- **Vendor: Microsoft**
- **Exam Code: AZ-120**
- **Exam Name: Planning and Administering Microsoft Azure for SAPWorkloads**
- **New Updated Questions from Braindump2go (Updated in August/2020)**

QUESTION 1
Case Study 1 - Litware, Inc
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.

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.

Answer: C

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.

References:

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

QUESTION 2

Case Study 1 - Litware, Inc

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.

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

Answer: A

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/

QUESTION 3

Case Study 1 - Litware, Inc

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.

You need to ensure that you can receive technical support to meet the technical requirements.

What should you deploy to Azure?

A. SAP Landscape Management (LaMa)
B. SAP Gateway
C. SAP Web Dispatcher
D. SAPRouter

Answer: A
Explanation:
Scenario: Ensure that SAP can provide technical support for all the SAP landscapes deployed to Azure.
References:
https://blogs.sap.com/2019/07/22/sap-landscape-management-on-microsoft-azure-part-1/

QUESTION 4
Case Study 1 - Litware, Inc
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.

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

Answer: D
Explanation:
Relevant use cases Dev/test environments for SAP workloads on Azure.
Noncritical SAP nonproduction workloads (such 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 5
Case Study 1 - Litware, Inc
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.

What should you use to perform load testing as part of the migration plan?

A. JMeter
B. SAP LoadRunner by Micro Focus
C. Azure Application Insights
D. Azure Monitor

Answer: B

Explanation:

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

With the SAP LoadRunner application by Micro Focus, you can accelerate testing and development, reduce slowdowns and expenses, and gain a better understanding of performance issues. Validate software performance, virtualize your network, simulate workloads, benchmark production system performance, and optimize your deployment of SAP HANA software References:

https://www.sap.com/products/loadrunner.html

QUESTION 6

Case Study 1 - Litware, Inc

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.

Hotspot Question

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

NOTE: Each correct selection is worth one point.

Answer Area

Statements	Yes	No
After the migration, all user authentication to the SAP applications must be handled by Azure Active Directory (Azure AD).	○	○
The migration requires that the on-premises Active Directory domain syncs to Azure Active Directory (Azure AD).	○	○
After the migration users will be able to authenticate to the SAP applications by using their existing credentials in litware.com.	○	○

Answer:

Answer Area

Statements	Yes	No
After the migration, all user authentication to the SAP applications must be handled by Azure Active Directory (Azure AD).	○	○
The migration requires that the on-premises Active Directory domain syncs to Azure Active Directory (Azure AD).	○	○
After the migration users will be able to authenticate to the SAP applications by using their existing credentials in litware.com.	○	○

Explanation:
In a Hybrid-IT scenario, Active Directory from on-premises can be extended to serve as the authentication mechanism through an Azure deployed domain controller (as well as potentially using the integrated DNS).
It is important to distinguish between traditional Active Directory Servers and Microsoft Azure Active Directory that provides only a subset of the traditional on-premises AD offering. This subset include Identity and Access Management, but does not have the full AD schema or services that many 3rd party application take advantage of. While Azure Active Directory IS a requirement to establish authentication for the Azure virtual machines in use, and it can synchronize users with customers' on-premises AD, the two are explicitly different and customers will likely continue to require full Active Directory servers deployed in Microsoft Azure.
References:
https://www.suse.com/media/guide/sap_hana_on_azure_101.pdf

QUESTION 7
Case Study 2 - Contoso, Ltd
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

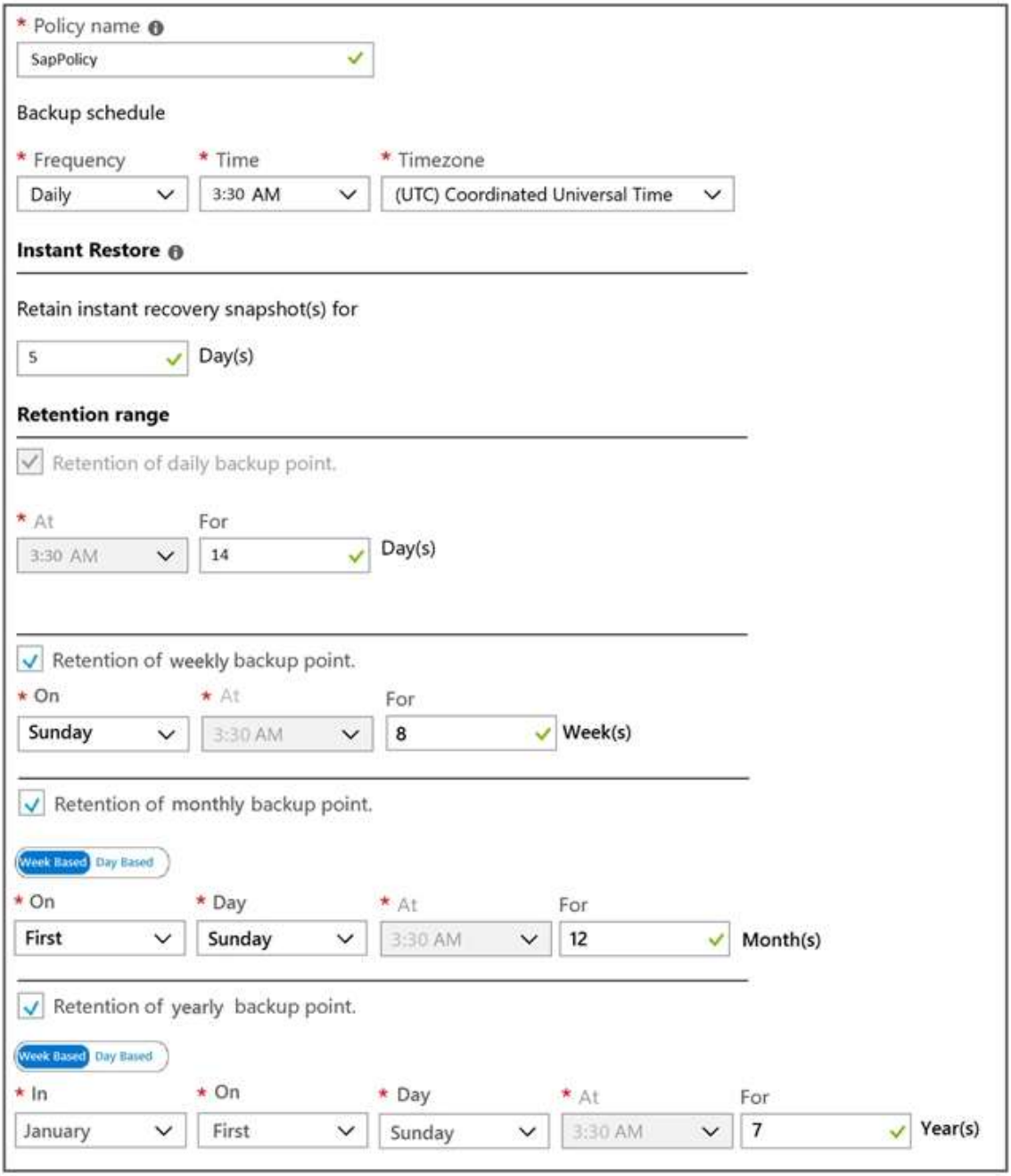
Contoso identifies the following technical requirements:

- 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')]",
```

```
            "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')]"
          }
        }
      }
    ]
  }
```

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

Answer: A
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 8
Case Study 2 - Contoso, Ltd
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.

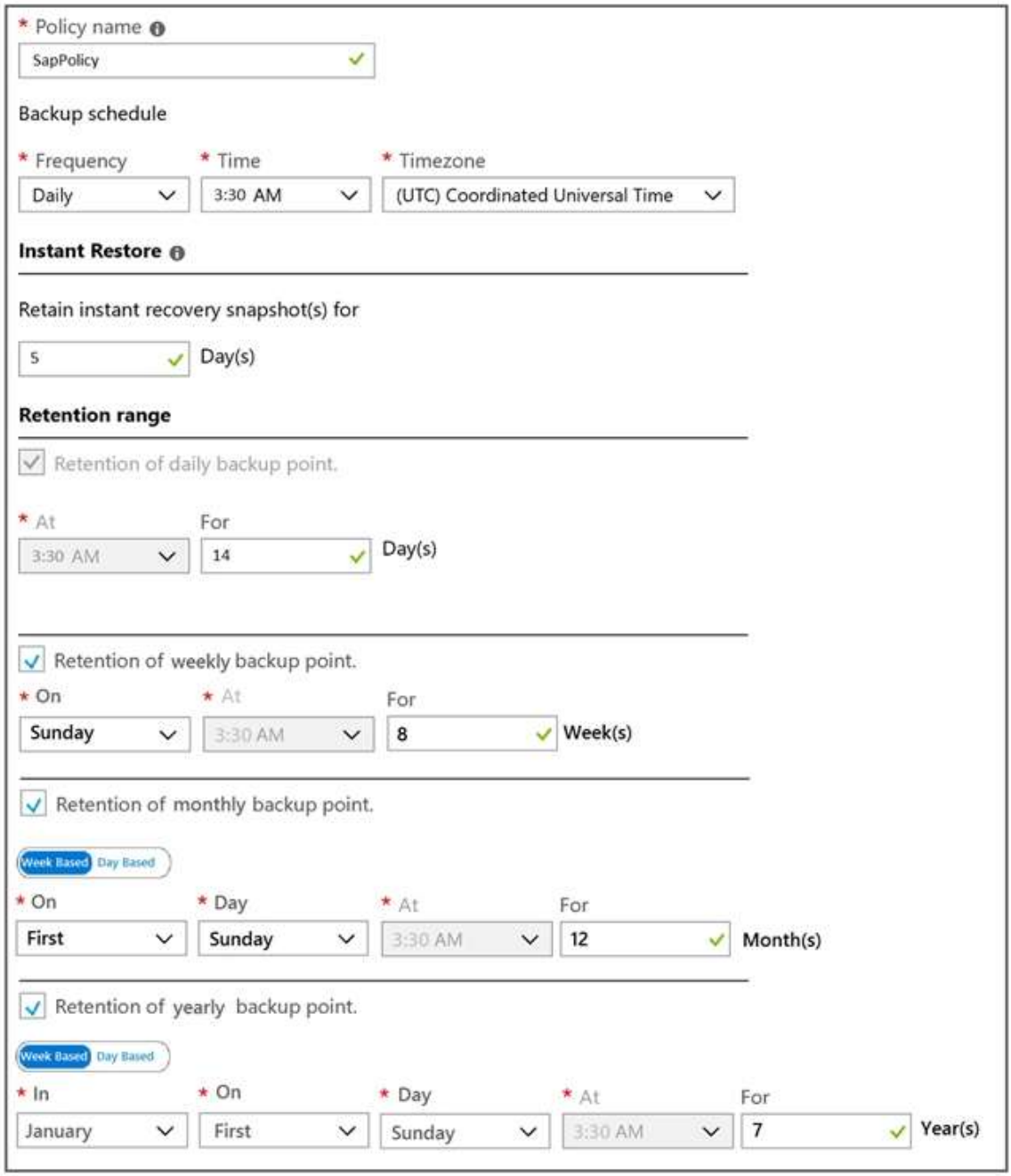
All resources for the production landscape will be in a resource group named SAPProduction.
Business goals
Contoso identifies the following business goals:
- Minimize costs whenever possible.
- Migrate SAP to Azure without causing downtime.
- Ensure that all SAP deployments to Azure are supported by 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')]",
```

```
            "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')]"
        }
      }
    }
  ]
}
```

Once the migration completes, to which size should you set the ExpressRoute circuit to the New York office to meet the business goals and technical requirements?

A. 500 Mbps
B. 1,000 Mbps
C. 2,000 Mbps
D. 5,000 Mbps

Answer: C
Explanation:
ExpressRoute circuits are configured to allow you to burst up to two times the bandwidth limit you procured for no additional cost.
Scenario: 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.
References:
https://docs.microsoft.com/en-us/azure/expressroute/expressroute-faqs

QUESTION 9
Case Study 2 - Contoso, Ltd
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

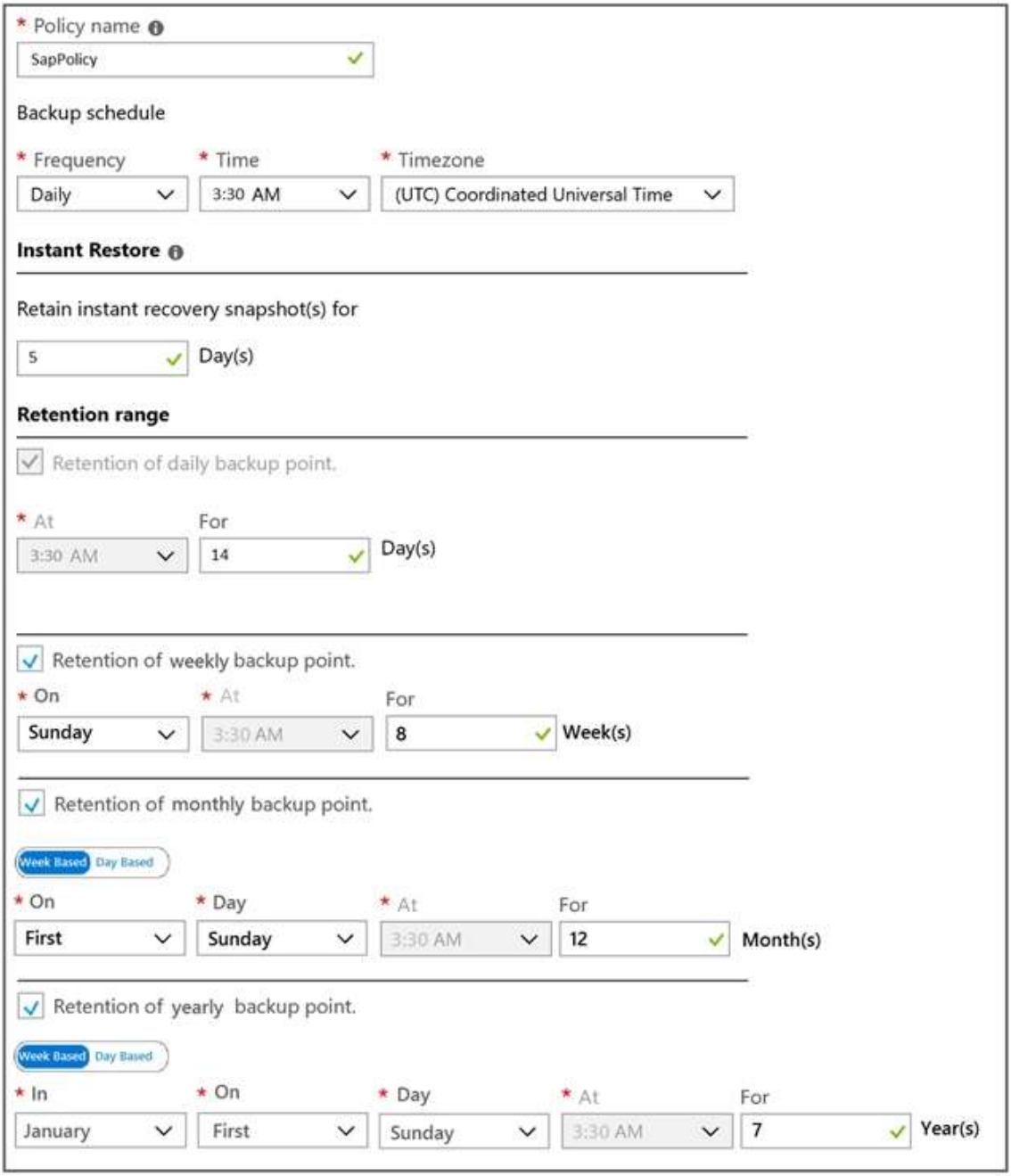
Contoso identifies the following technical requirements:

- 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')]",
```

```
            "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')]"
          }
        }
      }
    ]
  }
```

You are planning the Azure network infrastructure to support the disaster recovery requirements.
What is the minimum number of virtual networks required for the SAP deployment?

A. 1
B. 2
C. 3
D. 4

Answer: B
Explanation:
Scenario: Ensure that all the production databases can withstand the failure of an Azure region.
Note: Use Azure Site Recovery to replicate applications across regions. Azure Site Recovery replicates workloads running on physical and virtual machines from a primary site (either on-premises or in Azure) to a secondary location (in Azure). When an outage occurs at the customer's primary site, a failover can be triggered to quickly return the customer to an operational state. After the primary location is restored, customers can then fail back.
References:
https://docs.microsoft.com/en-us/azure/architecture/resiliency/recovery-loss-azure-region

QUESTION 10
Case Study 2 - Contoso, Ltd

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

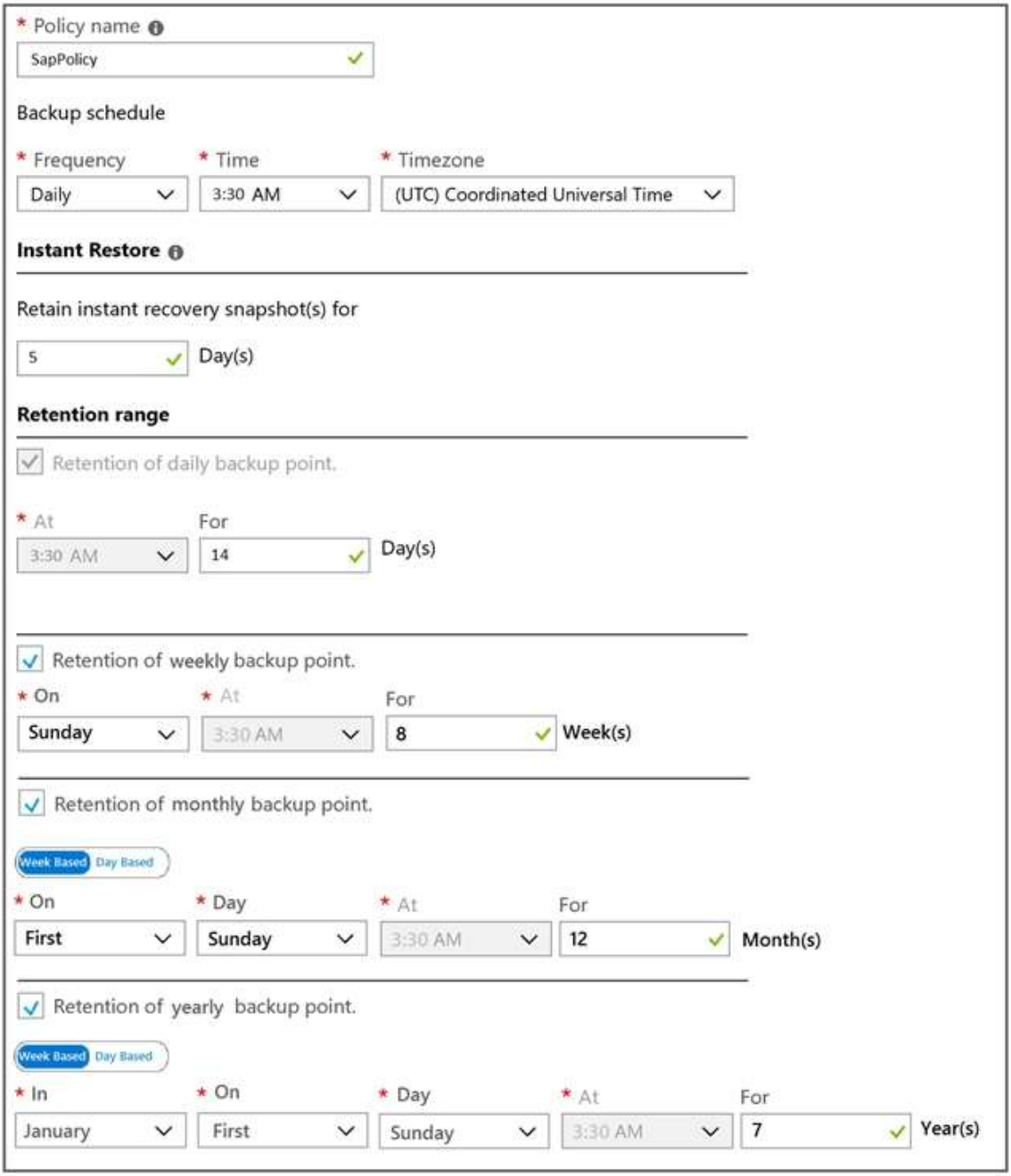
Contoso identifies the following technical requirements:

- 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')]",
```

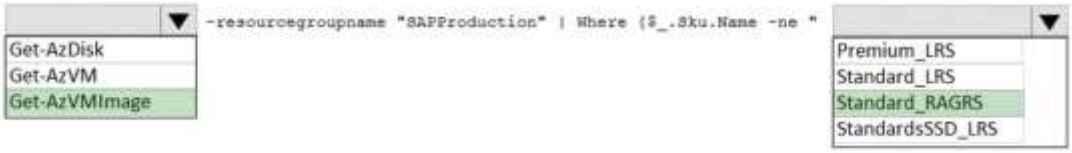
```
          "name": "[concat(parameters('vmname'), '-DD',copyIndex('datadisks'))]",
          "createOption": "Empty"
        }
      }
    ]
  },
  "networkProfile": {
   "networkInterfaces": [
      {
        "id": "[resourceId('Microsoft.Network/networkInterfaces', parameters('vmName'))]"
      }
    ]
  }
},
"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')]"
        }
      }
    }
  ]
}
```

Hotspot Question
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.

Answer Area

Answer:

Answer Area



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