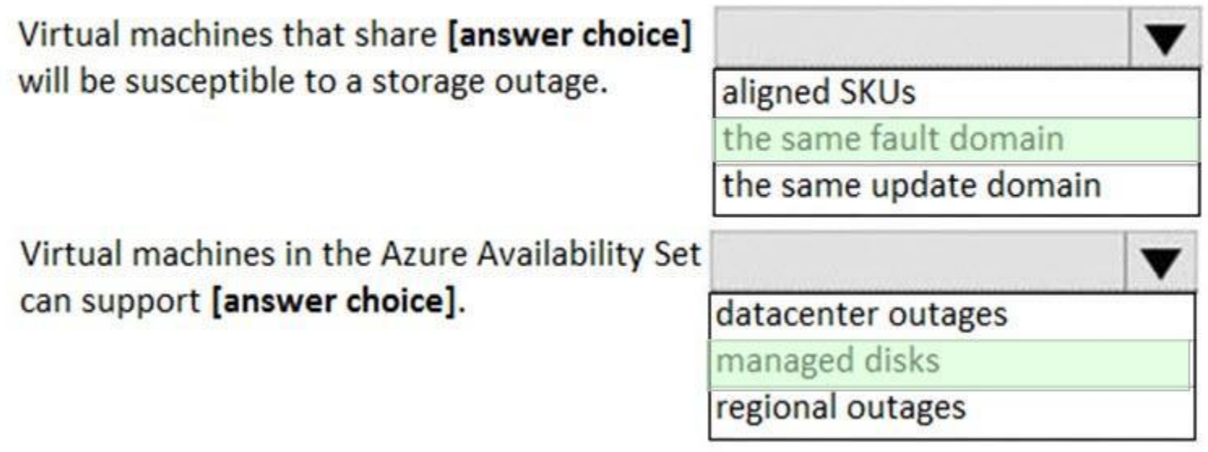
```
PS Azure:\> get-azavailabilityset | Select Sku, PlatformFaultDomainCount, PlatformUpdateDomainCount, name, type | FL

Sku                          : Aligned
PlatformFaultDomainCount     : 2
PlatformUpdateDomainCount    : 4
Name                         : SAP-Databases-AS
Type                         : Microsoft.Compute/availabilitySets
```

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:

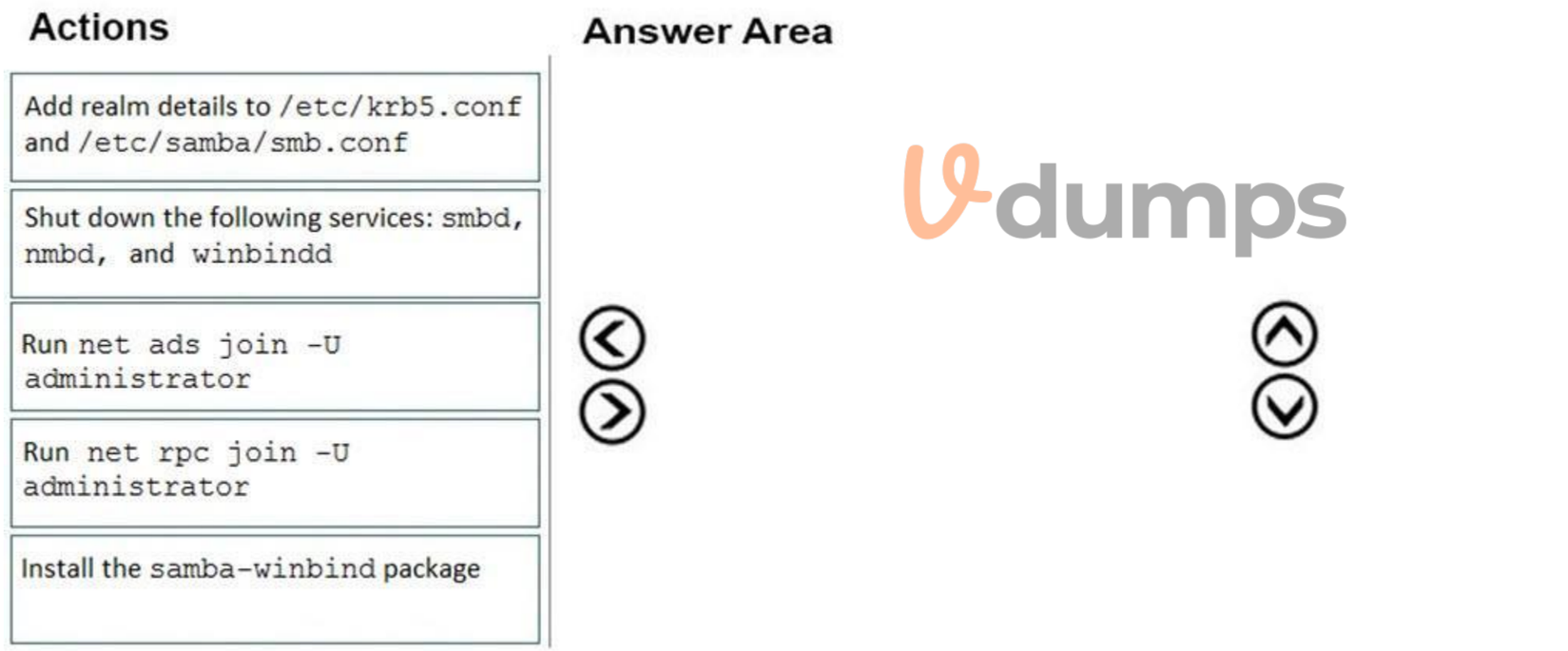


Section:

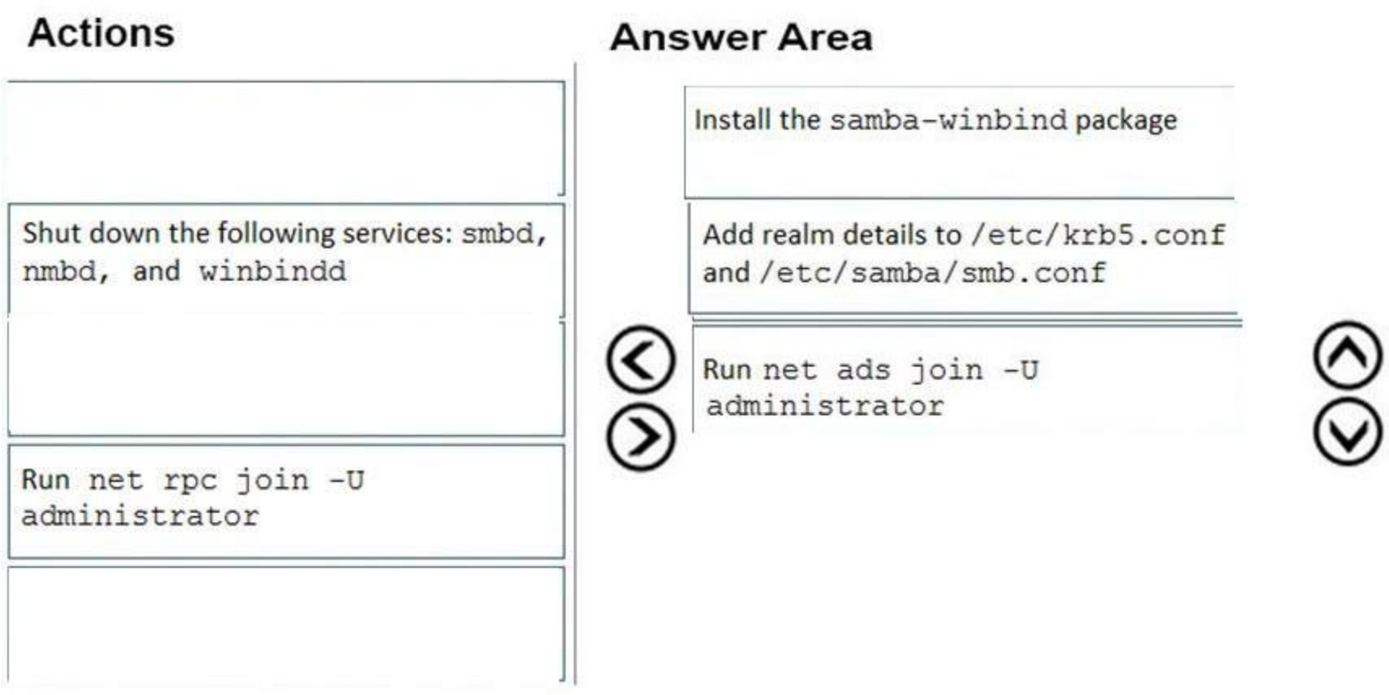
Explanation:
Box 1: the same fault domain
Fault domains define the group of virtual machines that share a common power source and network switch. If a storage fault domain fails due to hardware or software failure, only the VM instance with disks on the storage fault domain fails.
Box 2: managed disks
Managed disks provide better reliability for Availability Sets by ensuring that the disks of VMs in an Availability Set are sufficiently isolated from each other to avoid single points of failure. It does this by automatically placing the disks in different storage fault domains (storage clusters) and aligning them with the VM fault domain.
References:
https://docs.microsoft.com/en-us/azure/virtual-machines/windows/manage-availability

QUESTION 12
DRAG DROP
Your on-premises network contains an Active Directory domain.
You have an SAP environment on Azure that runs on SUSE Linux Enterprise Server (SLES) servers.
You configure the SLES servers to use domain controllers as their NTP servers and their DNS servers.
You need to join the SLES servers to the Active Directory domain.
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:



Correct Answer:



Section:

Explanation:

Step 1: Install the samba-winbind package

Install samba-winbind

Step 2: Add realm details to /etc/krb5.conf and /etc/samba/smb.conf

Edit files - best way to do this is to use yast on test machine and copy files from it

In following examples you need to replace EXAMPLE/EXAMPLE.COM/.example.com with your values/settings /etc/samba/smb.conf

[global]

workgroup = EXAMPLE

usershare allow guests = NO #disallow guests from sharing

idmap gid = 10000-20000

idmap uid = 10000-20000

kerberos method = secrets and keytab

realm = EXAMPLE.COM

security = ADS

template homedir = /home/%D/%U

template shell = /bin/bash

winbind offline logon = yes

winbind refresh tickets = yes

/etc/krb5.conf

[libdefaults]

default_realm = EXAMPLE.COM

clockskew = 300

[realms]

EXAMPLE.COM = {

kdc = PDC.EXAMPLE.COM

default_domain = EXAMPLE.COM

admin_server = PDC.EXAMPLE.COM

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}
..
Step 3: Run net ads join -U administrator
Join the SLES 12 Server to the AD domain
References:
https://www.suse.com/support/kb/doc/?id=7018461

QUESTION 13
HOTSPOT
You have SAP ERP on Azure.
For SAP high availability, you plan to deploy ASCS/ERS instances across Azure Availability Zones and to use failover clusters.
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:

Statements	Yes	No
To create a failover solution, you can use an Azure Basic Load Balancer for Azure virtual machines deployed across the Azure Availability Zones.	○	○
You can deploy Azure Availability Sets within an Azure Availability Zone.	○	○
The solution must use Azure managed disks.	○	○

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Answer Area:

Statements	Yes	No
To create a failover solution, you can use an Azure Basic Load Balancer for Azure virtual machines deployed across the Azure Availability Zones.	○	●
You can deploy Azure Availability Sets within an Azure Availability Zone.	●	○
The solution must use Azure managed disks.	●	○

Section:
Explanation:
Box 1: No
You can't use an Azure Basic Load Balancer to create failover cluster solutions based on Windows Server Failover Clustering or Linux Pacemaker. Instead, you need to use the Azure Standard Load Balancer SKU.
Box 2: Yes
Azure Availability Zones is one of the high-availability features that Azure provides. Using Availability Zones improves the overall availability of SAP workloads on Azure. The SAP application layer is deployed across one Azure availability set. For high availability of SAP Central Services, you can deploy two VMs in a separate availability set.
Box 3: Yes
You must use Azure Managed Disks when you deploy to Azure Availability Zones.

Reference:
https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/sap-ha-availability-zones

QUESTION 14
HOTSPOT
You are deploying an SAP environment across Azure Availability Zones. The environment has the following components:
ASCS/ERS instances that use a failover cluster
SAP application servers across the Azure Availability Zones
Database high availability by using a native database solution
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:

Statements	Yes	No
Network latency is a limiting factor when deploying DBMS instances that use synchronous replication across the Azure Availability Zones.	○	○
The performance of SAP systems can be validated by using ABAPMeter.	○	○
To help identity the best Azure Availability Zones for deploying the SAP components, you can use NIPING to verify network latency between the zones.	○	○

Answer Area:

Statements	Yes	No
Network latency is a limiting factor when deploying DBMS instances that use synchronous replication across the Azure Availability Zones.	○	○
The performance of SAP systems can be validated by using ABAPMeter.	○	○
To help identity the best Azure Availability Zones for deploying the SAP components, you can use NIPING to verify network latency between the zones.	○	○

Section:
Explanation:
Box 1: No
Azure Availability Zones are physically separate locations within an Azure region protecting customers' applications and data from datacenter-level failures. It is good for applications that require low-latency synchronous replication with protection from datacenter-level failures.
Box 2: Yes
AAP application server to database server latency can be tested with ABAPMeter report /SSA/CAT.
Box 3: Yes
To analyze network issue or measure network metrics you can test the connection using SAP's NIPING program. You can use NIPING to analyze the network connection between any two machines running SAP software.
Reference:
https://azure.microsoft.com/sv-se/blog/azure-availability-zones-expand-with-new-services-and-to-new-regions-in-europe-and-united-states/
https://azure.microsoft.com/en-us/blog/sap-on-azure-architecture-designing-for-performance-and-scalability/

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https://wiki.scn.sap.com/wiki/pages/viewpage.action?pageId=360974069

02 - Operationalize Azure SAP Architecture

QUESTION 1
You need direct connectivity from an on-premises network to SAP HANA (Large Instances). The solution must meet the following requirements:
Minimize administrative effort.
Provide the highest level of resiliency.
What should you use?

A. ExpressRoute Global Reach
B. Linux IPTables
C. ExpressRoute
D. NGINX as a reverse proxy

Correct Answer: C
Section:
Explanation:
The Azure network functionality used is:
Azure virtual networks are connected to the ExpressRoute circuit that connects to your on-premises network assets. An ExpressRoute circuit that connects on-premises to Azure should have a minimum bandwidth of 1 Gbps or higher. This minimal bandwidth allows adequate bandwidth for the transfer of data between on-premises systems and systems that run on VMs. It also allows adequate bandwidth for connection to Azure systems from on-premises users. All SAP systems in Azure are set up in virtual networks to communicate with each other.
Reference: https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/hana-network-architecture

QUESTION 2
You have an on-premises SAP environment hosted on VMware vSphere.
You plan to migrate the environment to Azure by using Azure Site Recovery.
You need to prepare the environment to support Azure Site Recovery.
What should you deploy first?

A. an on-premises data gateway to vSphere
B. Microsoft System Center Virtual Machine Manager (VMM)
C. an Azure Backup server
D. a configuration server to vSphere

Correct Answer: D
Section:
Explanation:
When you set up disaster recovery for on-premises VMware VMs, Site Recovery needs access to the vCenter Server/vSphere host so that the Site Recovery process server can automatically discover VMs, and fail them over as needed. By default the process server runs on the Site Recovery configuration server. Add an account for the configuration server to connect to the vCenter Server/vSphere host.
Reference: https://docs.microsoft.com/en-us/azure/site-recovery/vmware-azure-manage-vcenter

QUESTION 3
This question-requires that you evaluate the underlined text to determine if it is correct.
When deploying SAP HANA to an Azure virtual machine, you can enable Write Accelerator to reduce the latency between the SAP application servers and the database layer. Instructions: Review the underlined text. If it makes the statement correct, select "No change is needed". If the statement is incorrect, select the answer choice that makes the statement correct.

A. No change is needed

B. install the Mellanox driver
C. start the NIPING service
D. enable Accelerated Networking

Correct Answer: D
Section:
Explanation:
To further reduce network latency between Azure VMs, we [Microsoft] recommend that you choose Azure Accelerated Networking. Use it when you deploy Azure VMs for an SAP workload, especially for the SAP application layer and the SAP DBMS layer.
Incorrect Answers:
A: Write Accelerator is a disk capability for M-Series Virtual Machines (VMs) on Premium Storage with Azure Managed Disks exclusively. As the name states, the purpose of the functionality is to improve the I/O latency of writes against Azure Premium Storage.
B: Mellanox offers a robust and full set of protocol software and driver for Linux with the ConnectX EN family cards. Designed to provide a high performance support for Enhanced Ethernet with fabric consolidation over TCP/IP based LAN applications. The driver and software in conjunction with the Industry's leading ConnectX family of cards achieve full line rate, full duplex of up to 100Gbps performance per port. C: To analyze network issue or measure network metrics you can test the connection using SAP's NIPING program. You can use NIPING to analyze the network connection between any two machines running SAP software.
Reference: https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/dbms_guide_general

QUESTION 4
You plan to deploy a high availability SAP environment that will use a failover clustering solution.
You have an Azure Resource Manager template that you will use for the deployment. You have the following relevant portion of the template.

```
"apiVersion": "2017-08-01",
"type": "Microsoft.Network/loadBalancers",
"name": "load_balancer1",
"location": "region",
"sku":
    { "name": "Standard"},
"properties": {
    "frontendIPConfigurations": [
       {
            "name": "frontend1",
            "zones": [ "1" ],
            "properties": {
                "subnet": {
                    "Id": "[variabales('subnetRef')]"
                },
                "privateIPAddress": "10.0.0.6",
                "privateIPAllocationMethod": "Static"
            }
        },
    ],
}
```

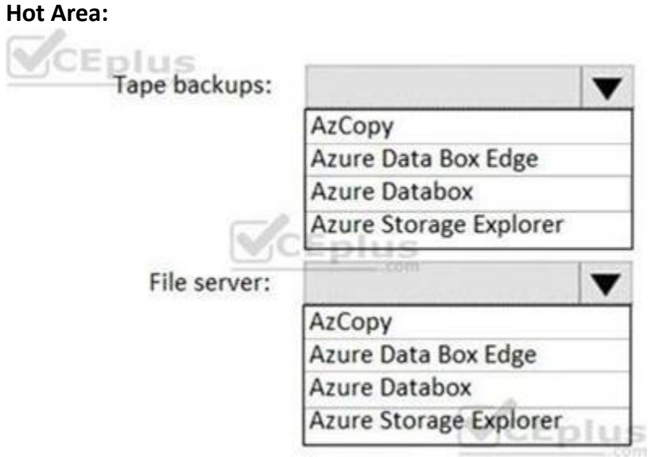
What is created by the template?

A. a zone-redundant public IP address for the internal load balancer
B. a zone-redundant frontend IP address for the internal Azure Basic Load Balancer
C. a zone-redundant frontend IP address for the internal Azure Standard Load Balancer
D. a zonal frontend IP address for the internal Azure Standard Load Balancer

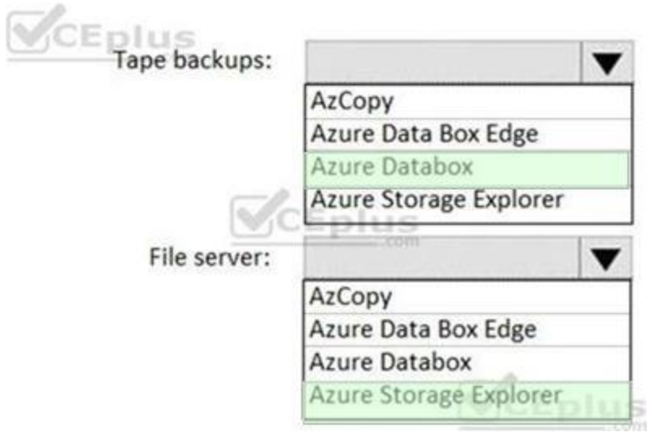
Correct Answer: C
Section:
Explanation:
Reference: https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/high-availability-guide-standard-load-balancer-outbound-connections

QUESTION 5
HOTSPOT
You have an on-premises SAP environment.
Backups are performed by using tape backups. There are 50 TB of backups.
A Windows file server has BMP images of checks used by SAP Finance. There are 9 TB of images.
You need to recommend a method to migrate the images and the tape backups to Azure. The solution must maintain continuous replication of the images.
What should you include in the recommendation? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.

Hot Area:



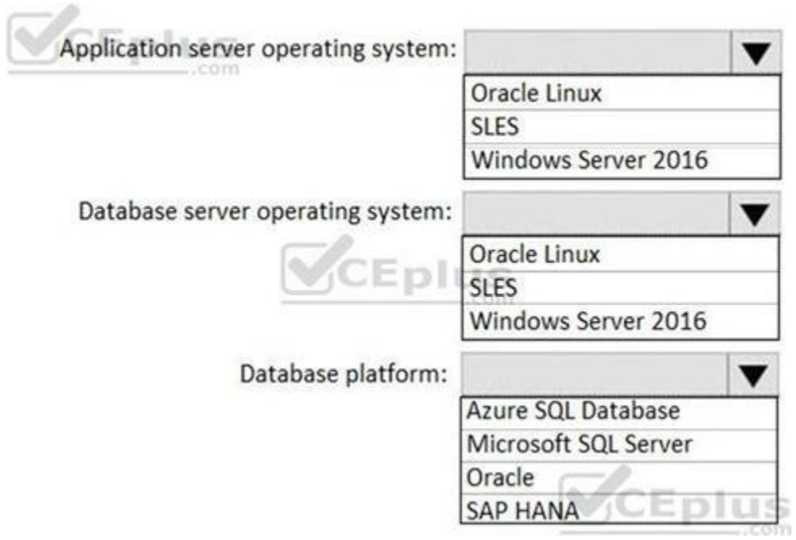
Answer Area:



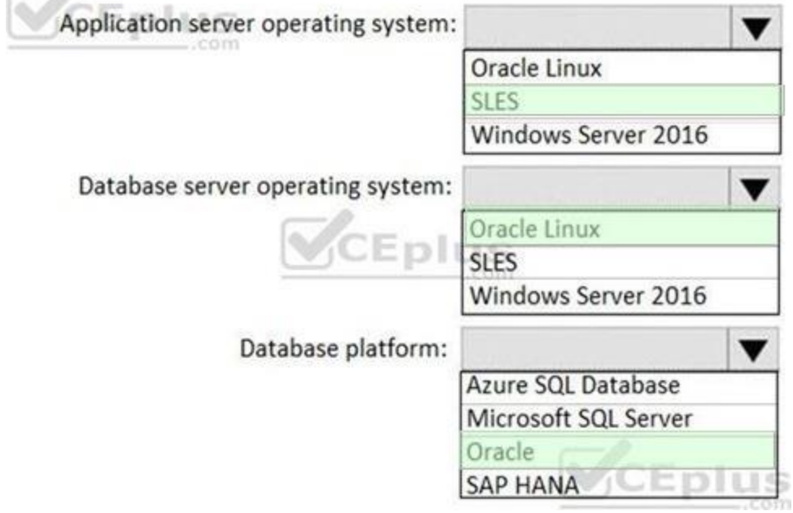
Section:
Explanation:
Tape backups: Azure DataBox
The Microsoft Azure Data Box cloud solution lets you send terabytes of data into Azure in a quick, inexpensive, and reliable way. The secure data transfer is accelerated by shipping you a proprietary Data Box storage device. Each storage device has a maximum usable storage capacity of 80 TB and is transported to your datacenter through a regional carrier. The device has a rugged casing to protect and secure data during the transit.
File server: Azure Storage Explorer
Azure Storage Explorer is an application which helps you to easily access the Azure storage account through any device on any platform, be it Windows, MacOS, or Linux. You can easily connect to your subscription and manipulate your tables, blobs, queues, and files.
Incorrect Answers:
Not Azure Data Box Edge: Azure Data Box Edge is rebranded as Azure Stack Edge. Azure Stack Edge is a Hardware-as-a-service solution. Microsoft ships you a cloud-managed device with a built-in Field Programmable Gate Array (FPGA) that enables accelerated AI-inferencing and has all the capabilities of a network storage gateway.
Reference:
https://docs.microsoft.com/en-us/azure/databox/data-box-overview
https://github.com/MicrosoftDocs/azure-docs/blob/master/articles/vs-azure-tools-storage-manage-with-storage-explorer.md

QUESTION 6
HOTSPOT
You have an on-premises SAP environment. Application servers run on SUSE Linux Enterprise Server (SLES) servers. Databases run on SLES servers that have Oracle installed.
You need to recommend a solution to migrate the environment to Azure. The solution must use currently deployed technologies whenever possible and support high availability.
What should you include in the recommendation? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.

Hot Area:



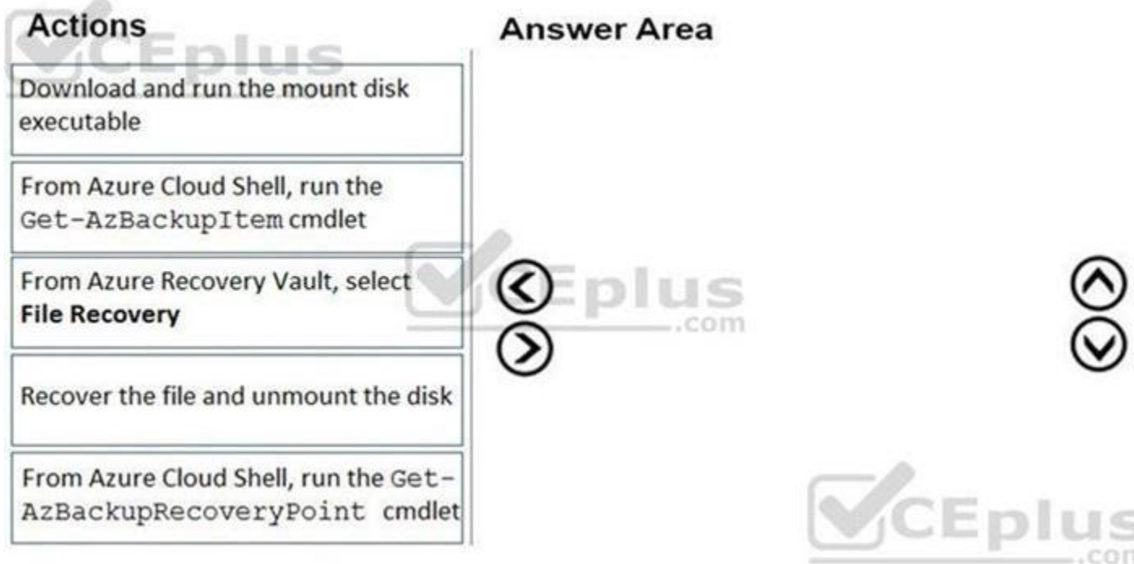
Answer Area:



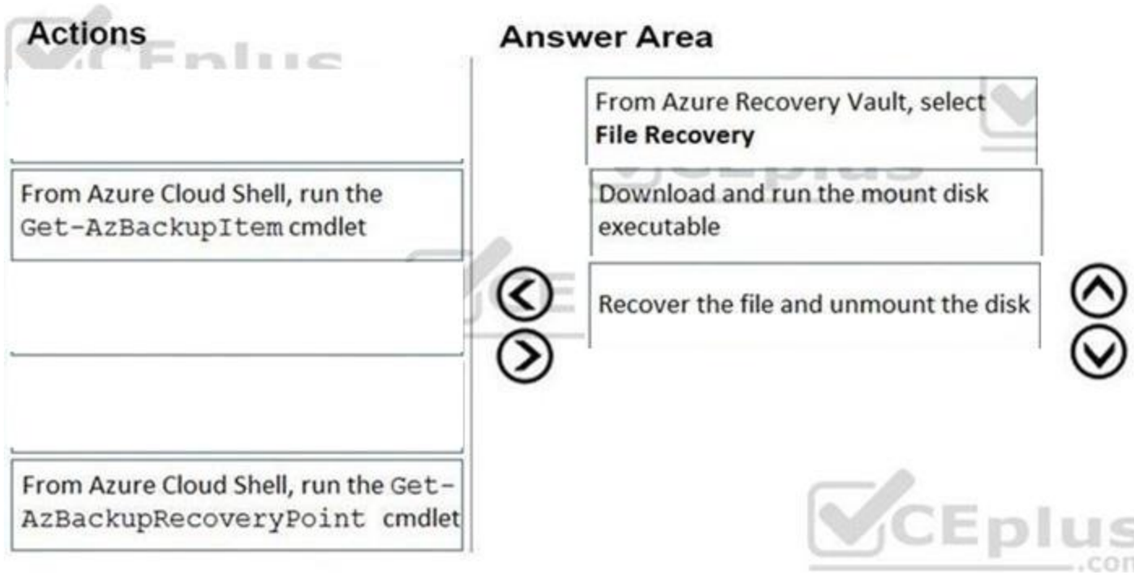
Section:
Explanation:

QUESTION 7
DRAG DROP
You have an SAP environment on Azure.
You use Azure Recovery Services to back up an SAP application server.
You need to test the restoration process of a file on the server.
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.

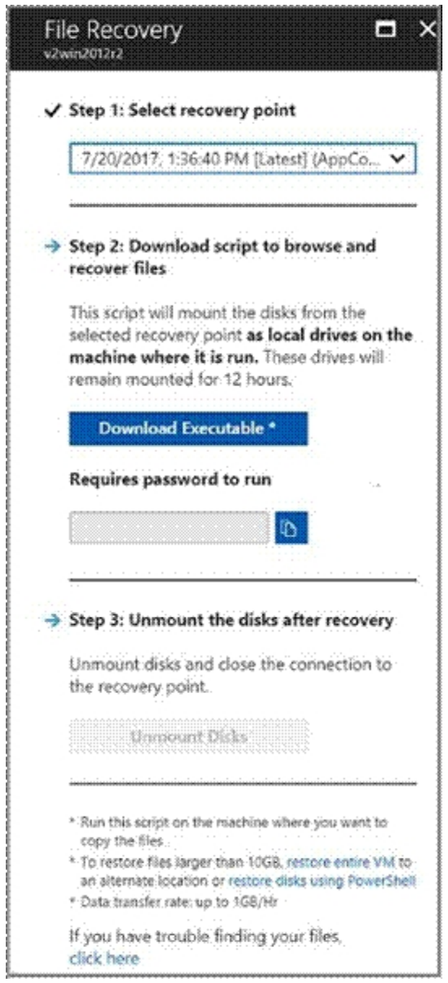
Select and Place:



Correct Answer:



Section:
Explanation:
Step 1: From Azure Recover Vault, select File Recovery
To restore files or folders from the recovery point, go to the virtual machine and choose the desired recovery point.
Step 2: Download and run the mount disk executable
Step 3: recover the file and unmount the disk



QUESTION 8
HOTSPOT
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:

Statements	Yes	No
Enabling Accelerated Networking on an SAP application server will decrease CPU usage.	○	○
Enabling Accelerated Networking on an SAP application server will increase jitter.	○	○
You can enable Accelerated Networking on any Azure virtual machine.	○	○

Answer Area:

Statements	Yes	No
Enabling Accelerated Networking on an SAP application server will decrease CPU usage.	○	○
Enabling Accelerated Networking on an SAP application server will increase jitter.	○	○
You can enable Accelerated Networking on any Azure virtual machine.	○	○

Section:
Explanation:
Box 1: Yes
By moving much of Azure's software-defined networking stack off the CPUs and into FPGA-based SmartNICs, compute cycles are reclaimed by end user applications, putting less load on the VM, decreasing jitter and inconsistency in latency.
Box 2: Yes
Box 3: No
Accelerated Networking (AN) is generally available (GA) and widely available for Windows and the latest distributions of Linux
Reference:
https://azure.microsoft.com/en-us/blog/maximize-your-vm-s-performance-with-accelerated-networking-now-generally-available-for-both-windows-and-linux/

QUESTION 9
HOTSPOT
You have an SAP environment that contains the following components:
Enhancement Package 6 for SAP ERP Central Component 6.0 (SAP ECC 6.0)
Servers that run SUSE Linux Enterprise Server 12 (SLES 12)
Databases on IBM DB2 10.5
▪ SAP Solution Manager 7.1
SAP Solution Manager 7.1
You plan to migrate the SAP environment to Azure.
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:

Statements	Yes	No
The version of SAP Solution Manager supports deployment to Azure.	○	○
The version of SAP ECC supports deployment to Azure.	○	○
The DB2 databases must be migrated to a different database platform before migrating to Azure.	○	○

Answer Area:

Statements	Yes	No
The version of SAP Solution Manager supports deployment to Azure.	○	○
The version of SAP ECC supports deployment to Azure.	○	○
The DB2 databases must be migrated to a different database platform before migrating to Azure.	○	○

Section:
Explanation:
Box 1: Yes
Box 2: No
Upgrade to ECC 7.01 or later.
Box 3: No
With Microsoft Azure, you can migrate your existing SAP application running on IBM Db2 for Linux, UNIX, and Windows (LUW) to Azure virtual machines. With SAP on IBM Db2 for LUW, administrators and developers can still use the same development and administration tools, which are available on-premises.
Reference:
https://docs.microsoft.com/en-us/azure/data-factory/connector-sap-table
https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/dbms_guide_ibm

QUESTION 10
DRAG DROP
You have an on-premises SAP environment that runs on SUSE Linux Enterprise Server (SLES) servers and Oracle. The version of the SAP ERP system is 6.06 and the version of the portal is SAP NetWeaver 7.3.
You need to recommend a migration strategy to migrate the SAP ERP system and the portal to Azure. The solution must be hosted on SAP HANA.
What should you recommend? To answer, drag the appropriate tools to the correct components. Each tool 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:

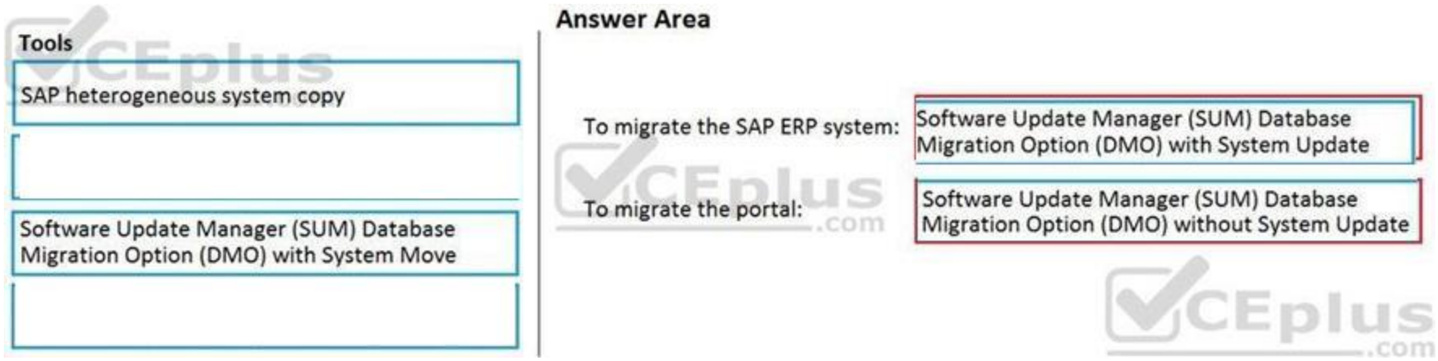
Tools

- SAP heterogeneous system copy
- Software Update Manager (SUM) Database Migration Option (DMO) with System Update
- Software Update Manager (SUM) Database Migration Option (DMO) with System Move
- Software Update Manager (SUM) Database Migration Option (DMO) without System Update

Answer Area

To migrate the SAP ERP system: [ ]
To migrate the portal: [ ]

Correct Answer:



Section:
Explanation:
Box 1: Software Update Manager (SUM) Database Migration option (DMO) with System Update
The SAP ERP system is 6.06.
Box 2: Software Update Manager (SUM) Database Migration option (DMO) without System Update
The portal is SAP NetWeaver 7.3.
SAP ERP portal migrate azure Software update manager database
Reference:
https://blogs.sap.com/2017/10/05/your-sap-on-azure-part-2-dmo-with-system-move/

QUESTION 11
You deploy an SAP environment on Azure.
You need to ensure that incoming requests are distributed evenly across the application servers.
What should you use?

A. SAP Web Dispatcher
B. SAP Solution Manager
C. SAP Control
D. Azure Monitor

Correct Answer: A
Section:
Explanation:
The SAP Web Dispatcher (SWD) component is used as a load balancer for SAP traffic among the SAP application servers.
Reference:
https://docs.microsoft.com/en-us/azure/architecture/reference-architectures/sap/sap-netweaver

QUESTION 12
HOTSPOT
You have an SAP production landscape on Azure that contains the virtual machines shown in the following table.

Name	Location	Application
HANA1	East US	SAP HANA 2.0
HANA2	East US	SAP HANA 2.0
HANA3	South Central US	SAP HANA 2.0
App1	East US	SAP Web Dispatcher
App2	East US	SAP Web Dispatcher

You configure HANA system replication as shown in the following table.

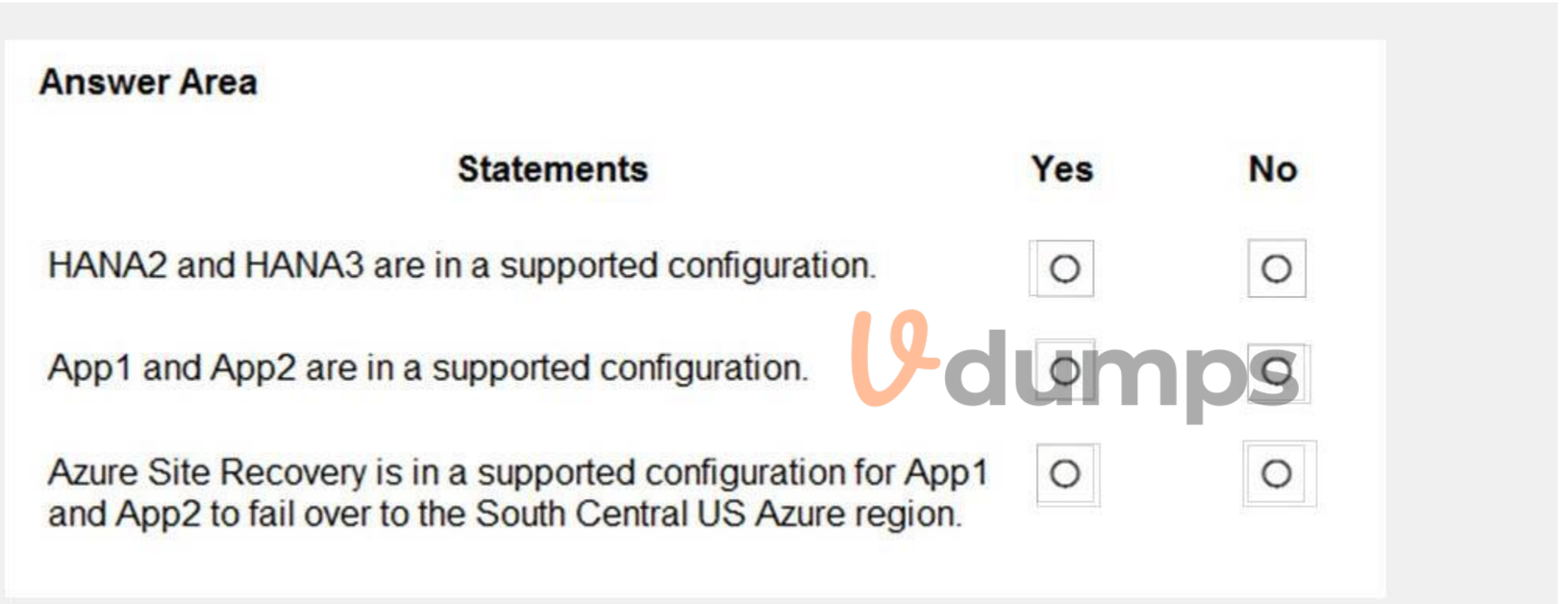
Source	Destination	Mode
HANA1	HANA2	Sync
HANA2	HANA3	Sync

You configure two load balancers as shown in the following table.

Name	Location	Type	Pool
LB1	East US	Standard	HANA1, HANA2
LB2	East US	Basic	App1, App2

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:

Answer Area

Statements	Yes	No
HANA2 and HANA3 are in a supported configuration.	○	○
App1 and App2 are in a supported configuration.	○	○
Azure Site Recovery is in a supported configuration for App1 and App2 to fail over to the South Central US Azure region.	○	○

Section:
Explanation:
Reference:
https://help.sap.com/viewer/6b94445c94ae495c83a19646e7c3fd56/2.0.02/en-US/f730f308fede4040bcb5ccea6751e74d.html
https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/sap-hana-high-availability

Exam A

QUESTION 1
HOTSPOT
You have an SAP landscape on Azure.
You plan to deploy a new SAP application server by using an Azure Resource Manager template.
You need to ensure that all new servers are deployed with Azure Disk Encryption enabled.
How should you complete the relevant component of the template? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.

Hot Area:


"resources": [
{
"type": "Microsoft.Compute/virtualMachines/
"name": "[concat(parameters
('vmName'),'/DiskEncryption')]",
"location": [parameters('location')]",
"apiVersion": "2017-03-30",
"properties": {
"publisher": "Microsoft.Azure.Security",
"type":
"Disk"
"KeyVault"
"Extensions"
"AzureDiskEncryption"
"typeHandlerVersion": "2.2",
"autoUpgradeMinorVersion": true,
"forceUpdateTag": "2",
"settings": {
"EncryptionOperation": "EnableEncryption",
"KeyVaultURL": "[reference(parameters('keyVaultResourceID'),'2016-10-01').vaultUri]",
"KeyVaultResourceId": "[parameters('keyVaultResourceID')]",
"KeyEncryptionKeyURL": "[parameters('keyEncryptionKeyURL')]",
"KeyVaultResourceId": "[parameters('keyVaultResourceID')]",
"KeyEncryptionAlgorithm": "RSA-OAEP",
"VolumeType": "All",
"ResizeOSDisk": false
}
}
]
Disk"
KeyVault"
Extensions"
AzureDiskEncryption"

Answer Area:

Section:
Explanation:
Box 1: extensions
Azure Disk Encryption can be enabled via Azure PowerShell or Azure CLI. That is normally seen in remediation. In a real-world scenario you would like to see a virtual machine during its creation include disk encryption process. This is technically possible thanks to Disk Encryption VM extension.
Box 2: AzureDiskEncryption Example:
..
"type": "Microsoft.Compute/virtualMachines/extensions",
"name": "[concat(parameters('vmName'),'/diskEncryption')]",
"location": "[parameters('location')]",
"dependsOn": [
"[resourceId('Microsoft.Compute/virtualMachines/', parameters('vmName'))]"
],
"properties": {
"publisher": "Microsoft.Azure.Security",
"type": "AzureDiskEncryption",
..
Reference: https://azsec.azurewebsites.net/2019/12/28/azure-disk-encryption-arm-template-for-windows-vm/

QUESTION 2

HOTSPOT

You have an Azure alert rule and action group as shown in the following exhibit.

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

Hot Area:

Answer Area

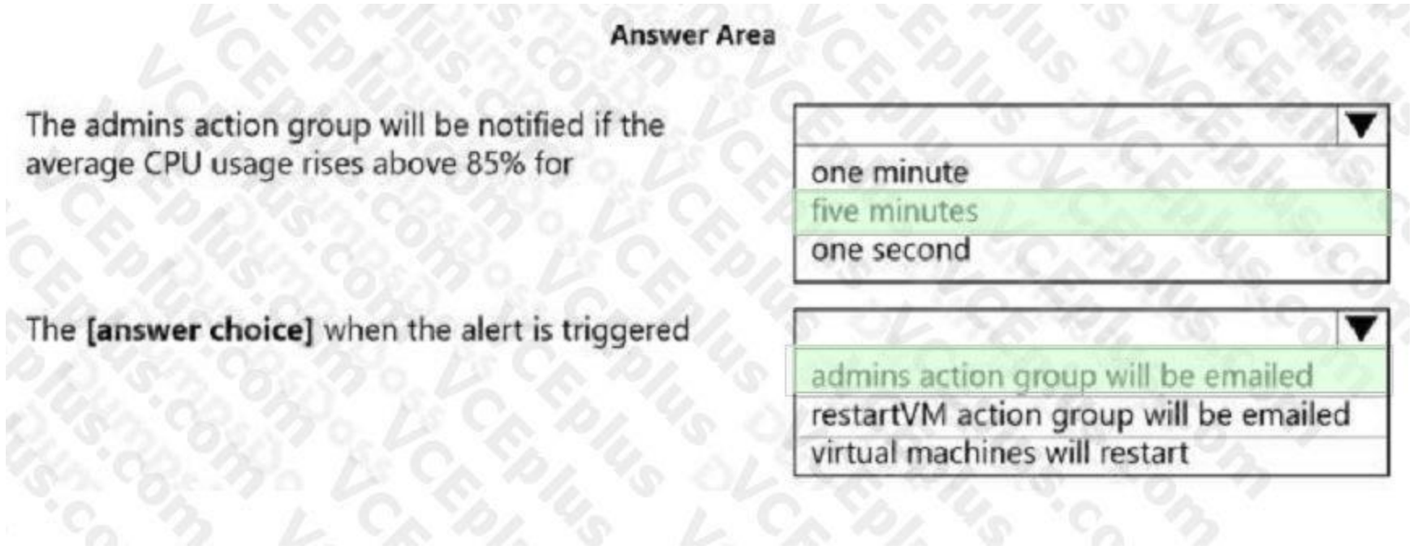
The admins action group will be notified if the average CPU usage rises above 85% for

- one minute
- five minutes
- one second

The **[answer choice]** when the alert is triggered

- admins action group will be emailed
- restartVM action group will be emailed
- virtual machines will restart

Answer Area:



Section:
Explanation:
Box 1: five minutes Window Size is 5 minutes.
Box 2: admins action group will be emailed The admins1 actiongroup will be executed.
Reference: https://docs.microsoft.com/en-us/azure/azure-monitor/alerts/alerts-metric-overview

QUESTION 3
You deploy an SAP environment on Azure.
You need to monitor the performance of the SAP NetWeaver environment by using Azure Extension for SAP. What should you do first?

A. From Azure CLI, install the Linux Diagnostic Extension
B. From the Azure portal, enable the Custom Script Extension
C. From Azure CLI, run the az vm aem set command
D. From the Azure portal, enable the Azure Network Watcher Agent

Correct Answer: D
Section:
Explanation:
This solution requires the VM Agent to be installed in the Azure Virtual Machines you want to run SAP systems.
Reference:
https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/vm-extension-for-sap

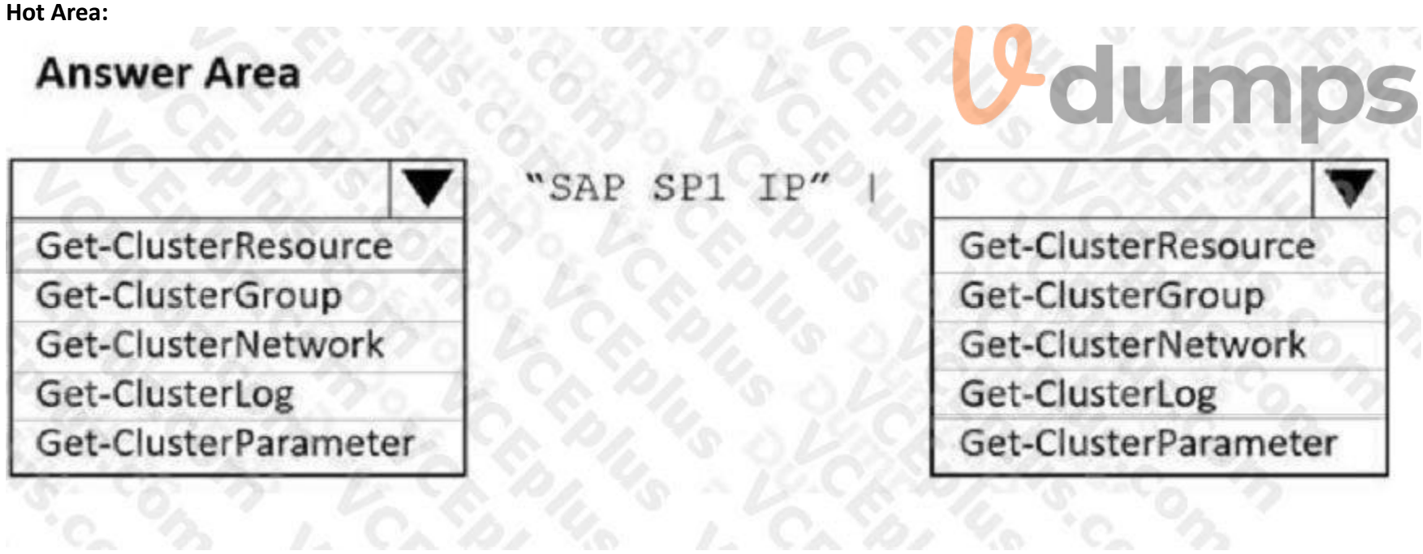
QUESTION 4
You have an Azure virtual machine that runs SUSE Linux Enterprise Server (SLES). The virtual machine hosts a highly available deployment of SAP HANA. You need to validate whether Accelerated Networking is operational for the virtual machine,
What should you use?

A. ethtool
B. netsh
C. iometer
D. fio

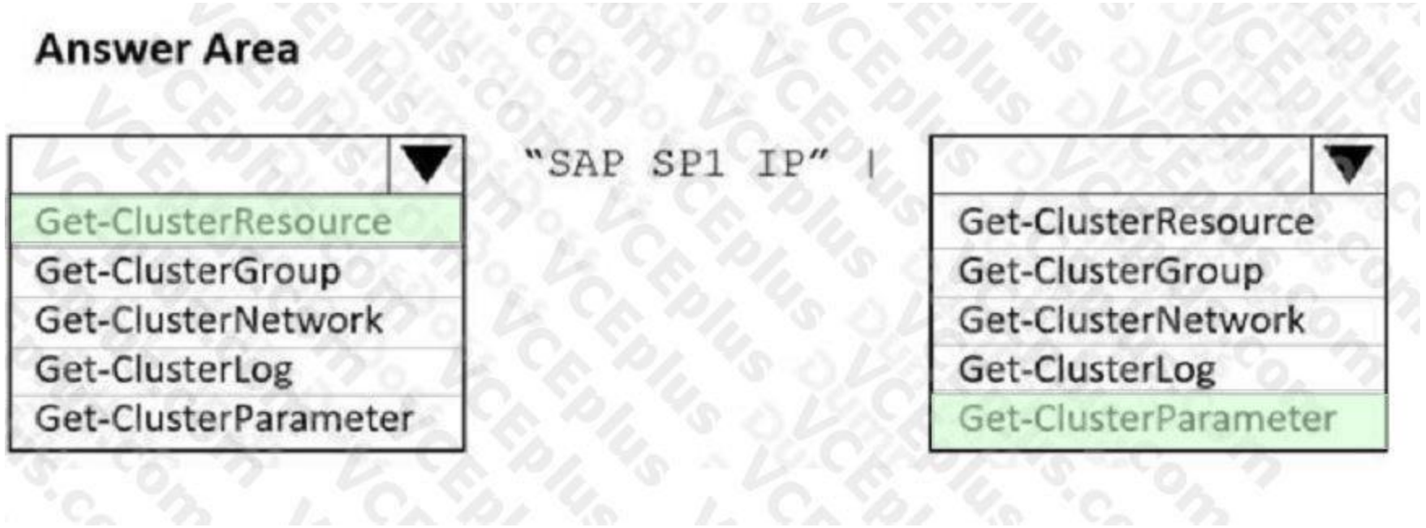
Correct Answer: A
Section:
Explanation:
Check for activity on the VF (virtual function) with the ethtool -S eth0 | grep vf_ command. If you receive output similar to the following sample output, accelerated networking is enabled and working.
vf_rx_packets: 992956 vf_rx_bytes: 2749784180 vf_tx_packets: 2656684 vf_tx_bytes: 1099443970 vf_tx_dropped: 0 Accelerated Networking is now enabled for your VM.
Incorrect Answers:
B: Network shell (netsh) is a command-line utility that allows you to configure and display the status of various network communications server roles and components after they are installed on computers running Windows Server. C: Iometer is an I/O subsystem measurement and characterization tool for single and clustered systems. It is used as a benchmark and troubleshooting tool and is easily configured to replicate the behaviour of many popular applications. One commonly quoted measurement provided by the tool is IOPS.
D: FIO is a popular tool to benchmark storage on the Linux VMs. It has the flexibility to select different IO sizes, sequential or random reads and writes. It spawns worker threads or processes to perform the specified I/O operations. You can specify the type of I/O operations each worker thread must perform using job files
Reference:
https://docs.microsoft.com/en-us/azure/virtual-network/create-vm-accelerated-networking-cli

QUESTION 5
HOTSPOT
You deploy an Azure Internal load balancer.
You deploy a node of an SAP NetWeaver 7.4 ABAP system named SP1.
You plan to deploy a second node.
You need to verify that the health probe port is configured for the cluster. The cluster IP address resource name is SAP SP1 IP.
How should you complete the command? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.

Hot Area:



Answer Area:



Section:
Explanation:
Box 1: Get-ClusterResource Example:
Get-ClusterResource -Name $SAPIPresourceName | Get-ClusterParameter
Write-Output " "
Write-Output "Current probe port property of the SAP cluster resource '$SAPIPresourceName' is '$OldProbePort'." Write-Output " "
Write-Output "Setting the new probe port property of the SAP cluster resource '$SAPIPresourceName' to '$ProbePort' ..." Write-Output " " Box 2: Get-ClusterParameter
Reference: https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/sap-high-availability-installation-wsfcshared-disk

QUESTION 6
You plan to deploy an SAP landscape that will have virtual machines deployed to multiple Azure regions. You need to ensure that the virtual machines can communicate across the regions.
What should you configure?

A. virtual network peering in Azure
B. Azure Bastion hosts
C. local network gateways
D. Azure Relay

Correct Answer: A
Section:
Explanation:
Depending on the rules and restrictions you want to apply between the different virtual networks hosting VMs of different SAP systems, you should peer those virtual network
Note: Virtual network peering enables you to seamlessly connect two or more Virtual Networks in Azure. The virtual networks appear as one for connectivity purposes. The traffic between virtual machines in peered virtual networks uses the Microsoft backbone infrastructure. Like traffic between virtual machines in the same network, traffic is routed through Microsoft's private network only.
Azure supports the following types of peering:
Virtual network peering: Connect virtual networks within the same Azure region.
Global virtual network peering: Connecting virtual networks across Azure regions.
Incorrect Answers:
B: Azure Bastion is a fully managed service that provides more secure and seamless Remote Desktop Protocol (RDP) and Secure Shell Protocol (SSH) access to virtual machines (VMs) without any exposure through public IP addresses. D: The Azure Relay service enables you to securely expose services that run in your corporate network to the public cloud. You can do so without opening a port on your firewall, or making intrusive changes to your corporate network infrastructure.
Reference:
https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/hana-network-architecture

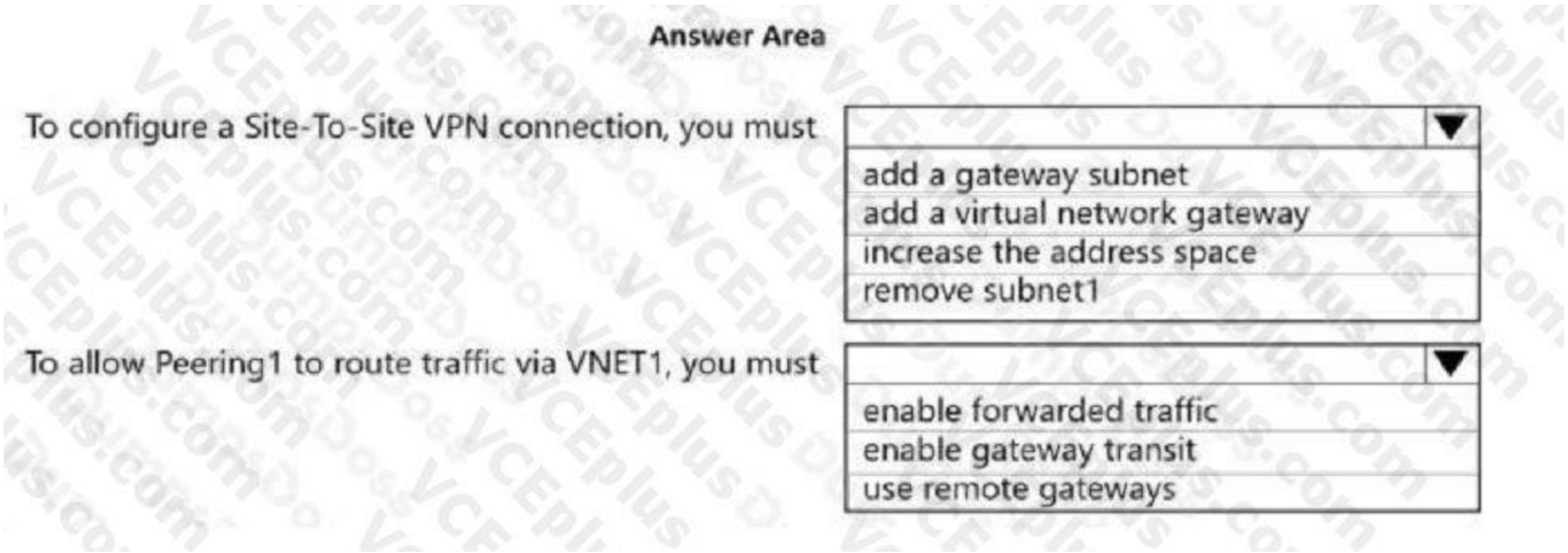
https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-peering-overview

QUESTION 7
HOTSPOT
You have an on-premises SAP landscape and an Azure subscription that contains a virtual network named VNET1. VNET1 has the following settings.

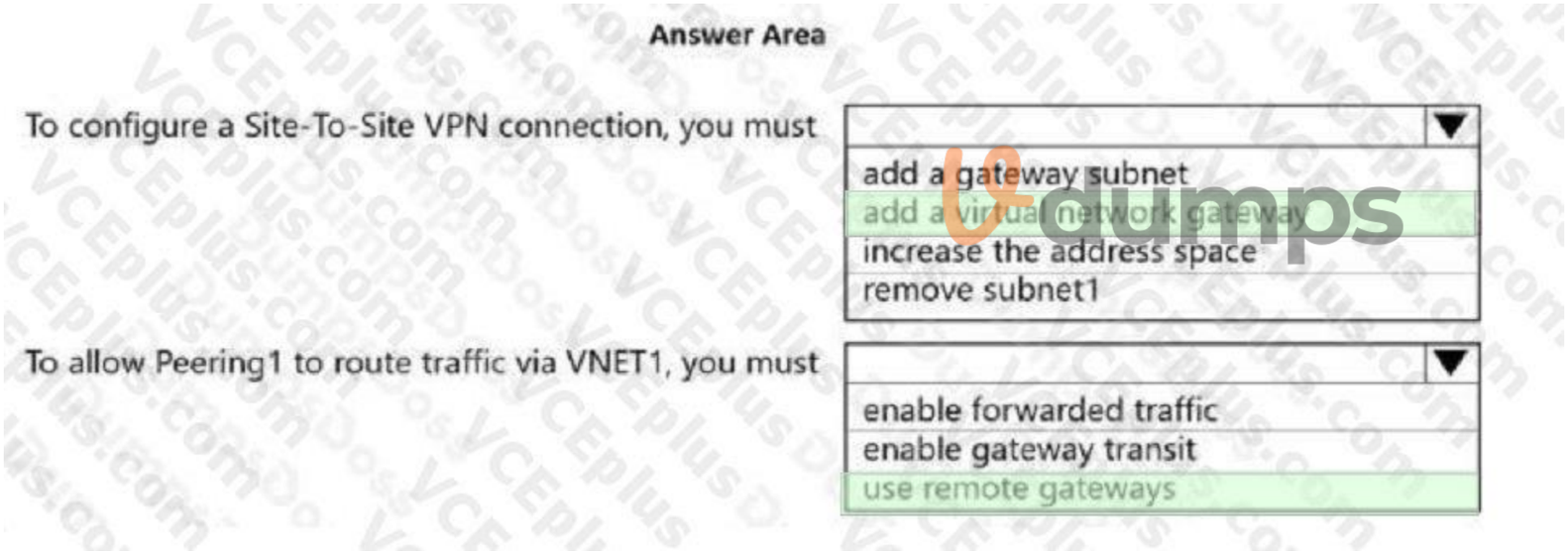

```
Name                    :VNET1
AddressSpace            : {
                            "AddressPrefixes": [
                              "10.1.0.0/24"
                            ]
                          }
Subnets                 : [
                            {
                              "Delegations": [],
                              "Name": "subnet1",
                              "AddressPrefix": [
                                "10.1.0.0/25"
                              ],
                              "IpConfigurations": [],
                              "PrivateEndpointNetworkPolicies": "Enabled",
                              "PrivateLinkServiceNetworkPolicies": "Enabled",
                              "IpAllocations": []
                            }
                          ]
VirtualNetworkPeerings  : [
                            {
                              "Name": "Peering1",
                              "PeeringState": "Connected",
                              "AllowVirtualNetworkAccess": true,
                              "AllowForwardedTraffic": false,
                              "AllowGatewayTransit": false,
                              "UseRemoteGateways": false,
                              "RemoteVirtualNetwork": {
                                "AddressPrefixes": [
                                  "10.2.0.0/24"
                                ]
                              },
                              "ProvisioningState": "Succeeded"
                            }
```


You plan to migrate the landscape to Azure.
You need to configure VNET1 to support the SAP landscape.
Use the drop-down menus to select the answer choice that completes each statement based on the information presented in the settings.
NOTE: Each correct selection is worth one point.

Hot Area:



Answer Area:



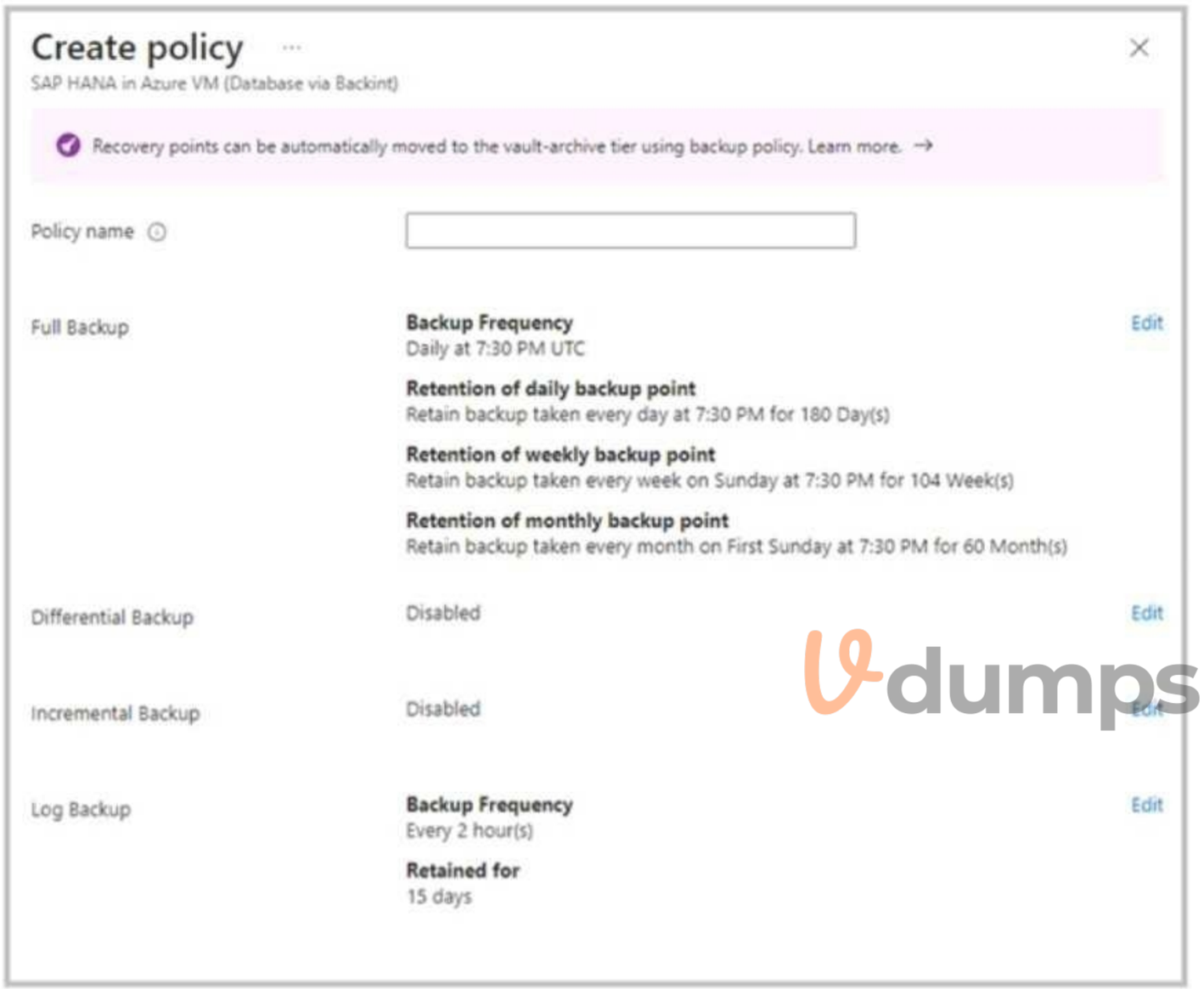
Section:
Explanation:
Box 1: add a virtual network gateway
Box 2: use remote gateways
Each virtual network, regardless of whether peered with another virtual network, can still have its own gateway to connect to an on-premises network. When you peer virtual networks, you can also configure the gateway in the peered virtual network as a transit point to an on-premises network. In this case, the virtual network that uses a remote gateway cannot have its own gateway. A virtual network can have only one gateway that can be either a local or remote gateway (in the peered virtual network).
Reference: https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-peering-overview

QUESTION 8
You deploy an SAP production landscape on Azure virtual machines that run SUSE Linux Enterprise Server (SLES). You need to generate a report that details performance differences between instances of an SAP AS ABAP system. What should you use?

A. JMeter
B. ABAPmeter
C. Micro Focus LoadRunner
D. SAP UI Speedtest Tool

Correct Answer: B
Section:
Explanation:
Use ABAPMETER in NetWeaver AS ABAP when you want to test the general performance/health of each instance in a NetWeaver AS ABAP system.
Incorrect Answers:
D: The SAP UI Speedtest Tool is used to network bandwidth and latency.
The UI5 Speedtest Tool regularly checks your network connection and allows you to review the results via a UI5 web interface.
Reference: https://userapps.support.sap.com/sap/support/knowledge/en/2879613

QUESTION 9
HOTSPOT
You have an SAP on Azure production landscape that contains an SAP HANA database. You create a backup policy as shown in the following exhibit.



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

Answer Area:

Answer Area

Section:
Explanation:

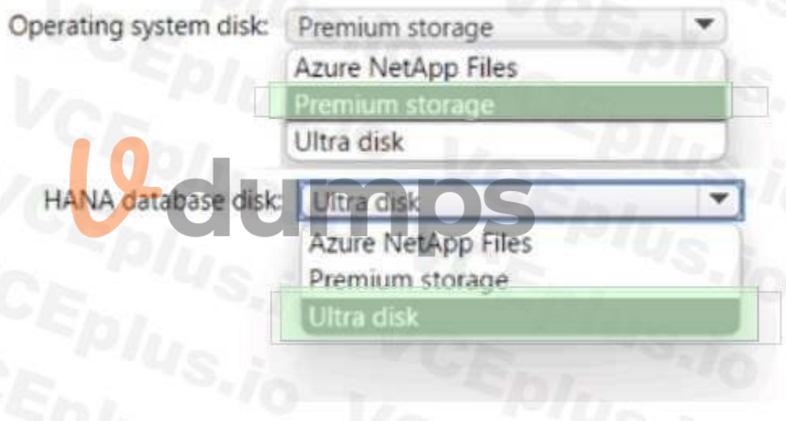
QUESTION 10
HOTSPOT
You plan to deploy two Azure virtual machines that will host an SAP HANA database for an SAP landscape. The virtual machines will be deployed to the same availability set. You need to meet the following requirements:
• Ensure that the virtual machines support disk snapshots.
• Ensure that the virtual machine disks provide submillisecond latency for writes.
• Ensure that each virtual machine can be allocated disks from a different storage cluster.
Which type of operating system disk and HANA database disk should you use? To answer, select the appropriate options in the answer area. NOTE Each correct selection is worth one point.

Hot Area:

Answer Area

Answer Area:

Answer Area



Section:
Explanation:

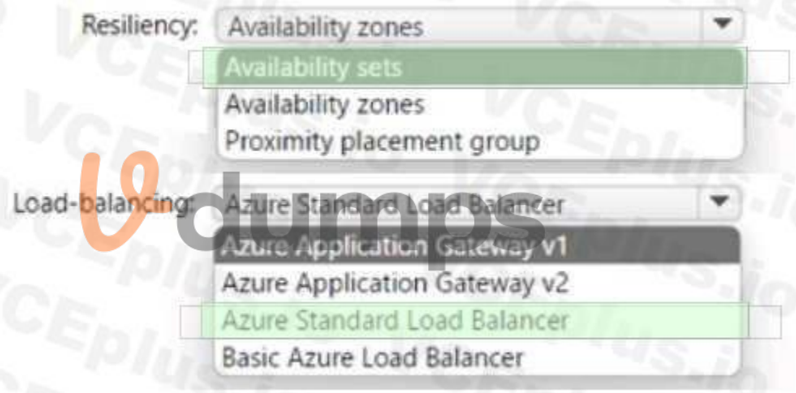
QUESTION 11
HOTSPOT
You are designing a four-node SAP Web Dispatcher deployment for an SAP on Azure landscape.
You need to recommend a resiliency solution and a load-balancing solution for the deployment. The solution must meet the following requirements; • Receive the highest SLA from Microsoft.
• Load balance client connections.
• Minimize administrative effort
What should include in the recommendation for each solution? To answer, select the appropriateoptions in the answer area. NOTE Each correct selection is worth one point.

Hot Area:

Answer Area

Answer Area:

Answer Area



Section:
Explanation:

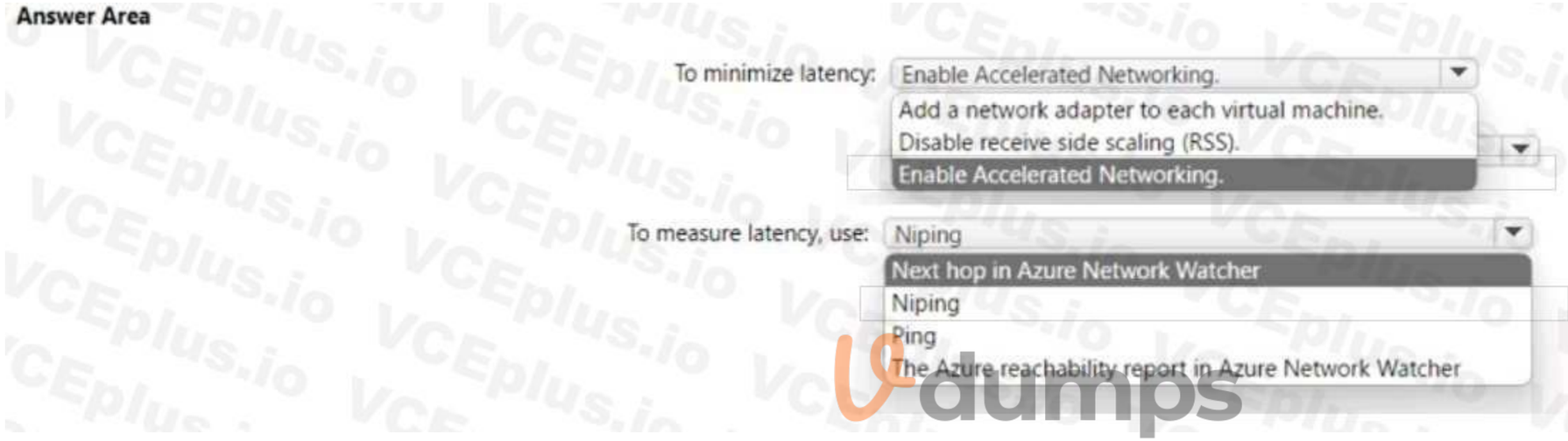
QUESTION 12
You have an Azure subscription that contains a virtual network named VNET1, an SAP production landscape on Azure, and an SAP non-production landscape on Azure. Both landscapes connect to VNET1. Each landscape contains virtual machines that run the following:
• SAPHANA
• SAP NetWeaver
• Microsoft SQL Server
You need to monitor the landscapes. The solution must minimize costs.
What is the minimum number of required Azure Monitor for SAP Solutions instances?

A. 1
B. 2
C. 3
D. 6

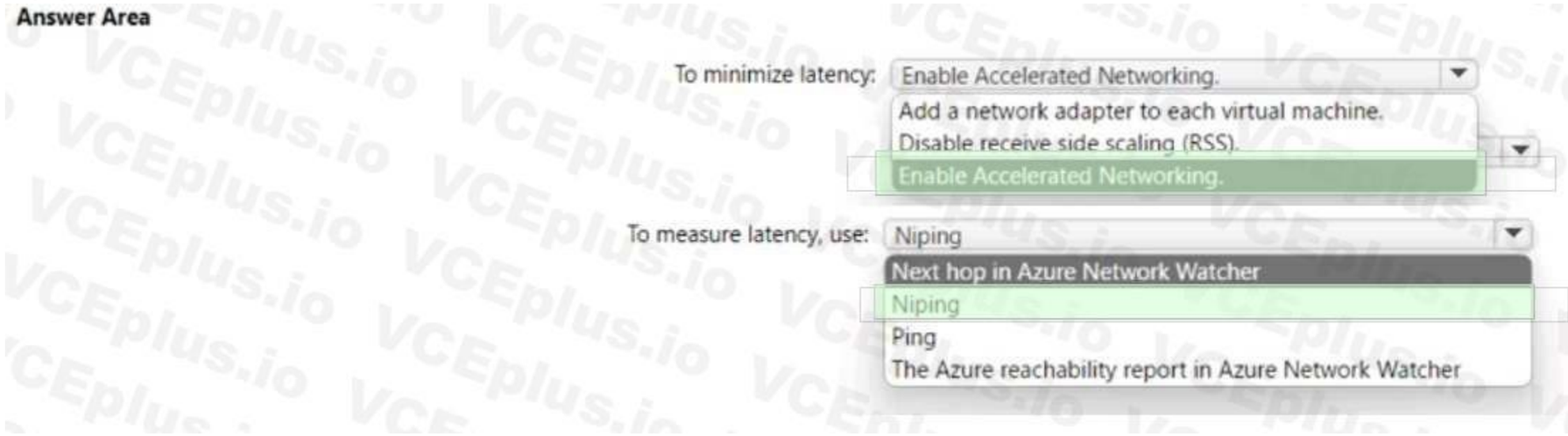
Correct Answer: B
Section:

QUESTION 13
HOTSPOT
You are planning an SAP NetWeaver deployment on Azure. The database tier will consist of two Azure virtual machines that have Microsoft SQL Server 2017 installed. Each virtual machine will be deployed to a separate availability zone. You need to perform the following:
• Minimize network latency between the virtual machines.
• Measure network latency between the virtual machines.
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:



Section:
Explanation:

QUESTION 14

You have an SAP production landscape on-premises and an SAP development landscape on Azure.
You deploy a network virtual appliance to act as a firewall between the Azure subnet and the premises network.
Solution: You deploy an Azure Standard Load balancer.
Does this meet the goal?

A. Yes
B. No

Correct Answer: B
Section:

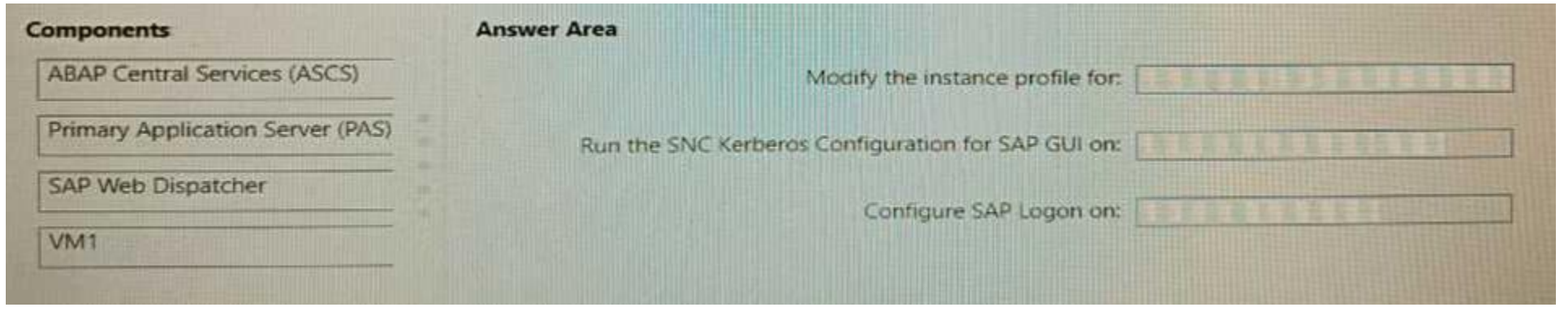
QUESTION 15
You have an SAP production landscape on-premises and an SAP development landscape on Azure.
You deploy a network virtual appliance to act as a firewall between the Azure subnet and the onpremises network.
Solution: You configure route filters for Microsoft peering.
Does this meet the goal?

A. Yes
B. No

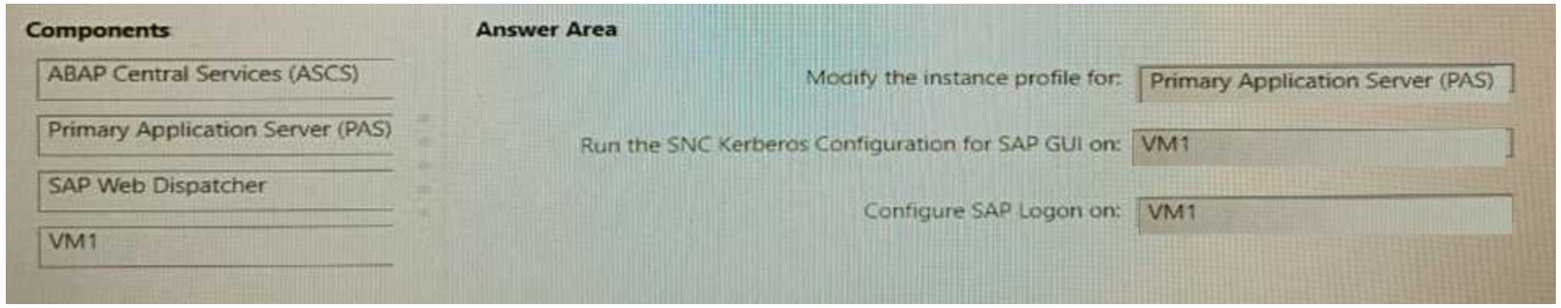
Correct Answer: A
Section:

QUESTION 16
DRAG DROP
You have an SAP ERP Central Component (SAP ECO deployment on Azure virtual machines. The virtual machines run Windows Server 2022 and are members of an Active Directory domain named contoso.com.
You install SAP GUI on an Azure virtual machine named VM1 that runs Windows 10.
You need to ensure that contoso.com users can sign in to SAP ECC via SAP GUI on VM1 by using their domain credentials.
What should you do? To answer, drag the appropriate components to the correct tasks. Each component 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.

Select and Place:



Correct Answer:



Section:
Explanation:

QUESTION 17
You have an on-premises SAP NetWeaver landscape that contains an IBM DB2 database.
You need to migrate the database to a Microsoft SQL Server instance on an Azure virtual machine.
Which tool should you use?

A. Data Migration Assistant
B. SQL Server Migration Assistant (SSMA)
C. Azure Migrate
D. Azure Database Migration Service

Correct Answer: B
Section:

QUESTION 18
You have a highly available deployment of SAP NetWeaver on Azure virtual machines. The database tier is hosted on two virtual machines that run Windows Server 2019 and have Microsoft SQL Server 2017 installed. The NetWeaver, application, and database tiers each reside on a separate subnet within the same virtual network.
You run ABAPMeter against the deployment and discover that the average value of Act DB is 2 ms.
You need to lower the Acc DB value.
What should you do?

A. Increase the tempdb size on the SQL Server virtual machines.
B. Move the application virtual machines to the same subnet as the SQL Server virtual machines.
C. Configure the SQL Server database to use asynchronous replication.
D. Redeploy the NetWeaver. application, and SQL Server virtual machines to the same proximity placement group.

Correct Answer: D
Section:

QUESTION 19
DRAG DROP
You plan to deploy SAP on Azure.
The deployment must meet the following requirements:
• Support failover to another Azure region in the event of a regional outage.
• Minimize data loss during a failover.
• Minimize costs.
Which fault tolerance technology should you choose for the SAP Web Dispatcher and the Microsoft SQL Server 2017 servers to meet the requirements? To answer, drag the appropriate technologies to The correct targets.

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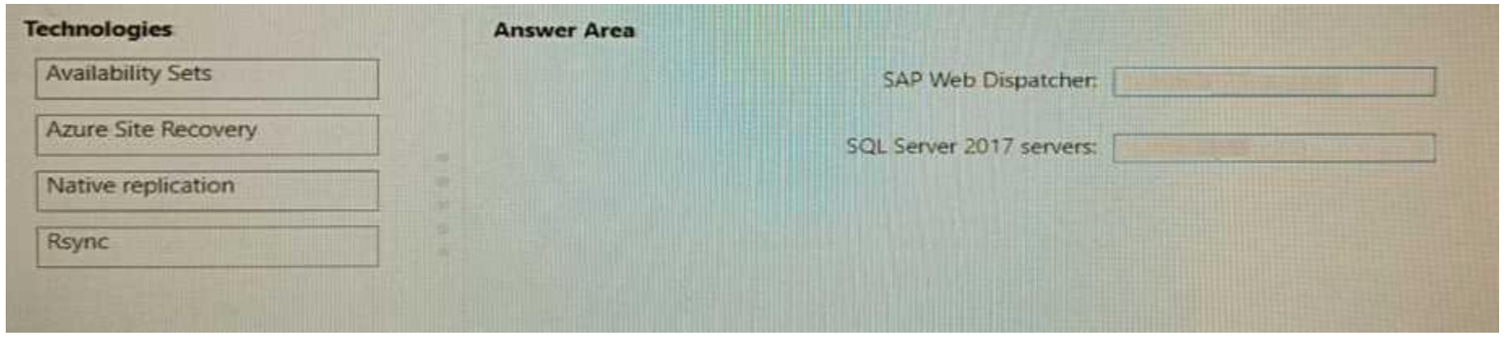
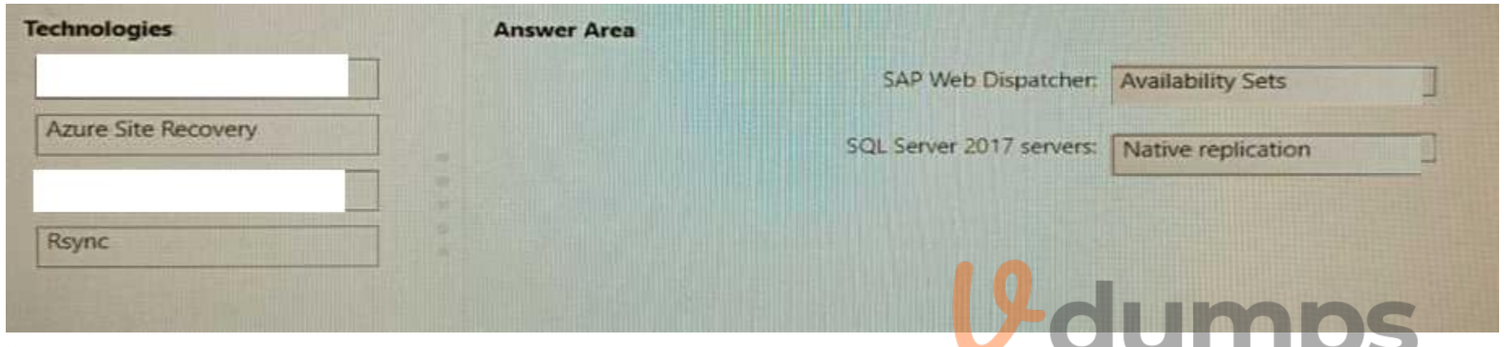
Each technology may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.
NOTE: Each correct selection is worth one point.

Select and Place:



Correct Answer:



Section:
Explanation:

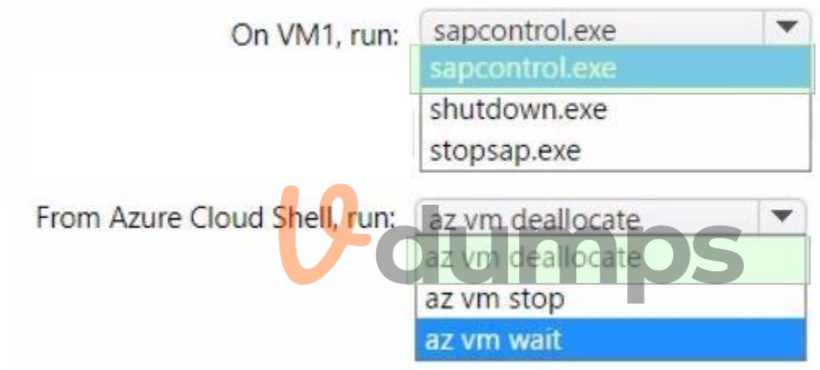
QUESTION 20
HOTSPOT
You have an Azure virtual machine named VM1 that hosts an SAP application server.
You need to implement snoozing for VM1. The solution must meet the following requirements:
* Minimize compute costs for VM1.
* Gracefully terminate the SAP application.
What should you do? To answer, select the appropriate options in the answer are a. NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Answer Area:

Answer Area



Section:
Explanation:

QUESTION 21
You have an on-premises SAP NetWeaver development landscape that contains the resources shown in the following table.

Name	Description
SAPDB1	Hyper-V virtual machine that runs Microsoft SQL Server 2017 and contains a 30-TB database
SAPSRV1	Hyper-V virtual machine that runs Windows Server

You have a 500-Mbps ExpressRoute circuit between the on-premises environment and a virtual network. You plan to migrate the landscape to Azure.
What should you include in the solution?

A. Azure Data Box
B. Microsoft System Center 2019 - Data Protection Manager (DPM 2019)
C. Azure Site Recovery
D. Azure Backup Server

Correct Answer: C
Section:

Explanation:
Simplify cloud migration by using Site Recovery to migrate your SAP deployment to Azure.
Incorrect Answers:
A: Not necessary with the fast ExpressRoute circuit.
Data Box devices easily move data to Azure when busy networks aren't an option. Move large amounts of data to Azure when you're limited by time, network availability, or costs, using common copy tools such as Robocopy.
All data is AESencrypted, and the devices are wiped clean after upload, in accordance with NIST Special Publication 800-88 revision 1 standards.
Reference:
https://docs.microsoft.com/en-us/azure/site-recovery/site-recovery-sap

QUESTION 22
You have an SAP environment on Azure.
Your on-premises network uses a 1-Gbps ExpressRoute circuit to connect to Azure. Private peering is enabled on the circuit. The default route (0.0.0.0/0) from the on-premises network is advertised.
Whenever backups are copied to Azure Blob storage, the ExpressRoute circuit is saturated.
You need to resolve the issue without modifying the ExpressRoute circuit. The solution must minimize administrative effort. What should you do?

A. Create a user-defined route that redirects traffic to the Blob storage
B. Create an application security group
C. Change the backup solution to use a third-party software that can write to the Blob storage
D. Enable virtual network private endpoints.

Correct Answer: D
Section:
Explanation:
Private endpoint enables connectivity between the consumers from the same ExpressRoute.
Note: Consult with SAP HANA on Microsoft Service Management. If they advise you to increase the bandwidth of the SAP HANA on Azure (Large Instances) ExpressRoute circuit, create an Azure support request. (You can request an increase for a single circuit bandwidth up to a maximum of 10 Gbps.)
Reference: https://docs.microsoft.com/en-us/azure/private-link/private-endpoint-overview https://docs.microsoft.com/bs-cyrlba/azure/virtual-machines/workloads/sap/hana-additional-network-requirements#increase-expressroute-circuit-bandwidth

QUESTION 23
You plan to deploy an SAP environment on Azure. The SAP environment will have landscapes for production, development and quality assurance.
You need to minimize the costs associated with running the development and quality assurance landscapes on Azure. What should you do?

A. Configure scaling for Azure App Service
B. Create a scheduled task that runs the stopsap command
C. Configure Azure virtual machine scale sets
D. Create Azure Automation runbooks to stop, deallocate, and start Azure virtual machines

Correct Answer: D
Section:
Explanation:
You can optimize your Azure Costs by Automating SAP System Start – Stop using runbooks.
Reference: https://techcommunity.microsoft.com/t5/running-sap-applications-on-the/optimize-your-azure-costs-by-automating-sap-system-start-stop/ba-p/2120675

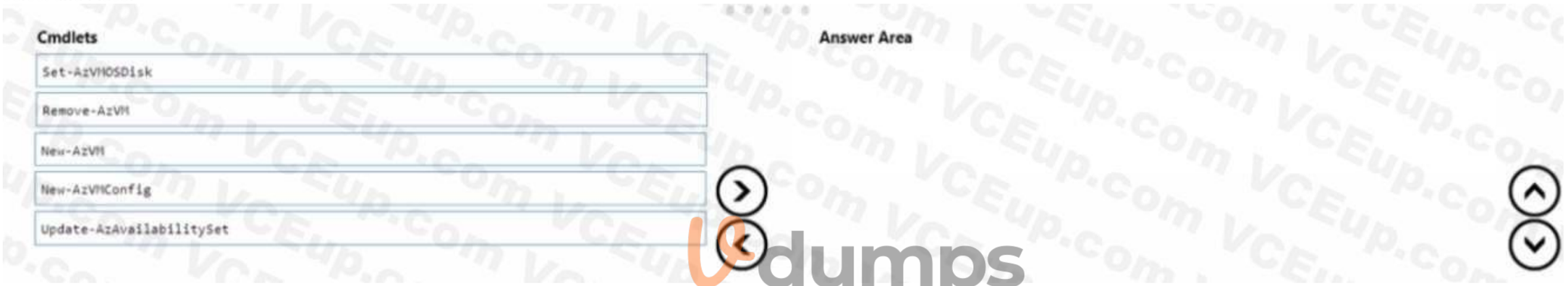
QUESTION 24
You have an SAP HANA on Azure (Large Instances) deployment that has two Type II SKU nodes. Each node is provisioned in a separate Azure region. You need to monitor storage replication for the deployment. What should you use?

A. xfsdump
B. azacsnap
C. rear
D. tar

Correct Answer: A
Section:

QUESTION 25
DRAG DROP
You have An Azure subscription that contains an availability set named AS1 and a virtual machine named VM1. VM1 hosts an SAP NetWeavef application You need to ensure that AS1 includes VM1. Which four PowerShell cmdlets should you run in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them m the correct order.

Select and Place:



Correct Answer:

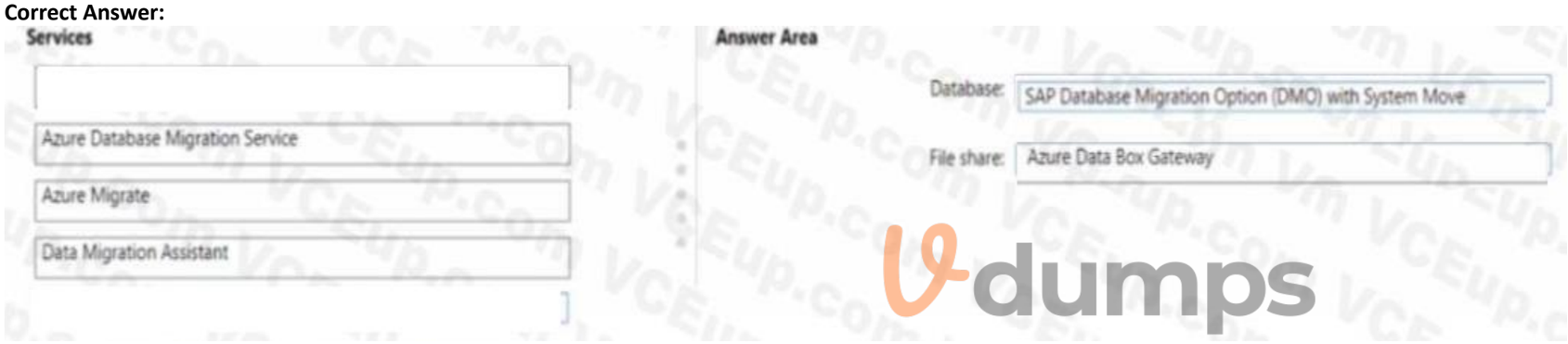
Section:
Explanation:

QUESTION 26
DRAG DROP
You have an on-premises SAP landscape that uses a DB2 database and contains an SAP Financial Accounting (SAP FIN) deployment. The deployment contains a file share that stores 50 TB of bitmap files. You plan to migrate the on-premises SAP landscape to SAP HANA on Azure (Large Instances) and Azure Files shares. The solution must meet the following requirements:
• Minimize downtime.
• Minimize administrative effort.
You need to recommend a migration solution.

What should you recommend for each resource? To answer, drag the appropriate services to the correct resources. Each service 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:

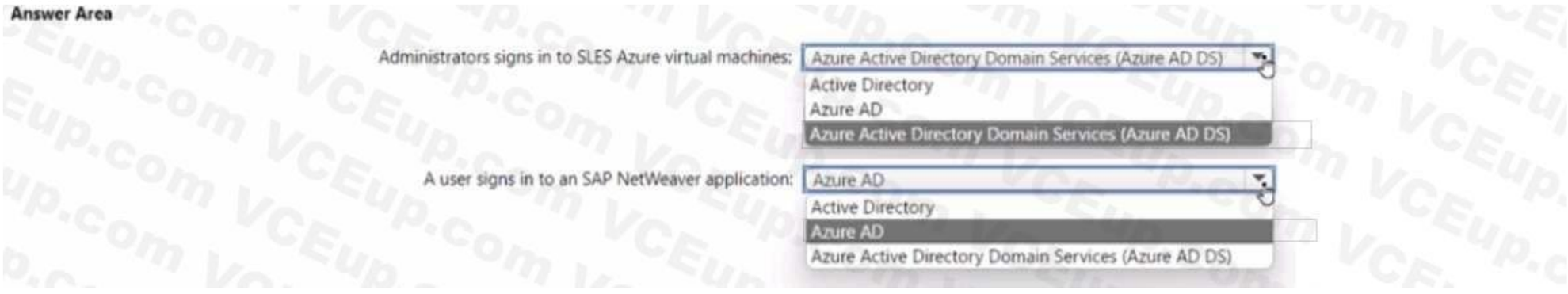
Correct Answer:



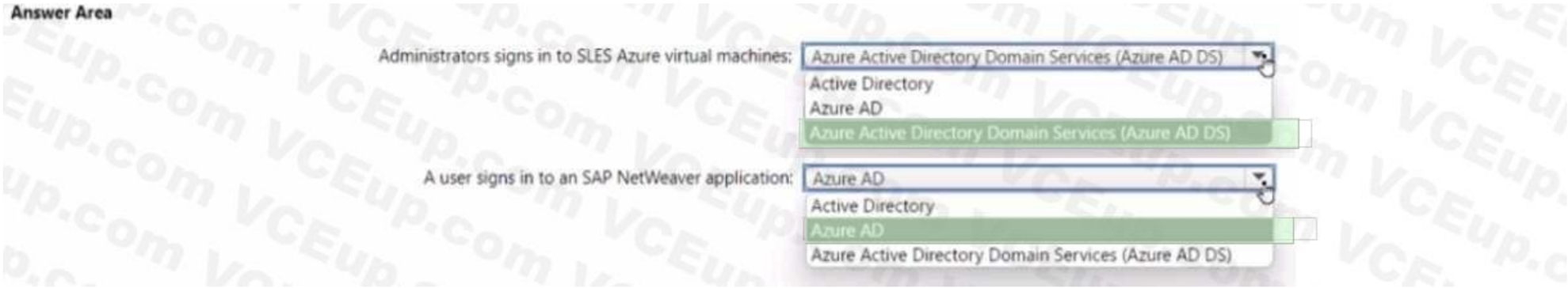
Section:
Explanation:

QUESTION 27
HOTSPOT
You have an Azure AD tenant named contoso.com that syncs to an Active Directory domain hosted on an Azure virtual machine. You plan to deploy an SAP NetWeaver landscape on Azure that will use SUSE Linux Enterprise Server (SLES). You need to recommend an authentication solution for the following, scenarios. The solution must support Azure Multi-Factor Authentication (MFA); • Administrators sign in to SLES Azure virtual machines.
• A user signs in to an SAP NetWeaver application.
What should you recommend for each scenario? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

Hot Area:



Answer Area:



Section:
Explanation:

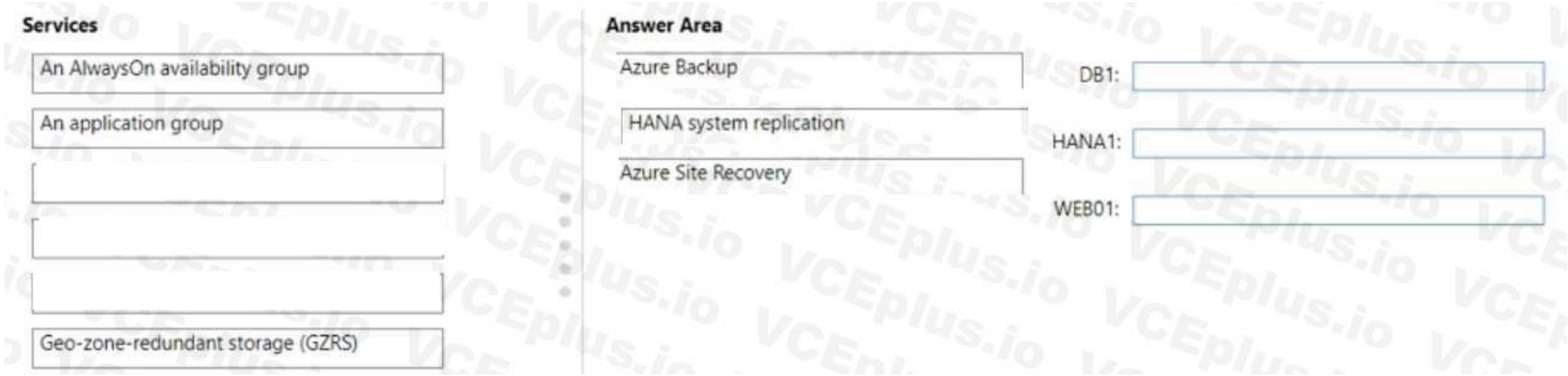
QUESTION 28
DRAG DROP
You have an SAP landscape on Azure that contains the virtual machines shown in the following table.

Name	Configuration
DB1	Microsoft SQL Server 2017
HANA1	SAP HANA 2.0
WEB01	SAP Web Dispatcher that runs on Windows Server 2019

You need to recommend a recovery solution in the event of an Azure regional outage. The solution must meet the following requirements:
• Minimize costs.
• Minimize data loss.
• Minimize administrative effort.
What should you recommend for each virtual machine? To answer, drag the appropriate services to the correct virtual machines. Each service 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:

Correct Answer:



Section:
Explanation:

QUESTION 29
You have an on-premises SAP landscape and a hybrid Azure AD tenant. You plan to enable Azure AD authentication for SAP NetWeaver. What should you configure first in Azure AD?

A. a conditional access policy
B. an Azure AD Application Proxy
C. a service principal
D. a user flow

Correct Answer: B
Section:

QUESTION 30
You have an Azure subscription that contains 10 virtual machines.
You plan to deploy an SAP landscape on Azure that will run SAP HANA.
You need to ensure that the virtual machines meet the performance requirements of HANA.
What should you use?

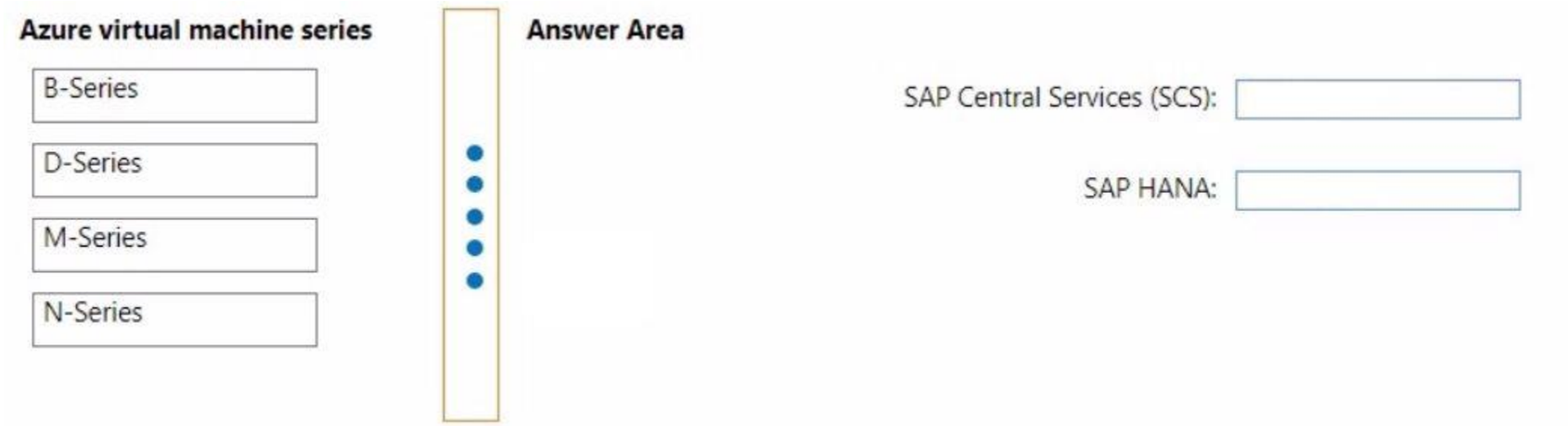
A. SAP Quick Sizer
B. Azure Advisor
C. ABAP Profiler
D. SAP HANA Hardware and Cloud Measurement Tool (HCMT)

Correct Answer: D
Section:

QUESTION 31
DRAG DROP
You need to deploy an SAP production landscape on Azure. The solution must be supported by the SAP production landscape and must minimize costs.
Which Azure virtual machine series should you use for each SAP workload? To answer, drag the appropriate series to the correct workloads. Each series 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:



Correct Answer:

Section:
Explanation:

QUESTION 32
You have an Azure subscription. The subscription contains a virtual machine named VM1 that runs SUSE Linux Enterprise Server (SLES) and was created by using an Azure Marketplace image.
You plan to deploy four virtual machines based on VM1 that will have the SAP Web Dispatcher role.
You need to create a generalized image of VM1.
What should you do first?

A. Install the Custom Script Extension.
B. Run sysprep.
C. Install the Azure Linux VM agent.
D. Run waagent,

Correct Answer: D
Section:

QUESTION 33
You have an SAP on Azure deployment that contains a production landscape, a development landscape, and a quality assurance landscape. All the landscapes are hosted on Azure virtual machines.
You need to create a monthly report that identifies opportunities for performance and security optimization. The solution must minimize administrative effort
What should you use?

A. Azure Monitor
B. SAP HANA hardware and cloud measurement tools
C. SAP GUI
D. Azure Advisor

Correct Answer: D
Section:

QUESTION 34
You have two Azure virtual machines named VM1 and VM2. VM1 hosts a single database container (SDC) for SAP HANA instance named sdl. VM2 hosts an SDC HANA instance named sd2. Azure Backup is enabled for the HANA databases on VM1 and VM2.
You need to restore sd1 to sd2 and overwrite the database instance on VM2.
What should you do first in the Azure portal?

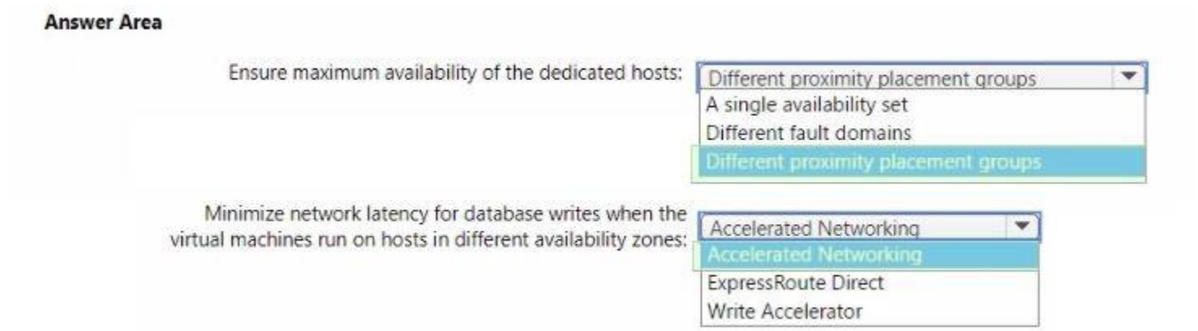
A. Rename the SystemDB database of sd2.
B. From Restore Configuration, set Restored DB Name to sd1 (sdc).
C. From Restore Configuration, set Restored DB Name to sd2(sdc).
D. Upgrade sd2 to Multiple Database Container (MDQ.

Correct Answer: B
Section:

QUESTION 35
HOTSPOT
You need to implement a deployment of SAP NetWeaver on Azure. The deployment will be hosted on Esv3 virtual machines that run on dedicated hosts. The hosts will be deployed to different availability zones in a single Azure region. The solution must meet the following requirements:
* Ensure maximum availability of the dedicated hosts.
* Minimize network latency for database writes when the virtual machines run on hosts in different availability zones.
What should you use for each requirement? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area:



Section:

Explanation: