

 **CERT** *Ya!*

Microsoft

AZ-120

**Planning and Administering Microsoft Azure for
SAP Workloads**

QUESTION & ANSWERS

QUESTION 1

You need to recommend a solution to reduce the cost of the SAP non-production landscapes after the migration. What should you include in the recommendation?

- A. Deallocate virtual machines when not in use.
- B. Migrate the SQL Server databases to Azure SQL Data Warehouse.
- C. Configure scaling of Azure App Service.
- D. Deploy non-production landscapes to Azure DevTest Labs.

Correct Answer: D

Explanation/Reference:

Relevant use cases Dev/test environments for SAP workloads on Azure. Noncritical SAP nonproduction workloads (such as sandbox, development, test, and quality assurance). Noncritical SAP business workloads. References: <https://docs.microsoft.com/en-us/azure/architecture/example-scenario/apps/sap-dev-test>

QUESTION 2

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.

Values

"false",

"none",

"true",

Answer Area

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

Explanation/Reference:

Values

-
-
-

Answer Area

```

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

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

```

Box 1: true

enableAcceleratedNetworking: If the network interface is accelerated networking enabled.

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.

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.

References:

https://docs.microsoft.com/en-us/azure/virtual-machines/workloads/sap/dbms_guide_general

QUESTION 3

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 load distribution to the application servers. What should you use?

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

Correct Answer: B

QUESTION 4

You have an SAP environment that is managed by using VMware vCenter.

You plan to migrate the SAP environment to Azure.

You need to gather information to identify which compute resources are required in Azure.

What should you use to gather the information?

- A. Azure Migrate and SAP EarlyWatch Alert reports
- B. Azure Site Recovery and SAP Quick Sizer
- C. SAP Quick Sizer and SAP HANA system replication
- D. Azure Site Recovery Deployment Planner and SAP HANA Cockpit

Correct Answer: A

Explanation/Reference:

Azure Migrate is a Microsoft service that helps an enterprise assess how its on-premises workloads will

perform, and how much they will cost to host, in the Azure public cloud.

An enterprise can use Azure Migrate to discover information about the VMware VMs running within its own

data center, including CPU and memory usage, as well as performance history.

SAP EarlyWatch Alert (EWA) is a monitoring service for SAP customers, to monitor SAP systems in the solution landscape.

QUESTION 5

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.

```
-resourcegroupname "SAPProduction" | Where {$_.Sku.Name -ne "
```

Get-AzDisk	Premium_LRS
Get-AzVM	Standard_LRS
Get-AzVMImage	Standard_RAGRS
	StandardsSSD_LRS

Correct Answer: see explanation below

Explanation/Reference:

```
-resourcegroupname "SAPProduction" | Where {$_.Sku.Name -ne "
```

Get-AzDisk	Premium_LRS
Get-AzVM	Standard_LRS
Get-AzVMImage	Standard_RAGRS
	StandardsSSD_LRS

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 6

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.

presented in the graphic.

NOTE: Each correct selection is worth one point.

Virtual machines that share **[answer choice]** will be susceptible to a storage outage.

- aligned SKUs
- the same fault domain
- the same update domain

Virtual machines in the Azure Availability Set can support **[answer choice]**.

- datacenter outages
- managed disks
- regional outages

Correct Answer:

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.	<input checked="" type="radio"/>	<input type="radio"/>
You can segregate the SAP application layer and the DBMS layer into different subnets in the same virtual network.	<input type="radio"/>	<input checked="" type="radio"/>
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.	<input checked="" type="radio"/>	<input type="radio"/>

Explanation/Reference:

Virtual machines that share **[answer choice]** will be susceptible to a storage outage.

- aligned SKUs
- the same fault domain
- the same update domain

Virtual machines in the Azure Availability Set can support **[answer choice]**.

- datacenter outages
- managed disks
- regional outages

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 7

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

Explanation/Reference:

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.

References: <https://docs.microsoft.com/bs-latn-ba/azure/data-factory/store-credentials-in-key-vault>

QUESTION 8

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.

Application server operating system:



Oracle Linux
SLES
Windows Server 2016

Database server operating system:



Oracle Linux
SLES
Windows Server 2016

Database platform:



Azure SQL Database
Microsoft SQL Server
Oracle
SAP HANA

Correct Answer:

Statements	Yes	No
Azure Active Directory (Azure AD) pass-through authentication can be used to enable MFA for on-premises users.	<input type="radio"/>	<input checked="" type="radio"/>
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.	<input checked="" type="radio"/>	<input type="radio"/>
Active Directory Federation Services (AD FS) can be used to enable MFA for on-premises users.	<input checked="" type="radio"/>	<input type="radio"/>

Explanation/Reference:

Application server operating system:

▼

Oracle Linux

SLES

Windows Server 2016

Database server operating system:

▼

Oracle Linux

SLES

Windows Server 2016

Database platform:

▼

Azure SQL Database

Microsoft SQL Server

Oracle

SAP HANA

QUESTION 9

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

Explanation/Reference:

Azure site-to-site VPN is cheaper.

References:

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

QUESTION 10

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

Correct Answer: A

Explanation/Reference:

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.

References: <https://blogs.sap.com/2017/10/05/your-sap-on-azure-part-2-dmo-with-system-move/>