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問題集

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Exam : AZ-204

**Title : Developing Solutions for
Microsoft Azure**

Version : DEMO

1. Topic 1, Windows Server 2016 virtual machine

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.

Current environment

Windows Server 2016 virtual machine

This virtual machine (VM) runs BizTalk Server 2016. The VM runs the following workflows:

- Ocean Transport – This workflow gathers and validates container information including container contents and arrival notices at various shipping ports.
- Inland Transport – This workflow gathers and validates trucking information including fuel usage, number of stops, and routes.

The VM supports the following REST API calls:

- Container API – This API provides container information including weight, contents, and other attributes.
- Location API – This API provides location information regarding shipping ports of call and trucking stops.
- Shipping REST API – This API provides shipping information for use and display on the shipping website.

Shipping Data

The application uses MongoDB JSON document storage database for all container and transport information.

Shipping Web Site

The site displays shipping container tracking information and container contents. The site is located at <http://shipping.wideworldimporters.com/>

Proposed solution

The on-premises shipping application must be moved to Azure. The VM has been migrated to a new Standard_D16s_v3 Azure VM by using Azure Site Recovery and must remain running in Azure to complete the BizTalk component migrations. You create a Standard_D16s_v3 Azure VM to host BizTalk Server.

The Azure architecture diagram for the proposed solution is shown below:



Requirements

Shipping Logic app

The Shipping Logic app must meet the following requirements:

- Support the ocean transport and inland transport workflows by using a Logic App.
- Support industry-standard protocol X12 message format for various messages including vessel content details and arrival notices.
- Secure resources to the corporate VNet and use dedicated storage resources with a fixed costing model.
- Maintain on-premises connectivity to support legacy applications and final BizTalk migrations.

Shipping Function app

Implement secure function endpoints by using app-level security and include Azure Active Directory (Azure AD).

REST APIs

The REST API's that support the solution must meet the following requirements:

- Secure resources to the corporate VNet.
- Allow deployment to a testing location within Azure while not incurring additional costs.
- Automatically scale to double capacity during peak shipping times while not causing application downtime.
- Minimize costs when selecting an Azure payment model.

Shipping data

Data migration from on-premises to Azure must minimize costs and downtime.

Shipping website

Use Azure Content Delivery Network (CDN) and ensure maximum performance for dynamic content while minimizing latency and costs.

Issues

Windows Server 2016 VM

The VM shows high network latency, jitter, and high CPU utilization. The VM is critical and has not been backed up in the past. The VM must enable a quick restore from a 7-day snapshot to include in-place restore of disks in case of failure.

Shipping website and REST APIs

The following error message displays while you are testing the website:

```
Failed to load http://test-shippingapi.wideworldimporters.com/: No
'Access-Control-Allow-Origin' header is present on the requested resource. Origin
'http://test.wideworldimporters.com/' is therefore not allowed access.
```

HOTSPOT

You need to resolve the Shipping web site error.

How should you configure the Azure Table Storage service? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

```
<?xml version="1.0" encoding="utf-8"?>
<StorageServiceProperties>
  ...
  <Cors>
    <CorsRule>
      <
        AllowedHeaders
        ExposedHeaders
        AllowedMethods
        AllowedOrigins
      >
      http://*.wideworldimporters.com
      http://test.wideworldimporters.com
      http://test-shippingapi.wideworldimporters.com
      http://www.wideworldimporters.com
    </
    AllowedHeaders
    ExposedHeaders
    AllowedMethods
    AllowedOrigins
  >
  <AllowedMethods>
    GET,PUT
    GET
    POST
    GET,HEAD
  </AllowedMethods>
  ...
  </CorsRule>
</Cors>
</StorageServiceProperties>
```

Answer:

```

<?xml version="1.0" encoding="utf-8"?>
<StorageServiceProperties>
  ...
  <Cors>
  <CorsRule>
    <
      AllowedHeaders
      ExposedHeaders
      AllowedMethods
      AllowedOrigins
    >
    http://*.wideworldimporters.com
    http://test.wideworldimporters.com
    http://test-shippingapi.wideworldimporters.com
    http://www.wideworldimporters.com
  </
  AllowedHeaders
  ExposedHeaders
  AllowedMethods
  AllowedOrigins
  >
  <AllowedMethods>
    GET,PUT
    GET
    POST
    GET,HEAD
  </AllowedMethods>
  ...
  </CorsRule>
</Cors>
</StorageServiceProperties>

```

Explanation:

Box 1: AllowedOrigins

A CORS request will fail if Access-Control-Allow-Origin is missing.

Scenario:

The following error message displays while you are testing the website:

Failed to load http://test-shippingapi.wideworldimporters.com/: No 'Access-Control-Allow-Origin' header is present on the requested resource. Origin 'http://testwideworldimporters.com/' is therefore not allowed access.

Box 2: http://test-shippingapi.wideworldimporters.com

Syntax: Access-Control-Allow-Origin: *

Access-Control-Allow-Origin: <origin>

Access-Control-Allow-Origin: null

<origin> Specifies an origin. Only a single origin can be specified.

Box 3: AllowedOrigins

Box 4: POST

The only allowed methods are GET, HEAD, and POST. In this case POST is used.

"<Corsrule>" "allowedmethods" Failed to load no "Access-control-Origin" header is present

References: <https://developer.mozilla.org/en-US/docs/Web/HTTP/Headers/Access-Control-Allow-Origin>

2.DRAG DROP

You need to support the message processing for the ocean transport workflow.

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.

Actions

Link the Logic App to the integration account.

Add partners, schemas, certificates, maps, and agreements.

Update the Logic App to use the partners, schemas, certificates, maps, and agreements.

Create a custom connector for the Logic App.

Link the custom connector to the Logic App.

Create an integration account in the Azure portal.

Answer:

Actions

Link the Logic App to the integration account.

Add partners, schemas, certificates, maps, and agreements.

Update the Logic App to use the partners, schemas, certificates, maps, and agreements.

Create a custom connector for the Logic App.

Link the custom connector to the Logic App.

Create an integration account in the Azure portal.

Answer Area

Answer Area

Create an integration account in the Azure portal.

Link the custom connector to the Logic App.

Add partners, schemas, certificates, maps, and agreements.

Create a custom connector for the Logic App.

Explanation:

Step 1: Create an integration account in the Azure portal

You can define custom metadata for artifacts in integration accounts and get that metadata during runtime for your logic app to use. For example, you can provide metadata for artifacts, such as partners, agreements, schemas, and maps - all store metadata using key-value pairs.

Step 2: Link the Logic App to the integration account

A logic app that's linked to the integration account and artifact metadata you want to use.

Step 3: Add partners, schemas, certificates, maps, and agreements

Step 4: Create a custom connector for the Logic App.

References:

<https://docs.microsoft.com/bs-latn-ba/azure/logic-apps/logic-apps-enterprise-integration-metadata>

3.HOTSPOT

You need to correct the VM issues.

Which tools should you use? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

Answer Area

Issue	Tool
Backup and Restore	<div data-bbox="547 714 1179 781"><input type="text"/></div> <ul data-bbox="547 781 1179 976" style="list-style-type: none">Azure Site RecoveryAzure BackupAzure Data BoxAzure Migrate
Performance	<div data-bbox="547 1001 1179 1068"><input type="text"/></div> <ul data-bbox="547 1068 1179 1263" style="list-style-type: none">Azure Network WatcherAzure Traffic ManagerExpressRouteAccelerated Networking

Answer:

Answer Area

Issue	Tool
Backup and Restore	<div style="border: 1px solid black; padding: 2px;"><div style="background-color: #e0e0e0; padding: 2px; display: flex; justify-content: space-between; align-items: center;">▼</div><div style="border-top: 1px solid black; border-bottom: 1px solid black; padding: 2px;"><div style="border-bottom: 1px solid black; padding: 2px;">Azure Site Recovery</div><div style="border-bottom: 1px solid black; padding: 2px; background-color: #d9ead3;">Azure Backup</div><div style="border-bottom: 1px solid black; padding: 2px;">Azure Data Box</div><div style="padding: 2px;">Azure Migrate</div></div></div>
Performance	<div style="border: 1px solid black; padding: 2px;"><div style="background-color: #e0e0e0; padding: 2px; display: flex; justify-content: space-between; align-items: center;">▼</div><div style="border-top: 1px solid black; border-bottom: 1px solid black; padding: 2px;"><div style="border-bottom: 1px solid black; padding: 2px;">Azure Network Watcher</div><div style="border-bottom: 1px solid black; padding: 2px;">Azure Traffic Manager</div><div style="border-bottom: 1px solid black; padding: 2px;">ExpressRoute</div><div style="padding: 2px; background-color: #d9ead3;">Accelerated Networking</div></div></div>

Explanation:

Backup and Restore: Azure Backup

Scenario: The VM is critical and has not been backed up in the past. The VM must enable a quick restore from a 7-day snapshot to include in-place restore of disks in case of failure. In-Place restore of disks in IaaS VMs is a feature of Azure Backup.

Performance: Accelerated Networking

Scenario: The VM shows high network latency, jitter, and high CPU utilization. Accelerated networking enables single root I/O virtualization (SR-IOV) to a VM, greatly improving its networking performance. This high-performance path bypasses the host from the datapath, reducing latency, jitter, and CPU utilization, for use with the most demanding network workloads on supported VM types.

References:

<https://azure.microsoft.com/en-us/blog/an-easy-way-to-bring-back-your-azure-vm-with-in-place-restore/>

4.HOTSPOT

You need to secure the Shipping Function app.

How should you configure the app? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

Answer Area

Setting	Value
Authorization level	<div style="border: 1px solid black; padding: 2px;"><div style="background-color: #e0e0e0; padding: 2px; display: flex; justify-content: space-between;">▼</div><div style="padding: 2px;"><ul style="list-style-type: none">FunctionAnonymousAdmin</div></div>
User claims	<div style="border: 1px solid black; padding: 2px;"><div style="background-color: #e0e0e0; padding: 2px; display: flex; justify-content: space-between;">▼</div><div style="padding: 2px;"><ul style="list-style-type: none">JSON Web Token (JWT)Shared Access Signature (SAS) tokenAPI Key</div></div>
Trigger type	<div style="border: 1px solid black; padding: 2px;"><div style="background-color: #e0e0e0; padding: 2px; display: flex; justify-content: space-between;">▼</div><div style="padding: 2px;"><ul style="list-style-type: none">blobHTTPqueuetimer</div></div>

Answer:

Answer Area

Setting	Value
Authorization level	<div style="border: 1px solid black; padding: 2px;"> <div style="background-color: #f0f0f0; padding: 2px; display: flex; justify-content: space-between; align-items: center;"> ▼ </div> <div style="padding: 2px;"> <p>Function</p> <p>Anonymous</p> <p>Admin</p> </div> </div>
User claims	<div style="border: 1px solid black; padding: 2px;"> <div style="background-color: #f0f0f0; padding: 2px; display: flex; justify-content: space-between; align-items: center;"> ▼ </div> <div style="padding: 2px;"> <p>JSON Web Token (JWT)</p> <p>Shared Access Signature (SAS) token</p> <p>API Key</p> </div> </div>
Trigger type	<div style="border: 1px solid black; padding: 2px;"> <div style="background-color: #f0f0f0; padding: 2px; display: flex; justify-content: space-between; align-items: center;"> ▼ </div> <div style="padding: 2px;"> <p>blob</p> <p>HTTP</p> <p>queue</p> <p>timer</p> </div> </div>

Explanation:

Scenario: Shipping Function app: Implement secure function endpoints by using app-level security and include Azure Active Directory (Azure AD).

Box 1: Function

Box 2: JSON based Token (JWT)

Azure AD uses JSON based tokens (JWTs) that contain claims

Box 3: HTTP

How a web app delegates sign-in to Azure AD and obtains a token

User authentication happens via the browser. The OpenID protocol uses standard HTTP protocol messages.

References: <https://docs.microsoft.com/en-us/azure/active-directory/develop/authentication-scenarios>

5.You need to secure the Shipping Logic App.

What should you use?

- A. Azure App Service Environment (ASE)
- B. Azure AD B2B integration
- C. Integration Service Environment (ISE)
- D. VNet service endpoint

Answer: C

Explanation:

Scenario: The Shipping Logic App requires secure resources to the corporate VNet and use dedicated storage resources with a fixed costing model.

You can access to Azure Virtual Network resources from Azure Logic Apps by using integration service environments (ISEs).

Sometimes, your logic apps and integration accounts need access to secured resources, such as virtual machines (VMs) and other systems or services, that are inside an Azure virtual network. To set up this access, you can create an integration service environment (ISE) where you can run your logic apps and create your integration accounts.

References:

<https://docs.microsoft.com/en-us/azure/logic-apps/connect-virtual-network-vnet-isolated-environment-overview>