Microsoft Azure DevOps Solutions v1.0 (AZ-400)

Question 31 (Testlet 2)

Case Study -
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Overview -
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Existing Environment -

Application Architecture -
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The application was developed by using Microsoft Visual Studio. Source code is stored in Team Foundation Server (TFS) in the main office. The branch offices access the source code by using TFS proxy servers.

Architectural Issues -
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Requirements -

Planned changes -
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The investment planning applications suite will include one multi-tier web application and two iOS mobile applications. One mobile application will be used by employees; the other will be used by customers.
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Technical requirements -
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The required operating system configuration for the test servers changes weekly. Azure Automation State Configuration must be used to ensure that the operating system on each test server is

configured the same way when the servers are created and checked periodically.

Current Technical Issue -
The test servers are configured correctly when first deployed, but they experience configuration drift over time. Azure Automation State Configuration fails to correct the configurations.
Azure Automation State Configuration nodes are registered by using the following command.

```
Register-AzureRmAutomationDscNode
  -ResourceGroupName 'TestResourceGroup'
  -AutomationAccountName 'LitwareAutomationAccount'
  -AzureVMName $vname
  -ConfigurationMode 'ApplyOnly'
```

To resolve the current technical issue, what should you do to the Register-AzureRmAutomationDscNode command?

A. Change the value of the ConfigurationMode parameter.
B. Replace the Register-AzureRmAutomationDscNode cmdlet with Register-AzureRmAutomationScheduledRunbook
C. Add the AllowModuleOverwrite parameter.
D. Add the DefaultProfile parameter.

Expose Correct Answer

Answer : **A**

Explanation:
Change the ConfigurationMode parameter from ApplyOnly to ApplyAndAutocorrect.
The Register-AzureRmAutomationDscNode cmdlet registers an Azure virtual machine as an APS Desired State Configuration (DSC) node in an Azure Automation account.
Scenario: Current Technical Issue
The test servers are configured correctly when first deployed, but they experience configuration drift over time. Azure Automation State Configuration fails to correct the configurations.
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Reference:

https://docs.microsoft.com/en-us/powershell/module/azurerm.automation/register-azurermautomationdscnode?view=azurermps-6.13.0

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Requirements -

Planned changes -
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Technical requirements -
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Visual Studio App Center must be used to centralize the reporting of mobile application crashes and device types in use.
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```

HOTSPOT -
You need to configure a cloud service to store the secrets required by the mobile applications to call the share pricing service.
What should you include in the solution? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.
Hot Area:

Answer Area

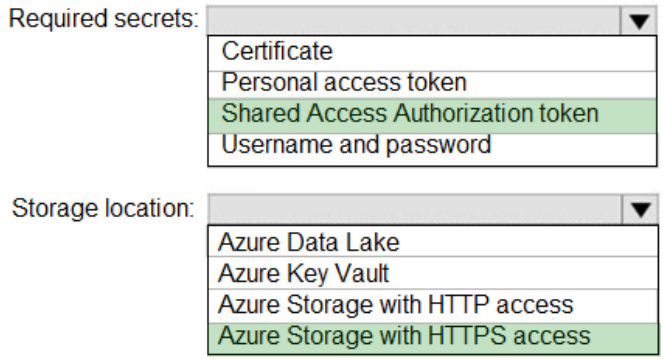
Required secrets:
- Certificate
- Personal access token
- Shared Access Authorization token
- Username and password

Storage location:
- Azure Data Lake
- Azure Key Vault
- Azure Storage with HTTP access
- Azure Storage with HTTPS access

Expose Correct Answer

Answer :

Answer Area



Explanation:
Every request made against a storage service must be authorized, unless the request is for a blob or container resource that has been made available for public or signed access. One option for authorizing a request is by using Shared Key.
Scenario: The mobile applications must be able to call the share pricing service of the existing retirement fund management system. Until the system is upgraded, the service will only support basic authentication over HTTPS.
The investment planning applications suite will include one multi-tier web application and two iOS mobile application. One mobile application will be used by employees; the other will be used by customers.
Reference:
https://docs.microsoft.com/en-us/rest/api/storageservices/authorize-with-shared-key

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```

HOTSPOT -
How should you complete the code to initialize App Center in the mobile application? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.
Hot Area:

Answer Area

```
MSAppCenter.start
( "{Your App Secret}",
  withServices:
)
```

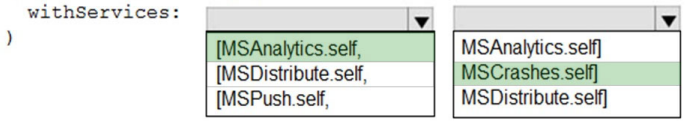
[▼]
- [MSAnalytics.self,
- [MSDistribute.self,
- [MSPush.self,

[▼]
- MSAnalytics.self]
- MSCrashes.self]
- MSDistribute.self]

Expose Correct Answer

Answer :

Answer Area



Scenario: Visual Studio App Center must be used to centralize the reporting of mobile application crashes and device types in use.
In order to use App Center, you need to opt in to the service(s) that you want to use, meaning by default no services are started and you will have to explicitly call each of them when starting the SDK.
Insert the following line to start the SDK in your app's AppDelegate class in the didFinishLaunchingWithOptions method.
MSAppCenter.start("{Your App Secret}", withServices: [MSAnalytics.self, MSCrashes.self])
Reference:
https://docs.microsoft.com/en-us/appcenter/sdk/getting-started/ios

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Which branching strategy should you recommend for the investment planning applications suite?

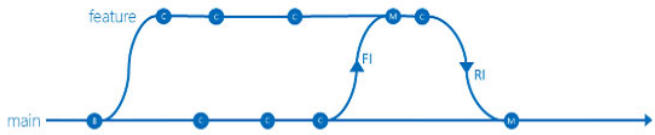
A. release isolation
B. main only
C. development isolation
D. feature isolation

Expose Correct Answer

Answer : **D**
Explanation:
Scenario: A branching strategy that supports developing new functionality in isolation must be

Scenario: A branching strategy that supports developing new functionality in isolation must be used.

Feature isolation is a special derivation of the development isolation, allowing you to branch one or more feature branches from main, as shown, or from your dev branches.



When you need to work on a particular feature, it might be a good idea to create a feature branch.

Incorrect Answers:

A: Release isolation introduces one or more release branches from main. The strategy allows concurrent release management, multiple and parallel releases, and codebase snapshots at release time.

B: The Main Only strategy can be folder-based or with the main folder converted to a Branch, to enable additional visibility features. You commit your changes to the main branch and optionally indicate development and release milestones with labels.

C: Development isolation: When you need to maintain and protect a stable main branch, you can branch one or more dev branches from main. It enables isolation and concurrent development. Work can be isolated in development branches by feature, organization, or temporary collaboration.

References:

https://docs.microsoft.com/en-us/azure/devops/repos/tfvc/branching-strategies-with-tfvc?view=azure-devops

Implement DevOps Development Processes

Next Question

Question 35 (Testlet 3)

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Overview -
Contoso, Ltd. is a manufacturing company that has a main office in Chicago.

Existing Environment -
Contoso plans to improve its IT development and operations processes by implementing Azure DevOps principles. Contoso has an Azure subscription and creates an Azure DevOps organization.
The Azure DevOps organization includes:
The Docker extension
A deployment pool named Pool7 that contains 10 Azure virtual machines that run Windows Server 2016
The Azure subscription contains an Azure Automation account.

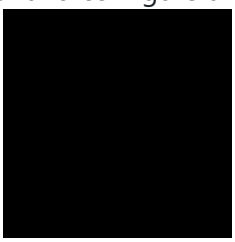
Requirements -

Planned changes -
Contoso plans to create projects in Azure DevOps as shown in the following table.

Project name	Project details
Project 1	Project1 will provide support for incremental builds and third-party SDK components
Project 2	Project2 will use an automatic build policy. A small team of developers named Team2 will work independently on changes to the project. The Team2 members will not have permissions to Project2.
Project 3	Project3 will be integrated with SonarQube
Project 4	Project4 will provide support for a build pipeline that creates a Docker image and pushes the image to the Azure Container Registry. Project4 will use an existing Dockerfile.
Project 5	Project5 will contain a Git repository in Azure Repos and a continuous integration trigger that will initiate a build in response to any change except for changes within /folder1 of the repository.
Project 6	Project6 will provide support for build and deployment pipelines. Deployment will be allowed only if the number of current work items representing active software bugs is 0.
Project 7	Project7 will contain a target deployment group named Group7 that maps to Pool7. Project7 will use Azure Automation State Configuration to maintain the desired state of the computers in Group7.

Technical requirements -
Contoso identifies the following technical requirements:
Implement build agents for Project1.
Whenever possible, use Azure resources.
Avoid using deprecated technologies.
Implement a code flow strategy for Project2 that will:
-Enable Team2 to submit pull requests for Project2.
-Enable Team2 to work independently on changes to a copy of Project2.
-Ensure that any intermediary changes performed by Team2 on a copy of Project2 will be subject to the same restrictions as the ones defined in the build policy of Project2.
Whenever possible, implement automation and minimize administrative effort.

Implement Project3, Project5, Project6, and Project7 based on the planned changes.
Implement Project4 and configure the project to push Docker images to Azure Container Registry.



You add the virtual machines as managed nodes in Azure Automation State Configuration.
You need to configure the managed computers in Pool7.
What should you do next?

A. Modify the RefreshMode property of the Local Configuration Manager (LCM).
B. Run the Register-AzureRmAutomationDscNode Azure Powershell cmdlet.
C. Modify the ConfigurationMode property of the Local Configuration Manager (LCM).
D. Install PowerShell Core.

Expose Correct Answer

Answer : **B**

Explanation:
The Register-AzureRmAutomationDscNode cmdlet registers an Azure virtual machine as an APS Desired State Configuration (DSC) node in an Azure Automation account.
Scenario: The Azure DevOps organization includes:

The Docker extension -
A deployment pool named Pool7 that contains 10 Azure virtual machines that run Windows Server 2016

Project 7	Project7 will contain a target deployment group named Group7 that maps to Pool7. Project7 will use Azure Automation State Configuration to maintain the desired state of the computers in Group7.

Reference:
https://docs.microsoft.com/en-us/powershell/module/azurerm.automation/register-azurermautomationdscnode

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