

Design a DevOps Strategy

QUESTION 1

You use Azure Artifacts to host NuGet packages that you create.

You need to make one of the packages available to anonymous users outside your organization. The solution must minimize the number of publication points. What should you do?

- Change the feed URL of the package
- Create a new feed for the package
- Promote the package to a release view.
- Publish the package to a public NuGet repository.

Correct Answer: **B**

QUESTION 2

Your company plans to use an agile approach to software development.

You need to recommend an application to provide communication between members of the development team who work in locations around the world. The applications must meet the following requirements:

Provide the ability to isolate the members of different project teams into separate communication channels and to keep a history of the chats within those channels.

Be available on Windows 10, Mac OS, iOS, and Android operating systems.

Provide the ability to add external contractors and suppliers to projects. Integrate directly with Azure DevOps. What should you recommend?

- Microsoft Project
- Bamboo
- Microsoft Lync
- Microsoft Teams

Correct Answer: **D**

QUESTION 3

You manage build pipelines and deployment pipelines by using Azure DevOps.

Your company has a team of 500 developers. New members are added continually to the team. You need to automate the management of users and licenses whenever possible.

Which task must you perform manually?

- modifying group memberships
- adding users
- assigning entitlements
- procuring licenses

Correct Answer: **D**

QUESTION 4

You are developing a multi-tier application. The application will use Azure App Service web apps as the front end and an Azure SQL database as the back end. The application will use Azure functions to write some data to Azure Storage. You need to send the Azure DevOps team an email message when the front end fails to return a status code of 200.

Which feature should you use?

- Service Map in Azure Log Analytics
- Availability tests in Azure Application Insights
- Profiler in Azure Application Insights
- Application Map in Azure Application Insights

Correct Answer: **B**

QUESTION 5

During a code review, you discover many quality issues. Many modules contain unused variables and empty catch blocks. You need to recommend a solution to improve the quality of the code. What should you recommend?

In a Grunt build task, select Enabled from Control Options.

In a Maven build task, select Run PMD.

In a Xcode build task, select Use xcpretty from Advanced.

In a Gradle build task, select Run Checkstyle.

Correct Answer: **B**

QUESTION 6

Your company has an on-premises Bitbucket Server that is used for Git-based source control. The server is protected by a firewall that blocks inbound Internet traffic. You plan to use Azure DevOps to manage the build and release processes.

Which two components are required to integrate Azure DevOps and Bitbucket? Each Correct Answer presents part of the solution.

NOTE: Each correct selection is worth one point.

a deployment group

a Microsoft-hosted agent

service hooks

a self-hosted agent

an External Git service connection

Correct Answer: **DE**

Switch to using [self-hosted agents](#) or [scale-set agents](#). These agents can be set up within your network and hence will have access to the Bitbucket server. These agents only require outbound connections to Azure Pipelines. There is no need to open a firewall for inbound connections. Make sure that the name of the server you specified when creating the service connection is resolvable from the self-hosted agents.

QUESTION 7

Your company plans to use an agile approach to software development.

You need to recommend an application to provide communication between members of the development team who work in locations around the world. The applications must meet the following requirements:

Provide the ability to isolate the members of different project teams into separate communication channels and to keep a history of the chats within those channels.

Be available on Windows 10, Mac OS, iOS, and Android operating systems.

Provide the ability to add external contractors and suppliers to projects. Integrate directly with Azure DevOps. What should you recommend?

Microsoft Project

Bamboo

Octopus

Slack

Correct Answer: **D**

QUESTION 8

DRAG DROP

You need to recommend project metrics for dashboards in Azure DevOps.

Which chart widgets should you recommend for each metric? To answer, drag the appropriate chart widgets to the correct metrics. Each chart widget may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Chart Widgets **Answer Area**

Burndown	The elapsed time from the creation of work items to their completion:	<input type="text"/>
Cycle Time		<input type="text"/>
Lead Time	The elapsed time to complete work items once they are active:	<input type="text"/>
Velocity	The remaining work:	<input type="text"/>

Correct Answer:

Chart Widgets **Answer Area**

<input type="text"/>	The elapsed time from the creation of work items to their completion:	<input type="text"/> Lead Time
<input type="text"/>	The elapsed time to complete work items once they are active:	<input type="text"/> Cycle Time
<input type="text"/> Velocity	The remaining work:	<input type="text"/> Burndown

QUESTION 9

DRAG DROP

You need to increase the security of your team's development process.

Which type of security tool should you recommend for each stage of the development process? To answer, drag the appropriate security tools to the correct stages. Each security tool may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Security Tools **Answer Area**

Penetration testing	Pull request: <input type="text"/>
Static code analysis	Continuous integration: <input type="text"/>
Threat modeling	Continuous delivery: <input type="text"/>

Security Tools **Answer Area**

Penetration testing	Pull request: <input type="text"/> Static code analysis
Static code analysis	Continuous integration: <input type="text"/> Static code analysis
Threat modeling	Continuous delivery: <input type="text"/> Penetration testing

QUESTION 10

HOTSPOT

Your company uses Team Foundation Server 2013 (TFS 2013). You plan to migrate to Azure DevOps.

You need to recommend a migration strategy that meets the following requirements:

Preserves the dates of Team Foundation Version Control changesets
Preserves the changes dates of work items revisions

Minimizes migration effort Migrates all TFS artifacts

What should you recommend? To answer, select the appropriate options in the answer area.

Hot Area:

Answer Area

On the TFS server:

- Install the TFS Java SDK.
- Upgrade TFS to the most recent RTW release.
- Upgrade to the most recent version of PowerShell Core.

To perform the migration:

- Copy the assets manually.
- Use public API-based tools.
- Use the TFS Database Import Service.
- Use the TFS Integration Platform.

Answer Area

On the TFS server:

- Install the TFS Java SDK.
- Upgrade TFS to the most recent RTW release.
- Upgrade to the most recent version of PowerShell Core.

To perform the migration:

- Copy the assets manually.
- Use public API-based tools.
- Use the TFS Database Import Service.
- Use the TFS Integration Platform.

QUESTION 11

DRAG DROP

You are planning projects for three customers. Each customer's preferred process for work items is shown in the following table.

Customer name	Preferred process
Litware, Inc.	Track product backlog items (PBIs) and bugs on the Kanban board. Break the PBIs down into tasks on the task board.
Contoso, Ltd.	Track user stories and bugs on the Kanban board. Track the bugs and tasks on the task board.
A. Datum Corporation	Track requirements, change requests, risks, and reviews.

The customers all plan to use Azure DevOps for work item management.

Which work item process should you use for each customer? To answer, drag the appropriate work item process to the correct customer. Each work item process may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Processes	Answer Area
Agile	Litware
CMMI	Contoso:
Scrum	A. Datum:
XP	

Processes	Answer Area
	Scrum
	Agile
	CMMI
XP	

QUESTION 12

Your development team is building a new web solution by using the Microsoft Visual Studio integrated development environment (IDE).

You need to make a custom package available to all the developers. The package must be managed centrally, and the latest version must be available for consumption in Visual Studio automatically. Which three actions should you perform? Each Correct Answer presents part of the solution.

NOTE: Each correct selection is worth one point.

Publish the package to a feed.

Create a new feed in Azure Artifacts.

Upload a package to a Git repository.

Add the package URL to the Environment settings in Visual Studio.

Add the package URL to the NuGet Package Manager settings in Visual Studio.

Create a Git repository in Azure Repos.

Correct Answer: **ABE**

QUESTION 13

You have a GitHub repository.

You create a new repository in Azure DevOps.

You need to recommend a procedure to clone the repository from GitHub to Azure DevOps. What should you recommend?

Create a pull request.

Create a webhook.

Create a service connection for GitHub.

From Import a Git repository, click **Import**.

Create a personal access token in Azure DevOps.

Correct Answer: D

QUESTION 14

Your company is concerned that when developers introduce open source libraries, it creates licensing compliance issues.

You need to add an automated process to the build pipeline to detect when common open source libraries are added to the code base. What should you use?

SourceGear Vault

Jenkins

Microsoft Visual SourceSafe

WhiteSource Bolt

Correct Answer: D

QUESTION 15

You plan to use a NuGet package in a project in Azure DevOps. The NuGet package is in a feed that requires authentication. You need to ensure that the project can restore the NuGet package automatically. What should the project use to automate the authentication?

an Azure Automation account

an Azure Artifacts Credential Provider

an Azure Active Directory (Azure AD) account that has multi-factor authentication (MFA) enabled

an Azure Active Directory (Azure AD) service principal

Correct Answer: B

QUESTION 16

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

The lead developer at your company reports that adding new application features takes longer than expected due to a large accumulated technical debt. You need to recommend changes to reduce the accumulated technical debt.

Solution: You recommend increasing the code duplication. Does this meet the goal?

Yes

No

Correct Answer: B

QUESTION 17

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

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The lead developer at your company reports that adding new application features takes longer than expected due to a large accumulated technical debt. You need to recommend changes to reduce the accumulated technical debt.

Solution: You recommend increasing the test coverage. Does this meet the goal?

Yes

No

Correct Answer: **B**

QUESTION 18

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

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The lead developer at your company reports that adding new application features takes longer than expected due to a large accumulated technical debt. You need to recommend changes to reduce the accumulated technical debt.

Solution: You recommend reducing the code complexity. Does this meet the goal?

Yes

No

Correct Answer: **A**

QUESTION 19

Your company has 60 developers who are assigned to four teams. Each team has 15 members. The company uses an agile development methodology.

You need to structure the work of the development teams so that each team owns their respective work while working together to reach a common goal. Which parts of the taxonomy should you enable the team to perform autonomously?

Features and Tasks

Initiatives and Epics

Epics and Features

Stories and Tasks

Correct Answer:**A**

QUESTION 20

HOTSPOT

Your company uses Git as a source code control system for a complex app named App1. You plan to add a new functionality to App1.

You need to design a branching model for the new functionality.

Which branch lifetime and branch time should you use in the branching model? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Branch lifetime:

Long-lived	▼
Short-lived	

Branch type:

Master	▼
Feature	
Integration	

Correct Answer:

Answer Area

Branch lifetime:

Long-lived	▼
Short-lived	

Branch type:

Master	▼
Feature	
Integration	

QUESTION 21

You store source code in a Git repository in Azure repos. You use a third-party continuous integration (CI) tool to control builds. What will Azure DevOps use to authenticate with the tool?

certificate authentication

a personal access token (PAT)

a Shared Access Signature (SAS) token

NTLM authentication

Correct Answer: **B**

QUESTION 22

During a code review, you discover quality issues in a Java application.

You need to recommend a solution to detect quality issues including unused variables and empty catch blocks. What should you recommend?

In a Maven build task, select Run PMD.

In an Xcode build task, select **Use xcpretty** from Advanced.

In a Gulp build task, specify a custom condition expression.

In a Grunt build task, select **Enabled** from Control Options.

Correct Answer: **A**

QUESTION 23

Your company creates a new Azure DevOps team. You plan to use Azure DevOps for sprint planning. You need to visualize the flow of your work by using an agile methodology. Which Azure DevOps component should you use?

Kanban boards

sprint planning

delivery plans

portfolio backlogs

Correct Answer: **A**

QUESTION 1

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 question on 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 on this case study, click the **Next** button. Use the buttons in the left pane to explore the content of the case study before you answer the questions. Clicking these buttons displays information such as business requirements, existing environment, and problem statements. If the case study has an **All Information** tab, note that the information displayed is identical to the information displayed on the subsequent tabs. When you are ready to answer a question, click the **Question** button to return to the question.

Overview

Litware, Inc. is an independent software vendor (ISV). Litware has a main office and five branch offices.

Existing Environment Application Architecture

The company's primary application is a single monolithic retirement fund management system based on ASP.NET web forms that use logic written in VB.NET. Some new sections of the application are written in C#. Variations of the application are created for individual customers. Currently, there are more than 80 live code branches in the application's code base.

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

Litware focuses on writing new code for customers. No resources are provided to refactor or remove existing code. Changes to the code base take a long time, as dependencies are not obvious to individual developers. Merge operations of the code often take months and involve many developers. Code merging frequently introduces bugs that are difficult to locate and resolve.

Customers report that ownership costs of the retirement fund management system increase continually. The need to merge unrelated code makes even minor code changes expensive. Customers report that bug reporting is overly complex.

Requirements Planned changes

Litware plans to develop a new suite of applications for investment planning. The investment planning applications will require only minor integration with the existing retirement fund management system.

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.

Litware plans to move to a more agile development methodology. Shared code will be extracted into a series of packages.

Litware has started an internal cloud transformation process and plans to use cloud-based services whenever suitable. Litware wants to become proactive in detecting failures, rather than always waiting for customer bug reports.

Technical requirements

The company's investment planning applications suite must meet the following requirements:

New incoming connections through the firewall must be minimized. Members of a group named Developers must be able to install packages. The principle of least privilege must be used for all

permission assignments. A branching strategy that supports developing new functionality in isolation must be used.

Members of a group named Team Leaders must be able to create new packages and edit the permissions of package feeds. Visual Studio App Center must be used to centralize the reporting of mobile application crashes and device types in use.

By default, all releases must remain available for 30 days, except for production releases, which must be kept for 60 days.

Code quality and release quality are critical. During release, deployments must not proceed between stages if any active bugs are logged against the release.

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 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

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

Configuration nodes are registered by using the following command.

:

QUESTION 2

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

Change the value of the ConfigurationMode parameter.

Replace the Register-AzureRmAutomationDscNode cmdlet with Register-

AzureRmAutomationScheduledRunbook

Add the AllowModuleOverwrite parameter.

Add the DefaultProfile parameter.

Correct Answer:**C**

QUESTION 3

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:

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

Correct Answer:

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

QUESTION 4

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:

Hot Area:

Answer Area

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

[MSAnalytics.self,
[MSDistribute.self,
[MSPush.self,

MSAnalytics.self]
MSCrashes.self]
MSDistribute.self]

Correct Answer:

Answer Area

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

[MSAnalytics.self,
[MSDistribute.self,
[MSPush.self,

MSAnalytics.self]
MSCrashes.self]
MSDistribute.self]

QUESTION 5

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

- release isolation
- main only
- development isolation
- feature isolation

Correct Answer: D

QUESTION 1

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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

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 Reports 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.

Azure subscription contains an Azure Automation account.

Requirements Planned changes

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

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.

QUESTION 2

You add the virtual machines as managed nodes in Azure Automation State Configuration. You need to configure the managed computers in Group7.

What should you do next?

Modify the RefreshMode property of the Local Configuration Manager (LCM).

Run the Register-AzureRmAutomationDscNode Azure Powershell cmdlet.

Modify the ConfigurationMode property of the Local Configuration Manager (LCM)

Install PowerShell Core.

Correct Answer: **B**

QUESTION 3

You need to implement the code flow strategy for Project2 in Azure DevOps.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order. Select and Place:

Select and Place:

Actions	Answer Area
Create a fork	
Create a branch	
Add a build validation policy.	◀
Add a build policy	▶
Create a repository	
Add an application access policy.	

Correct Answer:

Actions	Answer Area
Create a fork	Create a repository
	Create a branch
	Add a build validation policy.
Add a build policy	▶
	Add an application access policy.

QUESTION 4

You need to configure Azure Automation for the computer in Group7.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order. Select and Place:

Select and Place:

Actions	Answer Area
Run the <code>Import-AzureRmAutomationDscConfiguration</code> Azure PowerShell cmdlet.	
Create a Desired State Configuration (DSC) configuration file that has an extension of .ps1.	
Run the <code>New-AzureRmResourceGroupDeployment</code> Azure PowerShell cmdlet.	◀
Run the <code>Start-AzureRmAutomationDscCompilationJob</code> Azure PowerShell cmdlet.	▶
Create an Azure Resource Manager template file that has an extension of .json.	

Correct Answer:

Actions	Answer Area
	Create a Desired State Configuration (DSC) configuration file that has an extension of .ps1.
Run the <code>New-AzureRmResourceGroupDeployment</code> Azure PowerShell cmdlet.	Run the <code>Import-AzureRmAutomationDscConfiguration</code> Azure PowerShell cmdlet.
	Run the <code>Start-AzureRmAutomationDscCompilationJob</code> Azure PowerShell cmdlet.
Create an Azure Resource Manager template file that has an extension of .json.	

Implement DevOps Development Processes 03

QUESTION 1

Your company builds a multi-tier web application.

You use Azure DevOps and host the production application on Azure virtual machines.

Your team prepares an Azure Resource Manager template of the virtual machine that you will use to test new features. You need to create a staging environment in Azure that meets the following requirements:
 Minimizes the cost of Azure hosting
 Provisions the virtual machines automatically
 Uses the custom Azure Resource Manager template to provision the virtual machines
 What should you do?

In Azure Cloud Shell, run Azure CLI commands to create and delete the new virtual machines in a staging resource group.

In Azure DevOps, configure new tasks in the release pipeline to deploy to Azure Cloud Services.

From Azure Cloud Shell, run Azure PowerShell commands to create and delete the new virtual machines in a staging resource group.

In Azure DevOps, configure new tasks in the release pipeline to create and delete the virtual machines in Azure DevTest Labs.

Correct Answer: D

QUESTION 2

You have a branch policy in a project in Azure DevOps. The policy requires that code always builds successfully. You need to ensure that a specific user can always merge changes to the master branch, even if the user does not use the principle of least privilege. What should you do?

Add the user to the Build Administrators group.

Add the user to the Project Administrators group.

From the Security settings of the repository, modify the access control for the user.

From the Security settings of the branch, modify the access control for the user.

Correct Answer: D

QUESTION 3

Your company uses a Git repository in Azure Repos to manage the source code of a web application. The master branch is protected from direct updates. Developers work on new features in the topic branches. Because of the high volume of requested features, it is difficult to follow the history of the changes to the master branch.

You need to enforce a pull request merge strategy. The strategy must meet the following requirements:
 Consolidate commit histories.

Merge the changes into a single commit.

Which merge strategy should you use in the branch policy?

squash merge
fast-forward merge
Git fetch
no-fast-forward merge
Correct Answer: A

QUESTION 4

Your company uses cloud-hosted Jenkins for builds.
You need to ensure that Jenkins can retrieve source code from Azure Repos.
Which three actions should you perform? Each Correct Answer presents part of the solution. NOTE: Each correct selection is worth one point.

Create a webhook in Jenkins.
Add the Team Foundation Server (TFS) plug-in to Jenkins.
Add a domain to your Jenkins account.
Create a personal access token in your Azure DevOps account.
Create a service hook in Azure DevOps.

Correct Answer: BDE

QUESTION 5

You have an Azure Resource Manager template that deploys a multi-tier application. You need to prevent the user who performs the deployment from viewing the account credentials and connection strings used by the application. What should you use?

Azure Key Vault
a Web.config file
an Appsettings.json file
an Azure Storage table
an Azure Resource Manager parameter file

Correct Answer: A

QUESTION 6

Note: This question-is part of a series of questions that present the same scenario. Each question-in the series contains a unique solution that might meet the stated goals. Some question-sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question-in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You integrate a cloud-hosted Jenkins server and a new Azure DevOps deployment.

You need Azure DevOps to send a notification to Jenkins when a developer commits changes to a branch in Azure Repos. Solution: You create an email subscription to an Azure DevOps notification.

Does this meet the goal?

Yes
No

Correct Answer: B

QUESTION 7

Note: This question-is part of a series of questions that present the same scenario. Each question-in the series contains a unique solution that might meet the stated goals. Some question-sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question-in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. You integrate a cloud-hosted Jenkins server and a new Azure DevOps deployment.

You need Azure DevOps to send a notification to Jenkins when a developer commits changes to a branch in Azure Repos. Solution: You create a service hook subscription that uses the code pushed event. Does this meet the goal?

Yes
No

Correct Answer: A

QUESTION 8

Note: This question-is part of a series of questions that present the same scenario. Each question-in the series contains a unique solution that might meet the stated goals. Some question-sets might have more than one correct solution, while others might not have a correct solution.

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You need Azure DevOps to send a notification to Jenkins when a developer commits changes to a branch in Azure Repos. Solution: You add a trigger to the build pipeline.

Does this meet the goal?

Yes
No

Correct Answer: B

QUESTION 9

You are automating the build process for a Java-based application by using Azure DevOps. You need to add code coverage testing and publish the outcomes to the pipeline.

What should you use?

Cobertura
Bullseye Coverage
MSTest
Coverlet
NUnit
Coverage.py

Correct Answer: A

QUESTION 10

DRAG DROP

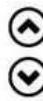
You need to recommend a solution for deploying charts by using Helm and Tiller to Azure Kubernetes Service (AKS) in an RBAC-enabled cluster.

Which three commands should you recommend be run in sequence? To answer, move the appropriate commands from the list of commands to the answer area and arrange them in the correct order.

Select and Place:

Commands**Answer Area**

helm install
kubectl create
helm completion
helm init
helm serve

**Correct Answer:****Commands****Answer Area**

helm completion
helm init
helm install



helm serve

QUESTION 11**DRAG DROP**

Your company has a project in Azure DevOps.

You plan to create a release pipeline that will deploy resources by using Azure Resource Manager templates. The templates will reference secrets stored in Azure Key Vault. You need to recommend a solution for accessing the secrets stored in the key vault during deployments. The solution must use the principle of least privilege.

What should you include in the recommendation? To answer, drag the appropriate configurations to the correct targets. Each configuration may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Configurations

Answer Area

A Key Vault access policy

Enable key vaults for template deployment by using:

A Key Vault advanced access policy

Restrict access to the secrets in Key Vault by using:

RBAC

Correct Answer:

Configurations**Answer Area**

A Key Vault access policy

Enable key vaults for template deployment by using:

Key Vault Access Policy

A Key Vault advanced access policy

Restrict access to the secrets in Key Vault by using:

Key Vault Access Policy

RBAC

QUESTION 12**DRAG DROP**

You need to configure access to Azure DevOps agent pools to meet the following requirements:

Use a project agent pool when authoring build or release pipelines. View the agent pool and agents of the organization.

Use the principle of least privilege.

Which role memberships are required for the Azure DevOps organization and the project? To answer, drag the appropriate role memberships to the correct targets. Each role membership may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Roles**Answer Area**

Administrator

Organization:

Reader

Project:

Service Account

User

Correct Answer:**Roles****Answer Area****Answer Area**

Administrator

Organization:

Reader

Reader

Project:

User

Service Account

User

QUESTION 13**DRAG DROP**

Your company has four projects. The version control requirements for each project are shown in the following table.

Project	Requirement
Project 1	Project leads must be able to restrict access to individual files and folders in the repository.
Project 2	The version control system must enforce the following rules before merging any changes to the main branch: <ul style="list-style-type: none">• Changes must be reviewed by at least two project members.• Changes must be associated to at least one work team.
Project 3	The project members must be able to work in Azure Repos directly from Xcode.
Project 4	The release branch must only be viewable or editable by the project leads.

You plan to use Azure Repos for all the projects.

Which version control system should you use for each project? To answer, drag the appropriate version control systems to the correct projects. Each version control system may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Version Control Systems	Answer Area
Git	Project 1: <input type="text"/>
Perforce	Project 2: <input type="text"/>
Subversion	Project 3: <input type="text"/>
Team Foundation Version Control	Project 4: <input type="text"/>

Correct Answer:

Version Control Systems	Answer Area
Git	Project 1: Team Foundation Version Control
Perforce	Project 2: Git
Subversion	Project 3: Subversion
Team Foundation Version Control	Project 4: Git

QUESTION 14

HOTSPOT

Your company is creating a suite of three mobile applications.

You need to control access to the application builds. The solution must be managed at the organization level. What should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Groups to control the build access:

- Active Directory groups
- Azure Active Directory groups
- Microsoft Visual Studio App Center distribution groups

Group type:

- Private
- Public
- Shared

Correct Answer:

Answer Area

Groups to control the build access:

- Active Directory groups
- Azure Active Directory groups
- Microsoft Visual Studio App Center distribution groups

Group type:

- Private
- Public
- Shared

QUESTION 15

DRAG DROP

You are configuring Azure DevOps build pipelines. You plan to use hosted build agents.

Which build agent pool should you use to compile each application type? To answer, drag the appropriate build agent pools to the correct application types. Each build agent pool may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Build Agent Pools

Answer Area

- Hosted Windows Container
- Hosted Ubuntu 1604
- Hosted macOS
- Hosted
- Default

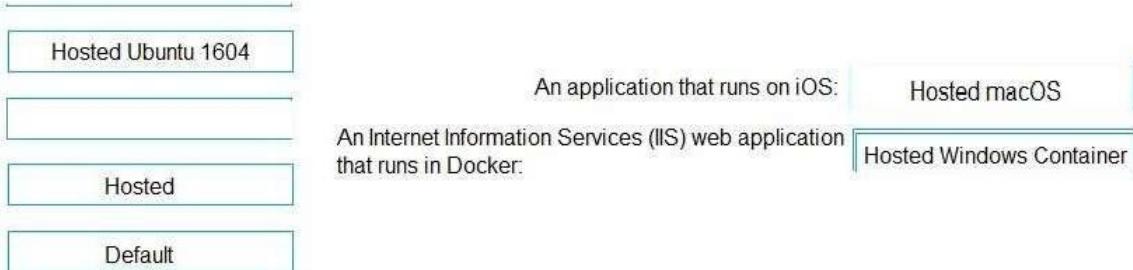
An application that runs on iOS:

An Internet Information Services (IIS) web application
that runs in Docker:

Correct Answer:

Build Agent Pools

Answer Area



QUESTION 16

Your company uses Azure DevOps.

Only users who have accounts in Azure Active Directory can access the Azure DevOps environment.

You need to ensure that only devices that are connected to the on-premises network can access the Azure DevOps environment. What would you do?

Assign the Stakeholder access level to all users.

In Azure Active Directory, configure risky sign-ins.

In Azure DevOps, configure Security in Project Settings.

In Azure Active Directory, configure conditional access.

Correct Answer: **D**

QUESTION 17

You are automating the testing process for your company. You need to automate UI testing of a web application.

Which framework should you use?

JaCoco

Selenium

Xamarin.UITest

Microsoft.CodeAnalysis

Correct Answer: **B**

QUESTION 18

You have an Azure DevOps organization named Contoso, an Azure DevOps project named Project1, an Azure subscription named Sub1, and an Azure key vault named vault1.

You need to ensure that you can reference the values of the secrets stored in vault1 in all the pipelines of Project1. The solution must prevent the values from being stored in the pipelines. What should you do?

Create a variable group in Project1.

Add a secure file to Project1.

Modify the security settings of the pipelines.

Configure the security policy of Contoso.

Correct Answer: **A**

QUESTION 19**DRAG DROP**

You are configuring Azure Pipelines for three projects in Azure DevOps as shown in the following table.

Project name	Project Details
Project1	The project team provides preconfigured YAML files that it wants to use to manage future pipeline configuration changes.
Project2	The sensitivity of the project requires that the source code be hosted on the managed Windows server on your company's network.
Project3	The project team requires a centralized version control system to ensure that developers work with the most recent version.

Which version control system should you recommend for each project? To answer, drag the appropriate version control systems to the correct projects. Each version control system may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Version Control Systems	Answer Area
Assembla Subversion	Project1:
Bitbucket Cloud	Project2:
Git in Azure Repos	Project3:
GitHub Enterprise	

Correct Answer:

Version Control Systems	Answer Area
	Project1: Git in Azure Repos
Bitbucket Cloud	Project2: GitHub Enterprise
	Project3: Assembla Subversion

QUESTION 20

Your team uses an agile development approach.

You need to recommend a branching strategy for the team's Git repository. The strategy must meet the following requirements.

Provide the ability to work on multiple independent tasks in parallel. Ensure that checked-in code remains

in a releasable state always. Ensure that new features can be abandoned at any time.

Encourage experimentation. What should you recommend?

a single long-running branch without forking

multiple long-running branches

a single fork per team member

a single long-running branch with multiple short-lived topic branches

Correct Answer: D

QUESTION 21

Your company has a project in Azure DevOps for a new web application. The company identifies security as one of the highest priorities.

You need to recommend a solution to minimize the likelihood that infrastructure credentials will be leaked. What should you recommend?

Add a Run Inline Azure PowerShell task to the pipeline.

Add a PowerShell task to the pipeline and run Set-AzureKeyVaultSecret.

Add a Azure Key Vault task to the pipeline.

Add Azure Key Vault references to Azure Resource Manager templates.

Correct Answer: D

QUESTION 22

DRAG DROP

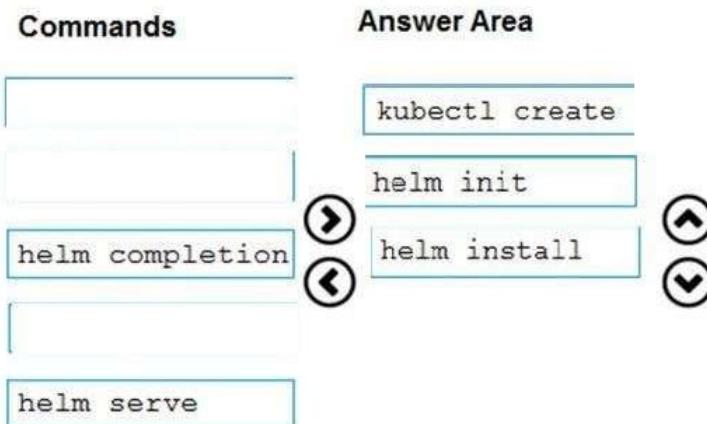
You provision an Azure Kubernetes Service (AKS) cluster that has RBAC enabled. You have a Helm chart for a client application. You need to configure Helm and Tiller on the cluster and install the chart.

Which three commands should you recommend be run in sequence? To answer, move the appropriate commands from the list of commands to the answer area and arrange them in the correct order.

Select and Place:

Commands	Answer Area
helm install	
kubectl create	
helm completion	↗
helm init	↖
helm serve	↙

Correct Answer:



/Reference:

QUESTION 23

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You need to recommend an integration strategy for the build process of a Java application. The solution must meet the following requirements:

The builds must access an on-premises dependency management system. The build outputs must be stored as Server artifacts in Azure DevOps.

The source code must be stored in a Git repository in Azure DevOps.

Solution: Configure an Octopus Tentacle on an on-premises machine. Use the Package Application task in the build pipeline. Does this meet the goal?

Yes

No

Correct Answer: B

QUESTION 24

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You need to recommend an integration strategy for the build process of a Java application. The solution must meet the following requirements: The builds must access an on-premises dependency management system.

The build outputs must be stored as Server artifacts in Azure DevOps. The source code must be stored in a Git repository in Azure DevOps.

Solution: Install and configure a self-hosted build agent on an on-premises machine. Configure the build pipeline to use the Default agent pool. Include the Java Tool Installer task in the build pipeline. Does this meet the goal?

Yes

No

Correct Answer: A

QUESTION 25

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You need to recommend an integration strategy for the build process of a Java application. The solution must meet the following requirements:

The builds must access an on-premises dependency management system. The build outputs must be stored as Server artifacts in Azure DevOps.

The source code must be stored in a Git repository in Azure DevOps.

Solution: Configure the build pipeline to use a Hosted VS 2017 agent pool. Include the Java Tool Installer task in the build pipeline. Does this meet the goal?

Yes

No

Correct Answer: **B**

QUESTION 26

You are designing the development process for your company.

You need to recommend a solution for continuous inspection of the open code patterns that are known company's code base to locate common code patterns that are known to be problematic. What should you include in the recommendation?

Microsoft Visual Studio test plans

Gradle wrapper scripts

SonarCloud analysis

the JavaScript task runner

Correct Answer: **C**

QUESTION 27

SIMULATION

You need to ensure that an Azure web app named az400-9940427-main can retrieve secrets from an Azure key vault named az400-9940427-kv1 by using a system managed identity. The solution must use the principle of least privilege.

QUESTION 28

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You need to recommend an integration strategy for the build process of a Java application. The solution must meet the following requirements:

The builds must access an on-premises dependency management system. The build outputs must be stored as Server artifacts in Azure DevOps.

The source code must be stored in a Git repository in Azure DevOps.

Solution: Configure the build pipeline to use a Hosted Ubuntu agent pool. Include the Java Tool Installer task in the build pipeline. Does this meet the goal?

Yes

No

Correct Answer: B

/Reference:

:
Instead use Octopus Tentacle.

Reference:

<https://explore.emtecinc.com/blog/octopus-for-automated-deployment-in-devops-models>

QUESTION 29

DRAG DROP

You are implementing an Azure DevOps strategy for mobile devices using App Center. You plan to use distribution groups to control access to releases.

You need to create the distribution groups shown in the following table.

Name	Use
Group1	Application testers who are invited by email
Group2	Early release users who use unauthenticated public links
Group3	Application testers for all the apps of your company

Which type of distribution group should you use for each group? To answer, drag the appropriate group types to the correct locations. Each group type may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Answer Area

Private

Group1:

Public

Group2:

Shared

Group3:

Correct Answer:

Answer Area

Group1: Private

Group2: Public

Group3: Shared

QUESTION 30
SIMULATION

You need to ensure that the <https://contoso.com/statushook> webhook is called every time a repository named az40010480345acr1 receives a new version of an image named dotnetapp.

To complete this task, sign in to the Microsoft Azure portal.

QUESTION 31

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You integrate a cloud-hosted Jenkins server and a new Azure DevOps deployment.

You need Azure DevOps to send a notification to Jenkins when a developer commits changes to a branch in Azure Repos. Solution: You create a service hook subscription that uses the build completed event. Does this meet the goal?

Yes
No

Correct Answer: A

QUESTION 32

HOTSPOT

You need to create deployment files for an Azure Kubernetes Service (AKS) cluster. The deployments must meet the provisioning storage requirements shown in the following table.

Deployment	Requirement
Deployment 1	Use files stored on an SMB-based share from the container's file system.
Deployment 2	Use files on a managed disk from the container's file system.
Deployment 3	Securely access X.509 certificates from the container's file system.

Which resource type should you use for each deployment? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Deployment 1:	azurekeyvault-flexvolume blobfuse-flexvol kubernetes.io/azure-disk kubernetes.io/azure-file volume.beta.kubernetes.io/storage-provisioner
Deployment 2:	azurekeyvault-flexvolume blobfuse-flexvol kubernetes.io/azure-disk kubernetes.io/azure-file volume.beta.kubernetes.io/storage-provisioner
Deployment 3:	azurekeyvault-flexvolume blobfuse-flexvol kubernetes.io/azure-disk kubernetes.io/azure-file volume.beta.kubernetes.io/storage-provisioner

Correct Answer

Deployment 1:	azurekeyvault-flexvolume blobfuse-flexvol kubernetes.io/azure-disk kubernetes.io/azure-file volume.beta.kubernetes.io/storage-provisioner
Deployment 2:	azurekeyvault-flexvolume blobfuse-flexvol kubernetes.io/azure-disk kubernetes.io/azure-file volume.beta.kubernetes.io/storage-provisioner
Deployment 3:	azurekeyvault-flexvolume blobfuse-flexvol kubernetes.io/azure-disk kubernetes.io/azure-file volume.beta.kubernetes.io/storage-provisioner

QUESTION 33

You create a Microsoft ASP.NET Core application.

You plan to use Azure Key Vault to provide secrets to the application as configuration data.

You need to create a Key Vault access policy to assign secret permissions to the application. The solution must use the principle of least privilege. Which secret permissions should you use?

List only

Get only

Get and List

Correct Answer: **B**

QUESTION 34

You are automating the build process for a Java-based application by using Azure DevOps. You need to

add code coverage testing and publish the outcomes to the pipeline.
What should you use?

Bullseye Coverage
JUnit
JaCoCo
NUnit

Correct Answer: C

QUESTION 35

SIMULATION

Your company plans to implement a new compliance strategy that will require all Azure web apps to be backed up every five hours.

You need to back up an Azure web app named az400-11566895-main every five hours to an Azure Storage account in your resource group.

To complete this task, sign in to the Microsoft Azure portal.

See solution below.

Correct Answer:

QUESTION 38

HOTSPOT

Your company uses Azure DevOps to deploy infrastructures to Azure. Pipelines are developed by using YAML.

You execute a pipeline and receive the results in the web portal for Azure Pipelines as shown in the following exhibit.

The screenshot shows the Azure DevOps interface with the 'Pipelines' section selected in the sidebar. A specific pipeline run (#20191120.1) is displayed, showing a summary of the build process. The summary includes the following steps:

- initial_build:
 - Pool: Azure Pipelines
 - Image: Ubuntu-18.04
 - Agent: Hosted Agent
 - Started: Just now
 - Duration: 7s
 - Job preparation parameters
- build vm:
 - Initialize job <1s
 - Checkout 4s
 - CmdLine 2s
 - Post-job: Ccheckout <1s
 - Finalize Job <1s
- deploy_to_dev:
 - deploy_to_dev_server 2s
- deploy_to_uat:
 - deploy_to_uat_server 2s
- Finalize build:
 - Report build status <1s

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

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

The pipeline contains

	▼
one stage	
two stages	
three stages	
four stages	
five stages	

Build_vm contains

	▼
one job	
two jobs	
three jobs	
four jobs	
five jobs	

Correct Answer:

Answer Area

The pipeline contains

	▼
one stage	
two stages	
three stages	
four stages	
five stages	

Build_vm contains

	▼
one job	
two jobs	
three jobs	
four jobs	
five jobs	

/

QUESTION 39

DRAG DROP

Your company has an Azure subscription named Subscription1. Subscription1 is associated to an Azure Active Directory tenant named contoso.com.

You need to provision an Azure Kubernetes Services (AKS) cluster in Subscription1 and set the permissions for the cluster by using RBAC roles that reference the identities in contoso.com. Which three objects should you create in sequence? To answer, move the appropriate objects from the list of objects to the answer area and arrange them in the correct order.

Select and Place:

Answer Area

Objects

a system-assigned managed identity

a cluster

an application registration in contoso.com

an RBAC binding

Correct Answer:

Answer Area

Objects

an application registration in contoso.com

a cluster

a system-assigned managed identity

an RBAC binding

QUESTION 40

HOTSPOT

You manage build and release pipelines by using Azure DevOps. Your entire managed environment resides in Azure.

You need to configure a service endpoint for accessing Azure Key Vault secrets. The solution must meet the following requirements: Ensure that the secrets are retrieved by Azure DevOps.

Avoid persisting credentials and tokens in Azure DevOps.

How should you configure the service endpoint? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Service connection type:	<input type="button" value="▼"/>
Azure Resource Manager	
Generic service	
Team Foundation Server / Azure Pipelines service connection	

Authentication/authorization method for the connection:	<input type="button" value="▼"/>
Azure Active Directory OAuth 2.0	
Grant authorization	
Managed Service Identity Authentication	

Correct Answer:

Answer Area

Service connection type:	<input type="button" value="▼"/>
Azure Resource Manager	
Generic service	
Team Foundation Server / Azure Pipelines service connection	

Authentication/authorization method for the connection:	<input type="button" value="▼"/>
Azure Active Directory OAuth 2.0	
Grant authorization	
Managed Service Identity Authentication	

QUESTION 41

You are deploying a server application that will run on a Server Core installation of Windows Server 2019.

You create an Azure key vault and a secret.

You need to use the key vault to secure API secrets for third-party integrations.

Which three actions should you perform? Each Correct Answer presents part of the solution.

NOTE: Each correct selection is worth one point.

Configure RBAC for the key vault.

Modify the application to access the key vault.

Configure a Key Vault access policy.

Deploy an Azure Desired State Configuration (DSC) extension.

Deploy a virtual machine that uses a system-assigned managed identity.

Correct Answer: **BCE**

Implement Continuous Integration 01

QUESTION 1

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 question on 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 sections 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 on this case study, click the **Next** button. Use the buttons in the left pane to explore the content of the case study before you answer the questions. Clicking these buttons displays information such as business requirements, existing environment, and problem statements. If the case study has an **All Information** tab, note that the information displayed is identical to the information displayed on the subsequent tabs. When you are ready to answer a question, click the **Question** button to return to the question.

Overview

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 Reports 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.

QUESTION 2

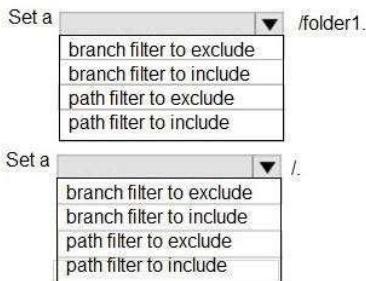
HOTSPOT

How should you configure the filters for the Project5 trigger? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

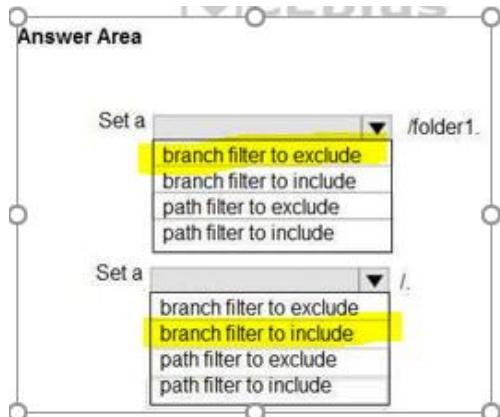
Hot Area:

Hot Area:

Answer Area



Correct Answer:



QUESTION 3

In Azure DevOps, you create Project3.

You need to meet the requirements of the project. What should you do first?

- From Azure DevOps, modify the build definition.
- From SonarQube, obtain an authentication token.
- From Azure DevOps, create a service endpoint.
- From SonarQube, create a project.

Correct Answer: C

QUESTION 4

You need to implement Project4. What should you do first?

- Add the FROM instruction in the Dockerfile file.
- Add a Copy and Publish Build Artifacts task to the build pipeline.
- Add a Docker task to the build pipeline.
- Add the MAINTAINER instruction in the Dockerfile file.

Correct Answer: B

QUESTION 5

DRAG DROP

You need to recommend a procedure to implement the build agent for Project1.

Which three actions should you recommend be performed in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions	Answer Area
Sign in to Azure DevOps by using an account that is assigned the Administrator service connection security role.	
Install the Azure Pipelines agent on on-premises virtual machine.	
Create a personal access token in the Azure DevOps organization of Contoso.	
Install and register the Azure Pipelines agent on an Azure virtual machine.	
Sign in to Azure DevOps by using an account that is assigned the agent pool administrator role.	



Correct Answer:

Actions	Answer Area
	Sign in to Azure DevOps by using an account that is assigned the Administrator service connection security role.
Install the Azure Pipelines agent on on-premises virtual machine.	
	Create a personal access token in the Azure DevOps organization of Contoso.
	Install and register the Azure Pipelines agent on an Azure virtual machine.
Sign in to Azure DevOps by using an account that is assigned the agent pool administrator role.	

Implement Continuous Integration 02

QUESTION 1

DRAG DROP

You need to use Azure Automation State Configuration to manage the ongoing consistency of virtual machine configurations.

Which five 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.

NOTE: More than one order of answer choices is correct. You will receive credit for any of the correct orders you select.

Select and Place:

Actions

Answer Area

Onboard the virtual machines to Azure Automation State Configuration.

Check the compliance status of the node.

Create a management group.

Assign the node configuration.



Compile a configuration into a node configuration.

Upload a configuration to Azure Automation State Configuration.

Assign tags to the virtual machines.

Correct Answer:

Actions

Answer Area

Upload a configuration to Azure Automation State Configuration.

Compile a configuration into a node configuration.

Create a management group.

Onboard the virtual machines to Azure Automation State Configuration.



Assign the node configuration.

Check the compliance status of the node.

Assign tags to the virtual machines.

:

QUESTION 2

You have 50 Node.js-based projects that you scan by using WhiteSource. Each project includes Package.json, Package-lock.json, and Npm-shrinkwrap.json files. You need to minimize the number of libraries reports by WhiteSource to only the libraries that you explicitly reference.

What should you do?

Configure the File System Agent plug-in.

Add a devDependencies section to Package-lock.json.

Configure the Artifactory plug-in.

Delete Package-lock.json.

Correct Answer: D

QUESTION 3

Your company deploys applications in Docker containers.

You want to detect known exploits in the Docker images used to provision the Docker containers.

You need to integrate image scanning into the application lifecycle. The solution must expose the exploits as early as possible during the application lifecycle. What should you configure?

a task executed in the continuous integration pipeline and a scheduled task that analyzes the image registry

manual tasks performed during the planned phase and the deployment phase

a task executed in the continuous deployment pipeline and a scheduled task against a running production container

a task executed in the continuous integration pipeline and a scheduled task that analyzes the production container

Correct Answer: A

QUESTION 4

Your company uses Azure DevOps for the build pipelines and deployment pipelines of Java-based projects. You need to recommend a strategy for managing technical debt.

Which two actions should you include in the recommendation? Each Correct Answer presents part of the solution. NOTE: Each correct selection is worth one point.

Configure post-deployment approvals in the deployment pipeline.

Configure pre-deployment approvals in the deployment pipeline.

Integrate Azure DevOps and SonarQube.

Integrate Azure DevOps and Azure DevTest Labs.

Correct Answer: BC

QUESTION 5

Your company has a hybrid cloud between Azure and Azure Stack.

The company uses Azure DevOps for its full CI/CD pipelines. Some applications are built by using Erlang and Hack.

You need to ensure that Erlang and Hack are supported as part of the build strategy across the hybrid cloud. The solution must minimize management overhead. What should you use to execute the build pipeline?

a Microsoft-hosted agent

Azure DevOps self-hosted agents on Azure DevTest Labs virtual machines.

Azure DevOps self-hosted agents on Hyper-V virtual machines

Azure DevOps self-hosted agents on virtual machines that run on Azure Stack

Correct Answer: B

QUESTION 6

You need to recommend a Docker container build strategy that meets the following requirements:

Minimizes image sizes

Minimizes the security surface area of the final image

What should you include in the recommendation?

multi-stage builds

PowerShell Desired State Configuration (DSC)

Docker Swarm

single-stage builds

Correct Answer: A

/Reference:

Multi-stage builds are a new feature requiring Docker 17.05 or higher on the daemon and client. Multistage builds are useful to anyone who has struggled to optimize Dockerfiles while keeping them easy to read and maintain. InCorrect Answers:
C: A swarm consists of multiple Docker hosts which run in swarm mode and act as managers (to manage membership and delegation) and workers (which run swarm services). References:
<https://docs.docker.com/develop/develop-images/multistage-build/>

QUESTION 7

You plan to create an image that will contain a .NET Core application.

You have a Dockerfile file that contains the following code. (Line numbers are included for reference only.)

```
01 FROM microsoft/dotnet:2.1-sdk
02 COPY ./
03 RUN dotnet publish -c Release -o out
04 FROM microsoft/dotnet:2.1-sdk
05 COPY --from=0 /out /
06 WORKDIR /
07 ENTRYPOINT ["dotnet", "appl.dll"]
```

You need to ensure that the image is as small as possible when the image is built. Which line should you modify in the file?

1
3
4
7

Correct Answer: C

QUESTION 8

You are developing an open source solution that uses a GitHub repository. You create a new public project in Azure DevOps.

You plan to use Azure Pipelines for continuous build. The solution will use the GitHub Checks API. Which authentication type should you use?

OpenID
GitHub App
a personal access token (PAT)
SAML

Correct Answer: B

QUESTION 9

Note: This question-is part of a series of questions that present the same scenario. Each question-in the series contains a unique solution that might meet the stated goals. Some question-sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question-in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. Your company has a project in Azure DevOps for a new web application.

You need to ensure that when code is checked in, a build runs automatically.

Solution: From the Pre-deployment conditions settings of the release pipeline, you select After stage.
Does this meet the goal?

Yes
No

Correct Answer: B

QUESTION 10

Note: This question-is part of a series of questions that present the same scenario. Each question-in the series contains a unique solution that might meet the stated goals. Some question-sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question-in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. Your company has a project in Azure DevOps for a new web application.

You need to ensure that when code is checked in, a build runs automatically.

Solution: From the Pre-deployment conditions settings of the release pipeline, you select Batch changes while a build is in progress. Does this meet the goal?

Yes

No

Correct Answer: **B**

QUESTION 11

Note: This question-is part of a series of questions that present the same scenario. Each question-in the series contains a unique solution that might meet the stated goals. Some question-sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question-in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. Your company has a project in Azure DevOps for a new web application.

You need to ensure that when code is checked in, a build runs automatically.

Solution: From the Triggers tab of the build pipeline, you select Enable continuous integration. Does this meet the goal?

Yes

No

Correct Answer: **A**

QUESTION 12

You have a project in Azure DevOps. You have an Azure Resource Group deployment project in Microsoft Visual Studio that is checked in to the Azure DevOps project. You need to create a release pipeline that will deploy resources by using Azure Resource Manager templates. The solution must minimize administrative effort.

Which task type should you include in the solution?

Azure Cloud Service Deployment

Azure RM Web App Deployment

Azure PowerShell

Azure App Service Manage

Correct Answer: **C**

QUESTION 13

Your company is building a new solution in Java.

The company currently uses a SonarQube server to analyze the code of .NET solutions. You need to analyze and monitor the code quality of the Java solution.

Which task types should you add to the build pipeline?

Chef

Gradle

Octopus

xCODE

Correct Answer: **B**

SonarQube is a set of static analyzers that can be used to identify areas of improvement in your code. It allows you to analyze the technical debt in your project and keep track of it in the future. With Maven and Gradle build tasks, you can run SonarQube analysis with minimal setup in a new or

existing Azure DevOps Services build task

QUESTION 14

DRAG DROP

You are developing a full Microsoft .NET Framework solution that includes unit tests.

You need to configure SonarQube to perform a code quality validation of the C# code as part of the build pipelines.

Which four tasks should you perform in sequence? To answer, move the appropriate tasks from the list of tasks to the answer area and arrange them in the correct order.

Select and Place:

Actions Commands Cmdlets Statements

Run Code Analysis

Visual Studio Test

Publish Build Artifacts

Visual Studio Build

Prepare Analysis Configuration

Answer Area

Correct Answer:

Actions Commands Cmdlets Statements

Publish Build Artifacts

Answer Area

Prepare Analysis Configuration

Visual Studio Build

Visual Studio Test

Run Code Analysis

QUESTION 15

You have an Azure DevOps organization named Contoso and an Azure DevOps project named Project1.

You plan to use Microsoft-hosted agents to build container images that will host full Microsoft .NET Framework apps in a YAML pipeline in Project1. What are two possible virtual machine images that you can use for the Microsoft-hosted agent pool? Each correct selection is worth one point.

- A. vs2017-win2016
- ubuntu-16.04
- win1803
- macOS-10.13
- E. vs.2015-win2012r2

Correct Answer: AB

QUESTION 16

HOTSPOT

You currently use JIRA, Jenkins, and Octopus as part of your DevOps processes. You plan to use Azure DevOps to replace these tools.

Which Azure DevOps service should you use to replace each tool? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

JIRA:

- Boards
- Build pipelines
- Release pipelines
- Repos

Jenkins:

- Boards
- Build pipelines
- Release pipelines
- Repos

Octopus:

- Boards
- Build pipelines
- Release pipelines
- Repos



Correct Answer:

Answer Area

JIRA:

- Boards
- Build pipelines
- Release pipelines
- Repos

Jenkins:

- Boards
- Build pipelines
- Release pipelines
- Repos

Octopus:

- Boards
- Build pipelines
- Release pipelines
- Repos

QUESTION 17

Your company has a project in Azure DevOps.

You need to ensure that when there are multiple builds pending deployment, only the most recent build is deployed. What should you use?

- deployment conditions
- deployment queue settings
- release gates

pull request triggers

Correct Answer: **B**

QUESTION 18

Your company develops a client banking application that processes a large volume of data.

Code quality is an ongoing issue for the company. Recently, the code quality has deteriorated because of an increase in time pressure on the development team. You need to implement static code analysis. During which phase should you use static code analysis?

- integration testing
- staging
- production release
- build

Correct Answer: **D**

QUESTION 19

Your company is building a new solution in Java.

The company currently uses a SonarQube server to analyze the code of .NET solutions. You need to analyze and monitor the code quality of the Java solution.

Which task types should you add to the build pipeline?

- Grunt
- Chef
- Maven
- Gulp

Correct Answer: **C**

QUESTION 20

DRAG DROP

Your company has a project in Azure DevOps.

You plan to create a release pipeline that will deploy resources by using Azure Resource Manager templates. The templates will reference secrets stored in Azure Key Vault. You need to recommend a solution for accessing the secrets stored in the key vault during deployments. The solution must use the principle of least privilege.

What should you include in the recommendation? To answer, drag the appropriate configurations to the correct targets. Each configuration may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Configurations

Answer Area

an Azure Key Vault access policy

Restrict access to delete the key vault:

a personal access token (PAT)

Restrict access to the secrets in Key Vault by using:

RBAC

Correct Answer:

Configurations	Answer Area
A Key Vault access policy	Enable key vaults for template deployment by using: <input type="text" value="Key Vault Access Policy"/>
A Key Vault advanced access policy	Restrict access to the secrets in Key Vault by using <input type="text" value="Key Vault Access Policy"/>
RBAC	

QUESTION 22

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

Your company has a project in Azure DevOps for a new web application. You need to ensure that when code is checked in, a build runs automatically.

Solution: From the Triggers tab of the build pipeline, you select **Batch changes while a build is in progress**. Does this meet the goal?

Yes
No

Correct Answer: B

QUESTION 23

HOTSPOT

You need to deploy Azure Kubernetes Service (AKS) to host an application. The solution must meet the following requirements: Containers must only be published internally.

AKS clusters must be able to create and manage containers in Azure.

What should you use for each requirement? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Containers must only be published internally:

<input type="checkbox"/>
Azure Container Instances
Azure Container Registry
Dockerfile

AKS clusters must be able to create and manage containers in Azure:

<input type="checkbox"/>
An Azure Active Directory (Azure AD) group
An Azure Automation account
An Azure service principal

Correct Answer:

Answer Area

Containers must only be published internally:

Azure Container Instances
Azure Container Registry
Dockerfile

AKS clusters must be able to create and manage containers in Azure:

An Azure Active Directory (Azure AD) group
An Azure Automation account
An Azure service principal

QUESTION 24

You are designing an Azure DevOps strategy for your company's development team. You suspect that the team's productivity is low due to accumulate technical debt.

You need to recommend a metric to assess the amount of the team's technical debt. What should you recommend?

- the number of code modules in an application
- the number of unit test failures
- the percentage of unit test failures
- the percentage of overall time spent on rework

Correct Answer: D

QUESTION 25

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

Your company has a project in Azure DevOps for a new web application. You need to ensure that when code is checked in, a build runs automatically.

Solution: From the Continuous deployment trigger settings of the release pipeline, you enable the Pull request trigger setting. Does this meet the goal?

- Yes
- No

Correct Answer: B

QUESTION 26

You use WhiteSource Bolt to scan a Node.js application.

The WhiteSource Bolt scan identifies numerous libraries that have invalid licenses. The libraries are used only during development and are not part of a production deployment. You need to ensure that WhiteSource Bolt only scans production dependencies.

Which two actions should you perform? Each Correct Answer presents part of the solution.

NOTE: Each correct selection is worth one point.

Run npm install and specify the --production flag.

Modify the WhiteSource Bolt policy and set the action for the licenses used by the development tools to **Reassign**.

Modify the devDependencies section of the project's Package.json file.

Configure WhiteSource Bolt to scan the node_modules directory only.

Correct Answer: AC

QUESTION 27

SIMULATION

You plan to deploy a runbook that will create Azure AD user accounts.

You need to ensure that runbooks can run the Azure PowerShell cmdlets for Azure Active Directory.

To complete this task, sign in to the Microsoft Azure portal.

A. QUESTION 28

DRAG DROP

You are creating a container for an ASP.NET Core app.

You need to create a Dockerfile file to build the image. The solution must ensure that the size of the image is minimized.

How should you configure the file? To answer, drag the appropriate values to the correct targets. Each value must be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Answer Area	
Values	FROM <input type="text"/> As build-env
dotnet publish -c Release -o out	COPY . /app/
dotnet restore	WORKDIR /app
microsoft/dotnet:2.2-aspnetcore-runtime	RUN <input type="text"/>
Microsoft/dotnet:2.2-sdk	FROM <input type="text"/>
	COPY --from=build-env /app/out /app
	WORKDIR /app
	ENTRYPOINT ["dotnet", "MvcMovie.dll"]

Correct Answer:

Answer Area

Values

```
dotnet publish -c Release -o out
```

FROM Microsoft/dotnet:2.2-sdk As build-env

COPY . /app/

WORKDIR /app

RUN REDACTED

FROM microsoft/dotnet:2.2-aspnetcore-runtime

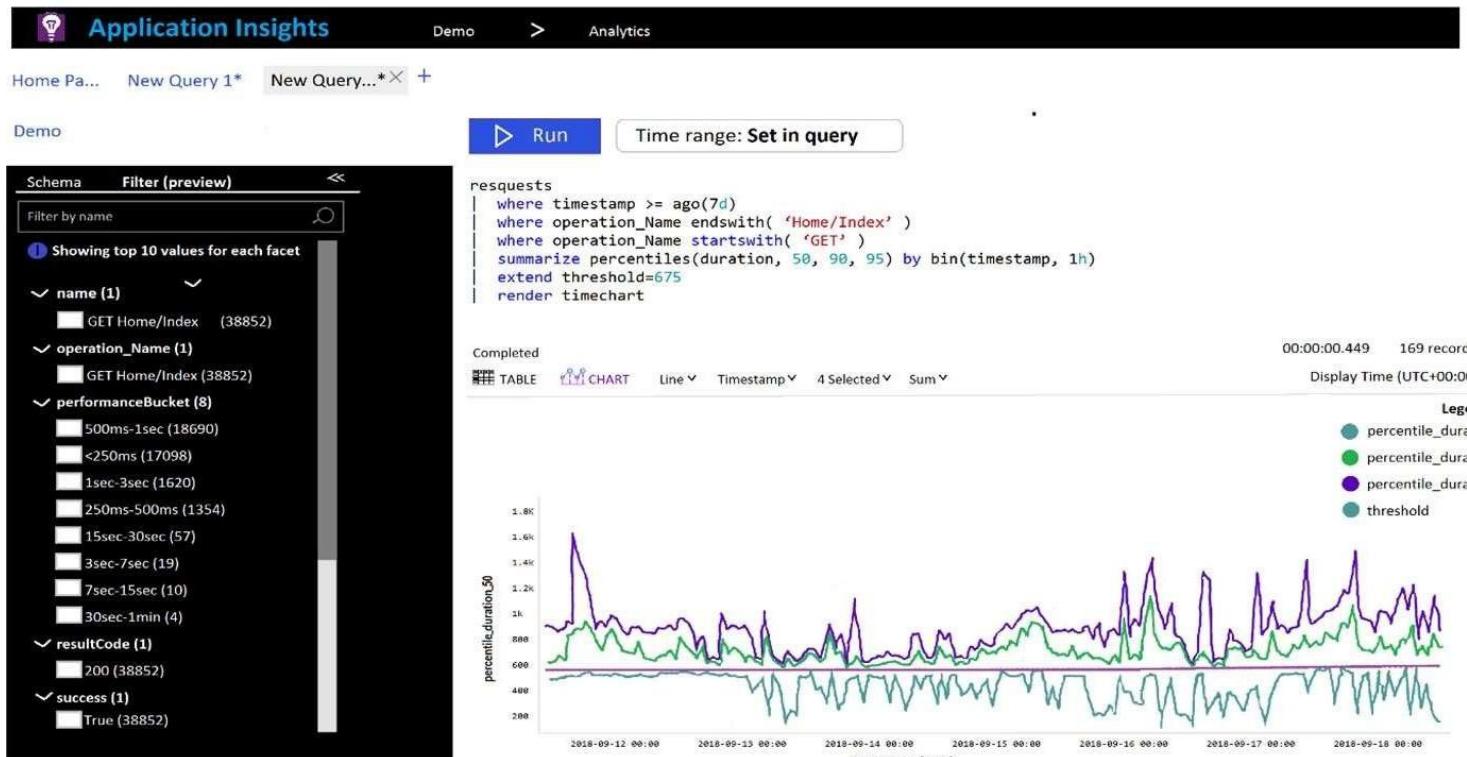
COPY --from=build-env /app/out /app

WORKDIR /app

ENTRYPOINT ["dotnet", "MvcMovie.dll"]

QUESTION 29 HOTSPOT

You plan to create alerts that will be triggered based on the page load time of the home page. You have the Application Insights log query shown in the following exhibit.



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

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

To create an alert based on the page load experience of most users, the alerting level must be based on [answer choice].

	▼
percentile_duration_50	
percentile_duration_90	
percentile_duration_95	
threshold	

To only create an alert when authentication error occurs on the server, the query must be filtered on [answer choice].

	▼
item Type	
resultCode	
source	
success	

Correct Answer:

Answer Area

To create an alert based on the page load experience of most users, the alerting level must be based on [answer choice].

	▼
percentile_duration_50	
percentile_duration_90	
percentile_duration_95	
threshold	

To only create an alert when authentication error occurs on the server, the query must be filtered on [answer choice].

	▼
item Type	
resultCode	
source	
success	

QUESTION 30

DRAG DROP

You are configuring the settings of a new Git repository in Azure Repos.

You need to ensure that pull requests in a branch meet the following criteria before they are merged:

Committed code must compile successfully.

Pull requests must have a Quality Gate status of Passed in SonarCloud.

Which policy type should you configure for each requirement? To answer, drag the appropriate policy types to the correct requirements. Each policy type may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Answer Area

Policy Types

A build policy

Committed code must compile successfully:

A check-in policy

Pull requests must have a Quality Gate status
of Passed in SonarCloud:

A status policy

Correct Answer:

Answer Area

Policy Types

Committed code must compile successfully:	A check-in policy
Pull requests must have a Quality Gate status of Passed in SonarCloud:	A build policy
A status policy	

Committed code must compile successfully:

A check-in policy

Pull requests must have a Quality Gate status of Passed in SonarCloud:

A build policy

QUESTION 31

You use a Git repository in Azure Repos to manage the source code of a web application. Developers commit changes directly to the master branch. You need to implement a change management procedure that meets the following requirements:

The master branch must be protected, and new changes must be built in the feature branches first. Changes must be reviewed and approved by at least one release manager before each merge. Changes must be brought into the master branch by using pull requests.

What should you configure in Azure Repos?

- branch policies of the master branch
- Services in Project Settings
- Deployment pools in Project Settings
- branch security of the master branch

Correct Answer: A

QUESTION 32

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You plan to update the Azure DevOps strategy of your company.

You need to identify the following issues as they occur during the company's development process:

- Licensing violations
- Prohibited libraries

Solution: You implement continuous integration. Does this meet the goal?

Yes

No

Correct Answer: A

QUESTION 33

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You plan to update the Azure DevOps strategy of your company.

You need to identify the following issues as they occur during the company's development process:

Licensing violations

Prohibited libraries

Solution: You implement pre-deployment gates. Does this meet the goal?

Yes

No

Correct Answer: B

QUESTION 34

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You plan to update the Azure DevOps strategy of your company.

You need to identify the following issues as they occur during the company's development process:

Licensing violations

Prohibited libraries

Solution: You implement automated security testing. Does this meet the goal?

Yes

No

Correct Answer: B

QUESTION 35

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

Your company uses Azure DevOps to manage the build and release processes for applications. You use a Git repository for applications source control.

You need to implement a pull request strategy that reduces the history volume in the master branch.

Solution: You implement a pull request strategy that uses fast-forward merges.

Does this meet the goal?

Yes

No

Correct Answer: B

QUESTION 36

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

Your company uses Azure DevOps to manage the build and release processes for applications.

You use a Git repository for applications source control.

You need to implement a pull request strategy that reduces the history volume in the master branch.

Solution: You implement a pull request strategy that uses squash merges.

Does this meet the goal?

Yes

No

Correct Answer: A

QUESTION 37

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

Your company uses Azure DevOps to manage the build and release processes for applications. You use a Git repository for applications source control.

You need to implement a pull request strategy that reduces the history volume in the master branch.

Solution: You implement a pull request strategy that uses an explicit merge.

Does this meet the goal?

Yes

No

Correct Answer: B

QUESTION 38

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

Your company uses Azure DevOps to manage the build and release processes for applications. You use a Git repository for applications source control.

You need to implement a pull request strategy that reduces the history volume in the master branch.

Solution: You implement a pull request strategy that uses a three-way merge.

Does this meet the goal?

Yes

No

Correct Answer: B

QUESTION 39

You are developing an application. The application source has multiple branches. You make several changes to a branch used for experimentation.

You need to update the main branch to capture the changes made to the experimentation branch and override the history of the Git repository. Which Git option should you use?

Rebase

Fetch

Merge

Push

Correct Answer: A

Implement Continuous Delivery 01

QUESTION 1

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 question on 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 sections 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 on 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.

Application Architecture

The company's primary application is a single monolithic retirement fund management system based on ASP.NET web forms that use logic written in VB.NET. Some new sections of the application are written in C#. Variations of the application are created for individual customers. Currently, there are more than 80 live code branches in the application's code base.

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

Litware focuses on writing new code for customers. No resources are provided to refactor or remove existing code. Changes to the code base take a long time, as dependencies are not obvious to individual developers. Merge operations of the code often take months and involve many developers. Code merging frequently makes it difficult to locate and resolve.

Customers report that ownership costs of the retirement fund management system increase continually. The cost of ownership makes even minor code changes expensive. Customers report that bug reporting is overly complex.

Planned changes

Litware plans to develop a new suite of applications for investment planning. The investment planning applications will require only minor integration with the existing retirement fund management system. 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. Litware plans to move to a more agile development methodology. Shared code will be extracted into a series of packages.

Litware has started an internal cloud transformation process and plans to use cloud-based services whenever suitable. Litware wants to become proactive in detecting failures, rather than always waiting for customer bug reports.

Technical requirements

The company's investment planning applications suite must meet the following requirements:

New incoming connections through the firewall must be minimized. Members of a group named Developers must be able to install packages. The principle of least privilege must be used for all permission assignments.

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

Members of a group named Team Leaders must be able to create new packages and edit the permissions of package feeds. Visual Studio App Center must be used to centralize the reporting of mobile application crashes and device types in use.

By default, all releases must remain available for 30 days, except for production releases, which must be kept for 60 days.

Code quality and release quality are critical. During release, deployments must not proceed between stages if any active bugs are logged against the release.

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 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 $vmaname  
-ConfigurationMode 'ApplyOnly'
```

What should you use to implement the code quality restriction on the release pipeline for the investment planning applications suite?

- a pre-deployment approval
- a deployment gate
- a post-deployment approval
- a trigger

Correct Answer: A

/Reference:

When a release is created from a release pipeline that defines approvals, the deployment stops at each point where approval is required until the specified approver grants approval or rejects the release (or re-assigns the approval to another user).

Scenario: Code quality and release quality are critical. During release, deployments must not proceed before logged against the release. References: <https://docs.microsoft.com/en-us/azure/devops/pipelines/release/approvals/approvals>

QUESTION 2

What should you use to implement the code quality restriction on the release pipeline for the investment planning applications suite?

- a pre-deployment approval
- a deployment gate
- a post-deployment approval
- a trigger

Correct Answer: A

QUESTION 3

HOTSPOT

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 question on 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 sections 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 on 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.

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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

Litware focuses on writing new code for customers. No resources are provided to refactor or remove existing code. Changes to the code base take a long time, as dependencies are not obvious to individual developers. Merge operations of the code often take months and involve many developers. Code merging frequently introduces bugs that are difficult to locate and resolve.

Customers report that ownership costs of the retirement fund management system increase continually. The need to merge unrelated code makes even minor code changes expensive. Customers report that bug reporting is overly complex.

Planned changes

Litware plans to develop a new suite of applications for investment planning. The investment planning applications will require only minor integration with the existing retirement fund management system. The investment planning applications suite will include one multi-tier web application and two iOS mobile applications. One will be used by employees; the other will be used by customers. Litware plans to move to a more agile development methodology. Shared code will be extracted into a shared code library.

Litware has started an internal cloud transformation process and plans to use cloud-based services whenever suitable. Litware wants to become proactive in detecting failures, rather than always waiting for customer bug reports.

Technical requirements

The company's investment planning applications suite must meet the following requirements:

New incoming connections through the firewall must be minimized. Members of a group named Developers must be able to install packages. The principle of least privilege must be used for all permission assignments.

A branching strategy that supports developing new functionality in isolation must be used. Members of a group named Team Leaders must be able to create new packages and edit the permissions of package feeds. Visual Studio App Center must be used to centralize the reporting of mobile application crashes and device types in use.

By default, all releases must remain available for 30 days, except for production releases, which must be kept for 60 days.

Code quality and release quality are critical. During release, deployments must not proceed between stages if any active bugs are logged against the release.

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 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 $vmname  
-ConfigurationMode 'ApplyOnly'
```

How should you configure the release retention policy for the investment planning applications suite? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Global release:	<ul style="list-style-type: none">Set the default retention policy to 30 days.Set the maximum retention policy to 30 days.Set the stage retention policy to 30 days.Set the stage retention policy to 60 days.
Production stage:	<ul style="list-style-type: none">Set the default retention policy to 30 days.Set the maximum retention policy to 60 days.Set the stage retention policy to 30 days.Set the stage retention policy to 60 days.

Correct Answer:

Answer Area

Global release:	<ul style="list-style-type: none">Set the default retention policy to 30 days.Set the maximum retention policy to 30 days.Set the stage retention policy to 30 days.Set the stage retention policy to 60 days.
Production stage:	<ul style="list-style-type: none">Set the default retention policy to 30 days.Set the maximum retention policy to 60 days.Set the stage retention policy to 30 days.Set the stage retention policy to 60 days.

QUESTION 4

HOTSPOT

Where should the build and release agents for the investment planning application suite run? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Build agent:

- A hosted service
- A source control system
- The developers' computers

Release agent:

- A hosted service
- A source control system
- The developers' computers

Correct Answer:

Answer Area

Build agent:

- A hosted service
- A source control system
- The developers' computers

Release agent:

- A hosted service
- A source control system
- The developers' computers

Implement Continuous Delivery 02

QUESTION 1

Note: This question-is part of a series of questions that present the same scenario. Each question-in the series contains a unique solution that might meet the stated goals. Some question-sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question-in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You plan to create a release pipeline that will deploy Azure resources by using Azure Resource Manager templates. The release pipeline will create the following resources: Two resource groups

Four Azure virtual machines in one resource group Two Azure SQL databases in other resource group

You need to recommend a solution to deploy the resources.

Solution: Create a main template that will deploy the resources in one resource group and a nested template that will deploy the resources in the other resource group. Does this meet the goal?

Yes
No

Correct Answer: **B**

QUESTION 2

Note: This question-is part of a series of questions that present the same scenario. Each question-in the series contains a unique solution that might meet the stated goals. Some question-sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question-in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You plan to create a release pipeline that will deploy Azure resources by using Azure Resource Manager templates. The release pipeline will create the following resources: Two resource groups

Four Azure virtual machines in one resource group Two Azure SQL databases in other resource group You need to recommend a solution to deploy the resources. n its respective group.

Solution: Create a main template that has two linked templates, each of which will deploy the resource i

Does this meet the goal?

Yes
No

Correct Answer: **A**

QUESTION 3

Your company has a project in Azure DevOps for a new web application. The company uses ServiceNow for change management.

You need to ensure that a change request is processed before any components can be deployed to the production environment.

What are two ways to integrate ServiceNow into the Azure DevOps release pipeline? Each Correct Answer presents a complete solution. NOTE: Each correct selection is worth one point.

Define a deployment control that invokes the ServiceNow REST API.

Define a pre-deployment gate before the deployment to the Prod stage.

Define a deployment control that invokes the ServiceNow SOAP API.

Define a post-deployment gate after the deployment to the QA stage.

Correct Answer: **BD**

QUESTION 4

Note: This question-is part of a series of questions that present the same scenario. Each question-in the series contains a unique solution that might meet the stated goals. Some question-sets might have more than one correct solution, while others might not have a correct solution. After you answer a question-in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. You have an approval process that contains a condition. The condition requires that releases be approved by a team leader before they are deployed. You have a policy stating that approvals must occur within eight hours. You discover that deployment fail if the approvals take longer than two hours. You need to ensure that the deployments only fail if the approvals take longer than eight hours.

Solution: From Post-deployment conditions, you modify the Time between re-evaluation of gates option Does this meet the goal?

Yes
No

Correct Answer: **B**

/Reference:

Use a gate From Pre-deployment conditions instead.

References: <https://docs.microsoft.com/en-us/azure/devops/pipelines/release/approvals/gates>

QUESTION 5

Note: This question-is part of a series of questions that present the same scenario. Each question-in the series contains a unique solution that might meet the stated goals. Some question-sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question-in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have an approval process that contains a condition. The condition requires that releases be approved by a team leader before they are deployed. You have a policy stating that approvals must occur within eight hours.

You discover that deployment fail if the approvals take longer than two hours.

You need to ensure that the deployments only fail if the approvals take longer than eight hours. Solution: From Pre-deployment conditions, you modify the Time between re-evaluation of gates option. Does this meet the goal?

Yes

No

Correct Answer: **B**

QUESTION 6

Note: This question-is part of a series of questions that present the same scenario. Each question-in the series contains a unique solution that might meet the stated goals. Some question-sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question-in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have an approval process that contains a condition. The condition requires that releases be approved by a team leader before they are deployed. You have a policy stating that approvals must occur within eight hours.

You discover that deployment fail if the approvals take longer than two hours.

You need to ensure that the deployments only fail if the approvals take longer than eight hours.

Solution: From Pre-deployment conditions, you modify the Timeout setting for pre-deployment approvals. Does this meet the goal?

Yes

No

Correct Answer: **A**

QUESTION 7

Note: This question-is part of a series of questions that present the same scenario. Each question-in the series contains a unique solution that might meet the stated goals. Some question-sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question-in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You plan to create a release pipeline that will deploy Azure resources by using Azure Resource Manager templates. The release pipeline will create the following resources: Two resource groups

Four Azure virtual machines in one resource group Two Azure SQL databases in other resource group

You need to recommend a solution to deploy the resources.

Solution: Create two standalone templates, each of which will deploy the resources in its respective group.

Does this meet the goal?

Yes

No

Correct Answer: **B**

QUESTION 8

HOTSPOT

You have a project in Azure DevOps.

You plan to create a build pipeline that will deploy resources by using Azure Resource Manager templates. The templates will reference secrets stored in Azure Key Vault. You need to ensure that you can dynamically generate the resource ID of the key vault during template deployment. What should you include in the template? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

```
"resources": [
  {
    "apiVersion": "2018-05-01",
    "name" : "secrets",
    "type": "Microsoft.KeyVault/vaults",
    "properties": {
      "mode" : "Incremental",
      "deployment"
      "template"
      "templateLink"
    }
  }
],
```



Correct Answer:

Answer Area

```
"resources": [
  {
    "apiVersion": "2018-05-01",
    "name" : "secrets",
    "type": "Microsoft.KeyVault/vaults",
    "Microsoft.Resources/deployment",
    "Microsoft.Subscription/subscriptions"
  },
  {
    "mode" : "Incremental",
    "deployment"
    "template"
    "templateLink"
  }
],
"contentVersion" : "1.0.0.0",
"uri" : "[uri(parameters('_artifactsLocation'),
concat('./nested/sqlserver.json',
parameters('_artifactsLocationSasToken')))]"
},
"parameters":{
  "secret":{

    "reference":{

      "keyVault":{

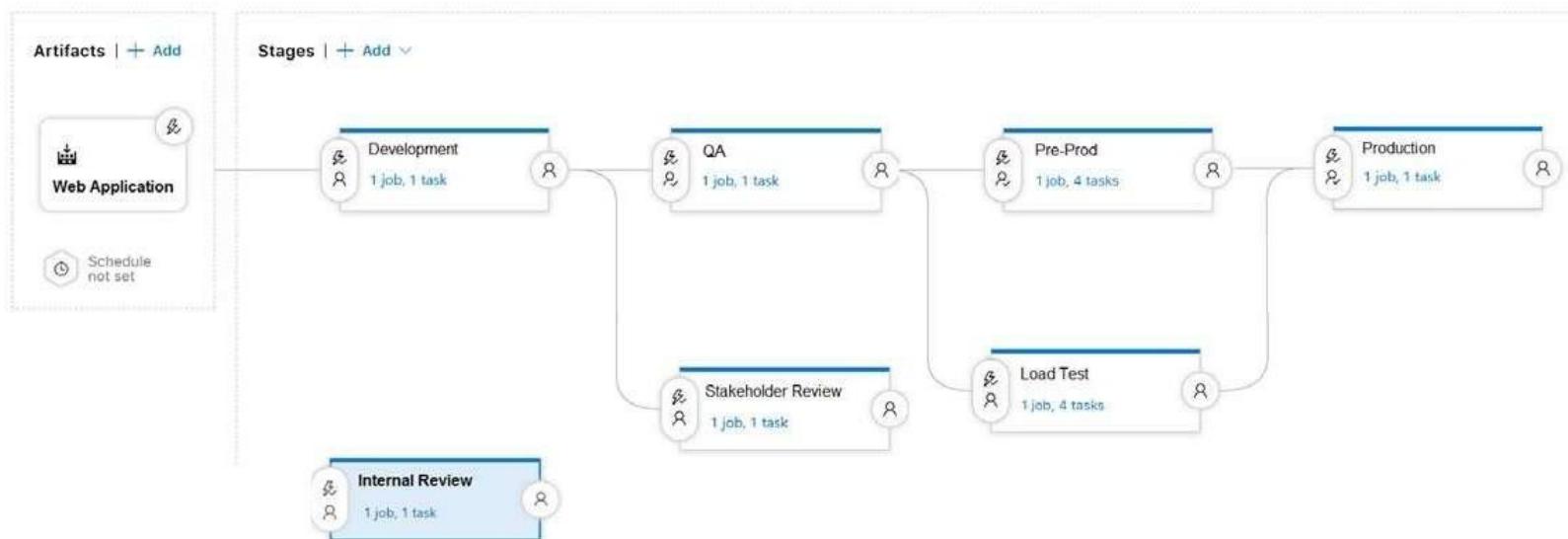
        "id": "[resourceId(parameters('vaultSubscription'),
        parameters('vaultResourceGroupName'),
        'Microsoft.KeyVault/vaults',
        parameters('vaultName'))]"
      },
      "secretName": "[parameters('secretName')]"
    }
  }
}
]
},
```

/Reference:

QUESTION 9

HOTSPOT

You are configuring a release pipeline in Azure DevOps as shown in the exhibit.



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

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

How many stages have triggers set?

0
1
2
3
4
5
6
7

Which component should you modify to enable continuous delivery?

The Development stage
The Internal Review stage
The Production stage
The Web Application artifact

Correct Answer:

Answer Area

How many stages have triggers set?

0
1
2
3
4
5
6
7

Which component should you modify to enable continuous delivery?

The Development stage
The Internal Review stage
The Production stage
The Web Application artifact

QUESTION 10

DRAG DROP

Your company plans to deploy an application to the following endpoints: Ten virtual machines hosted in Azure

Ten virtual machines hosted in an on-premises data center environment All the virtual machines have the Azure Pipelines agent.

You need to implement a release strategy for deploying the application to the endpoints.

What should you recommend using to deploy the application to the endpoints? To answer, drag the appropriate components to the correct endpoints. Each component may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Components	Answer Area
A deployment group	
A management group	Ten virtual machines hosted in Azure: <input type="text"/>
A resource group	Ten virtual machines hosted in an on-premises data center environment: <input type="text"/>
Application roles	

Correct Answer:

Components	Answer Area
A deployment group	
A management group	Ten virtual machines hosted in Azure: <input checked="" type="text"/> A deployment group
A resource group	Ten virtual machines hosted in an on-premises data center environment: <input checked="" type="text"/> A deployment group
Application roles	

QUESTION 11

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one

correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You plan to create a release pipeline that will deploy Azure resources by using Azure Resource Manager templates. The release pipeline will create the following resources: Two resource groups
Four Azure virtual machines in one resource group Two Azure SQL databases in other resource group

You need to recommend a solution to deploy the resources.

Solution: Create a single standalone template that will deploy all the resources. Does this meet the goal?

Yes

No

Correct Answer: **B**

/Reference:

:

Use two templates, one for each resource group, and link the templates.

References:

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/resource-group-linked-templates>

QUESTION 12

HOTSPOT

Your company has an Azure subscription.

The company requires that all resource group in the subscription have a tag named organization set to a value of Contoso. You need to implement a policy to meet the tagging requirement.

How should you complete the policy? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

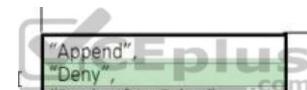
Hot Area:

```
{
  "policyRule": {
    "if": {
      "allOf": [
        {
          "field": "type",
          "equals": [
            "MicrosoftResources/deployments",
            "MicrosoftResources/subscriptions",
            "MicrosoftResources/subscriptions/resourceGroups"
          ]
        },
        {
          "not": {
            "field": "tags['organization']",
            "equals": "Contoso"
          }
        }
      ],
      "then": {
        "effect": [
          "Append",
          "Deny",
          "DeployIfNotExists",
        ],
        "details": [
          {
            "field": "tags['organization']",
            "value": "Contoso"
          }
        ]
      }
    }
  }
}
```



Correct Answer:

```
{
  "policyRule": {
    "if": {
      "allOf": [
        {
          "field": "type",
          "equals": [
            "MicrosoftResources/deployments",
            "MicrosoftResources/subscriptions",
            "MicrosoftResources/subscriptions/resourceGroups"
          ]
        },
        {
          "not": {
            "field": "tags['organization']",
            "equals": "Contoso"
          }
        }
      ],
      "then": {
        "effect": [
          "Append",
          "Deny",
          "DeployIfNotExists",
        ],
        "details": [
          {
            "field": "tags['organization']",
            "value": "Contoso"
          }
        ]
      }
    }
  }
}
```



QUESTION 13**DRAG DROP**

You are defining release strategies for two applications as shown in the following table.

Application name	Goal
App1	Failure of App1 has a major impact on your company. You need a small group of users, who opted in to a testing App1, to test new releases of the application.
App2	You need to minimize the time it takes to deploy new releases of App2, and you must be able to roll back as quickly as possible.

Which release strategy should you use for each application? To answer, drag the appropriate release strategies to the correct applications. Each release strategy may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Release Strategies

- Blue/Green deployment
- Canary deployment
- Rolling deployment

Answer Area:App1: App2: **Correct Answer:****Release Strategies**

-
- Rolling deployment

Answer Area:App1: Canary deploymentApp2: Blue/Green deployment**QUESTION 14**

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have an approval process that contains a condition. The condition requires that releases be approved. You have a policy stating that approvals must occur within eight hours.

You discover that deployment fail if the approvals take longer than two hours.

You need to ensure that the deployments only fail if the approvals take longer than eight hours.

Solution: From Post-deployment conditions, you modify the Timeout setting for post-deployment approvals. Does this meet the goal?

Yes

No

Correct Answer: B

/Reference:

QUESTION 15

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have an Azure DevOps project.

Your build process creates several artifacts.

You need to deploy the artifacts to on-premises servers.

Solution: You deploy a Kubernetes cluster on-premises. You deploy a Helm agent to the cluster. You add a Download Build Artifacts task to the deployment pipeline. Does this meet the goal?

Yes

No

Correct Answer: B

QUESTION 16

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have an Azure DevOps project.

Your build process creates several artifacts.

You need to deploy the artifacts to on-premises servers.

Solution: You deploy a Docker build to an on-premises server. You add a Download Build Artifacts task to the deployment pipeline. Does this meet the goal?

Yes

No

Correct Answer: B

QUESTION 17

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have an Azure DevOps project.

Your build process creates several artifacts.

You need to deploy the artifacts to on-premises servers.

Solution: You deploy an Azure self-hosted agent to an on-premises server. You add a Copy and Publish Build Artifacts task to the deployment pipeline. Does this meet the goal?

Yes

No

Correct Answer: A

QUESTION 18

Your company hosts a web application in Azure. The company uses Azure Pipelines for the build and release management of the application. Stakeholders report that the past few releases have negatively affected system performance.

You configure alerts in Azure Monitor.

You need to ensure that new releases are only deployed to production if the releases meet defined performance baseline criteria in the staging environment first. What should you use to prevent the deployment of releases that fall to meet the performance baseline?

an Azure Scheduler job

a trigger

a gate

an Azure function

Correct Answer: C

QUESTION 19

SIMULATION

You need to ensure that an Azure web app named az400-9940427-main supports rolling upgrades. The solution must ensure that only 10 percent of users who connect to az400-9940427-main use update versions of the app. The solution must minimize administrative effort.

To complete this task, sign in to the Microsoft Azure portal.

See solution below.

Correct Answer: A

QUESTION 20

You have an Azure DevOps project named Project1 and an Azure subscription named Sub1. Sub1 contains an Azure SQL database named DB1. You need to create a release pipeline that uses the Azure SQL Database Deployment task to update DB1.

Which artifact should you deploy?

a BACPAC

a DACPAC

an LDF file

an MDF file

Correct Answer: B

QUESTION 21

DRAG DROP

You have an Azure Kubernetes Service (AKS) cluster.

You need to deploy an application to the cluster by using Azure DevOps.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions	Answer Area
Create a service account in the cluster.	
Create a service principal in Azure Active Directory (Azure AD).	
Add an Azure Function App for Container task to the deployment pipeline.	
Add a Helm package and deploy a task to the deployment pipeline.	
Add a Docker Compose task to the deployment pipeline.	
Configure RBAC roles in the cluster.	

Correct Answer:

Actions	Answer Area
Create a service account in the cluster.	
Add an Azure Function App for Container task to the deployment pipeline.	
Configure RBAC roles in the cluster.	

QUESTION 22

You plan to use Terraform to deploy an Azure resource group.

You need to install the required frameworks to support the planned deployment.

Which two frameworks should you install? Each Correct Answer presents part of the solution.

NOTE: Each correct selection is worth one point.

Vault
Terratest
Node.js
Yeoman
Tiller

Correct Answer: BD

Implement Dependency Management 01

QUESTION 1

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 question on 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 sections 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 on this case study, click the **Next** button. Use the buttons in the left pane to explore the content of the case study before you answer the questions. Clicking these buttons displays information such as business requirements, existing environment, and problem statements. If the case study has an **All Information** tab, note that the information displayed is identical to the information displayed on the subsequent tabs. When you are ready to answer a question, click the **Question** button to return to the question.

Overview

Litware, Inc. is an independent software vendor (ISV). Litware has a main office and five branch offices.

Existing Environment Application Architecture

The company's primary application is a single monolithic retirement fund management system based on ASP.NET web forms that use logic written in VB.NET. Some new sections of the application are written in C#. Variations of the application are created for individual customers. Currently, there are more than 80 live code branches in the application's code base.

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

Litware focuses on writing new code for customers. No resources are provided to refactor or remove existing code. Changes to the code base take a long time, as dependencies are not obvious to individual developers. Merge operations of the code often take months and involve many developers. Code merging frequently introduces bugs that are difficult to locate and resolve.

Customers report that ownership costs of the retirement fund management system increase continually. The need to merge unrelated code makes even minor code changes expensive. Customers report that bug reporting is overly complex.

Requirements Planned changes

Litware plans to develop a new suite of applications for investment planning. The investment planning applications will require only minor integration with the existing retirement fund management system. 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. Litware plans to move to a more agile development methodology. Shared code will be extracted into a series of packages.

Litware has started an internal cloud transformation process and plans to use cloud-based services whenever suitable. Litware wants to become proactive in detecting failures, rather than always waiting for customer bug reports.

Technical requirements

The company's investment planning applications suite must meet the following requirements: New incoming connections through the firewall must be minimized.

Members of a group named Developers must be able to install packages. The principle of least privilege must be used for all permission assignments. A branching strategy that supports developing new functionality in isolation must be used.

Members of a group named Team Leaders must be able to create new packages and edit the permissions of package feeds. Visual Studio App Center must be used to centralize the reporting of mobile application crashes and device types in use.

By default, all releases must remain available for 30 days, except for production releases, which must be kept for 60 days.

Code quality and release quality are critical. During release, deployments must not proceed between stages if any active bugs are logged against the release.

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 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

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

Configuration nodes are registered by using the following command.

A.

QUESTION 2

DRAG DROP

Which package feed access levels should be assigned to the Developers and Team Leaders groups for the investment planning applications suite? To answer, drag the appropriate access levels to the correct groups. Each access level may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Access Levels	Answer Area
Collaborator	Developers:
Contributor	Team Leaders:
Owner	
Reader	

Correct Answer:

Access Levels	Answer Area
Collaborator	Developers:
Contributor	Team Leaders:
	Reader
	Owner

Implement Dependency Management 02

QUESTION 1

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 question on 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 sections 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 on this case study, click the **Next** button. Use the buttons in the left pane to explore the content of the case study before you answer the questions. Clicking these buttons displays information such as business requirements, existing environment, and problem statements. If the case study has an **All Information** tab, note that the information displayed is identical to the information displayed on the subsequent tabs. When you are ready to answer a question, click the **Question** button to return to the question.

Overview

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 Reports 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.

A.

Correct Answer:

QUESTION 2

DRAG DROP

You need to implement Project6.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions**Answer Area**

Open the release pipeline editor.

Disable the continuous integration trigger.

Enable Gates.



Add a manual intervention task.

Open the **Triggers** tab.

Add Query Work Items.

Correct Answer:**Actions****Answer Area**

Open the release pipeline editor.

Disable the continuous integration trigger.

Enable Gates.

Add a manual intervention task.

Add Query Work Items.

Open the **Triggers** tab.

Implement Dependency Management 03**QUESTION 1**

You plan to share packages that you wrote, tested, validated, and deployed by using Azure Artifacts. You need to release multiple builds of each package by using a single feed. The solution must limit the release of packages that are in development. What should you use?

- local symbols
- views
- global symbols
- upstream sources

Correct Answer: D

QUESTION 2

Your company is concerned that when developers introduce open source libraries, it creates licensing compliance issues. You need to add an automated process to the build pipeline to detect when common open source libraries are added to the code base. What should you use?

Microsoft Visual SourceSafe

PDM

WhiteSource

OWASP ZAP

Correct Answer: C

QUESTION 3

Your company is concerned that when developers introduce open source libraries, it creates licensing compliance issues.

You need to add an automated process to the build pipeline to detect when common open source libraries are added to the code base. What should you use?

Microsoft Visual SourceSafe

Code Style

Black Duck

Jenkins

SourceGea

OWASP ZAP

Correct Answer: C

QUESTION 4

DRAG DROP

You need to find and isolate shared code. The shared code will be maintained in a series of packages.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions	Answer Area
Group the related components.	
Assign ownership to each component group.	
Create a dependency graph for the application.	
Identify the most common language used.	
Rewrite the components in the most common language.	

Correct Answer:

Actions

Identify the most common language used.
Rewrite the components in the most common language.

Answer Area

- | |
|--|
| Create a dependency graph for the application. |
| Group the related components. |
| Assign ownership to each component group. |

QUESTION 5
DRAG DROP

You are implementing a package management solution for a Node.js application by using Azure Artifacts.

You need to configure the development environment to connect to the package repository. The solution must minimize the likelihood that credentials will be leaked.

Which file should you use to configure each connection? To answer, drag the appropriate files to the correct connections. Each file may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Files
The .npmrc file in the project
The npmrc file in the user's home folder
The Package.json file in the project
The Project.json file in the project

Answer Area

Feed registry information:	File
Credentials:	File

Correct Answer:

Files**Answer Area**

The Package.json file in the project

The Project.json file in the project

Feed registry information:

The .npmrc file in the project

Credentials:

The npmrc file in the user's home folder

QUESTION 6**DRAG DROP**

You are creating a NuGet package.

You plan to distribute the package to your development team privately.

You need to share the package and test that the package can be consumed.

Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions**Answer Area**

Create a new Azure Artifacts feed.

Configure a self-hosted agent.

Publish a package.

Install a package.

Connect to an Azure Artifacts feed.

**Correct Answer:**

Actions	Answer Area
Create a new Azure Artifacts feed.	Create a new Azure Feed
Configure a self-hosted agent.	Publish a package
Publish a package.	Connect to Azure feed
Install a package.	Install a Package
Connect to an Azure Artifacts feed.	

QUESTION 7

HOTSPOT

You have an Azure DevOps project that contains a build pipeline. The build pipeline uses approximately 50 open source libraries. You need to ensure that the project can be scanned for known security vulnerabilities in the open source libraries.

What should you do? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Object to create:

A build task
 A deployment task
 An artifacts repository

Service to use:

WhiteSource Bolt
 Bamboo
 CMake
 Chef

Answer Area

Object to create:

A build task
A deployment task
An artifacts repository

Service to use:

WhiteSource Bolt
Bamboo
CMake
Chef

QUESTION 9

You have an Azure DevOps project that contains a build pipeline. The build pipeline uses approximately 50 open source libraries. You need to ensure that all the open source libraries comply with your company's licensing standards.

Which service should you use?

- NuGet
- Maven
- Black Duck
- Helm

Correct Answer: C

QUESTION 10

You have an Azure DevOps project that contains a build pipeline. The build pipeline uses approximately 50 open source libraries. You need to ensure that all the open source libraries comply with your company's licensing standards.

Which service should you use?

- NuGet
- Maven
- Black Duck
- Helm

Correct Answer: C

Implement Application Infrastructure

QUESTION 1

DRAG DROP

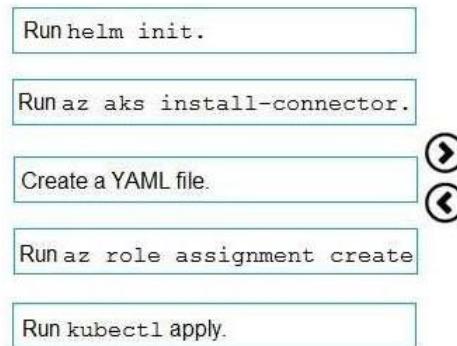
You have an Azure Kubernetes Service (AKS) implementation that is RBAC-enabled.

You plan to use Azure Container Instances as a hosted development environment to run containers in the AKS implementation. You need to configure Azure Container Instances as a hosted environment for running the containers in AKS.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

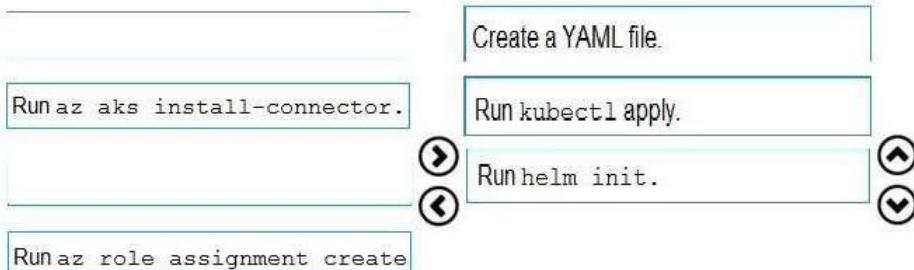
Select and Place:

Run helm init.
Run az aks install-connector.
Create a YAML file.
Run az role assignment create
Run kubectl apply.



Correct Answer:

Run az aks install-connector.	Create a YAML file.
Run az role assignment create	Run kubectl apply.
	Run helm init.



:

QUESTION 2

You have an application that consists of several Azure App Service web apps and Azure functions. You need to access the security of the web apps and the functions.

Which Azure features can you use to provide a recommendation for the security of the application?

- Security & Compliance in Azure Log Analytics
- Resource health in Azure Service Health
- Smart Detection in Azure Application Insights
- Compute & apps in Azure Security Center

Correct Answer: D

QUESTION 3

You have a private distribution group that contains provisioned and unprovisioned devices.

- You need to distribute a new iOS application to the distribution group by using Microsoft Visual Studio App Center. What should you do?
- Request the Apple ID associated with the user of each device.
 - Register the devices on the Apple Developer portal.
 - Create an active subscription in App Center Test.
 - Add the device owner to the organization in App Center.

Correct Answer: B

QUESTION 4

DRAG DROP

You plan to use Azure Kubernetes Service (AKS) to host containers deployed from images hosted in a Docker Trusted Registry.

You need to recommend a solution for provisioning and connecting to AKS. The solution must ensure that AKS is RBAC-enabled and uses a custom service principal.

Which three commands should you recommend be run in sequence? To answer, move the appropriate commands from the list of commands to the answer area and arrange them in the correct order.

Select and Place:

Commands

Answer Area

az role assignment create

az aks get-credentials

az aks create

az ad sp create-for-rbac

kubectl create



Commands

Answer Area

az role assignment create

az aks create

az aks get-credentials

az ad sp create-for-rbac



QUESTION 5

Your company has a project in Azure DevOps for a new application. The application will be deployed to several Azure virtual machines that run Windows Server 2016. You need to recommend a deployment strategy for the virtual machines. The strategy must meet the following requirements:

Ensure that the virtual machines maintain a consistent configuration. Minimize administrative effort to configure the virtual machines.

What should you include in the recommendation?

Azure Resource Manager templates and the PowerShell Desired State Configuration (DSC) extension for Windows

Deployment YAML and Azure pipeline deployment groups

Azure Resource Manager templates and the Custom Script Extension for Windows

Deployment YAML and Azure pipeline stage templates

Correct Answer: C

QUESTION 6

Your company develops an app for iOS. All users of the app have devices that are members of a private distribution group in Microsoft Visual Studio App Center. You plan to distribute a new release of the app. You need to identify which certificate file you require to distribute the new release from App Center. Which file type should you upload to App Center?

- .cer
- .pfx
- .p12
- .pvk

Correct Answer: C

QUESTION 11

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You manage a project in Azure DevOps.

You need to prevent the configuration of the project from changing over time. Solution: Add a code coverage step to the build pipelines.

Does this meet the goal?

Yes

No

Correct Answer: B

QUESTION 12

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You manage a project in Azure DevOps.

You need to prevent the configuration of the project from changing over time. Solution: Implement Continuous Integration for the project.

Does this meet the goal?

Yes

No

Correct Answer: B

QUESTION 13

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You manage a project in Azure DevOps.

You need to prevent the configuration of the project from changing over time. Solution: Implement Continuous Assurance for the project.

Does this meet the goal?

Yes

No

Correct Answer: A

QUESTION 14

Your company has a release pipeline in an Azure DevOps project.

You plan to deploy to an Azure Kubernetes Services (AKS) cluster by using the Helm package and deploy task. You need to install a service in the AKS namespace for the planned deployment.

Which service should you install?

Azure Container Registry

Chart

Kubectl

Tiller

Correct Answer: D

QUESTION 15

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You manage a project in Azure DevOps.

You need to prevent the configuration of the project from changing over time. Solution: Perform a Subscription Health scan when packages are created.

Does this meet the goal?

Yes

No

Correct Answer: B

QUESTION 16

You are developing an iOS application by using Azure DevOps.

You need to test the application manually on 10 devices without releasing the application to the public. Which two actions should you perform? Each Correct Answer presents part of the solution.

NOTE: Each correct selection is worth one point.

Create a Microsoft Intune device compliance policy.

Deploy a certificate from an internal certification authority (CA) to each device.

Register the application in the iTunes store.

Onboard the devices into Microsoft Intune.

Distribute a new release of the application.

Register the IDs of the devices in the Apple Developer portal.

Correct Answer: **BF**

QUESTION 17

You have a private distribution group that contains provisioned and unprovisioned devices.

You need to distribute a new iOS application to the distribution group by using Microsoft Visual Studio App Center. What should you do?

Select Register devices and sign my app.

Generate a new .p12 file for each device.

Create an active subscription in App Center Test.

Add the device owner to the collaborators group.

Correct Answer: **A**

QUESTION 1

Your company uses ServiceNow for incident management. You develop an application that runs on Azure. The company needs to generate a ticket in ServiceNow when the application fails to authenticate. Which Azure Log Analytics solution should you use?

Application Insights Connector

Automation & Control

IT Service Management Connector (ITSM)

Insight & Analytics

Correct Answer: **C**

QUESTION 2

You use Azure SQL Database Intelligent Insights and Azure Application Insights for monitoring. You need to write ad-hoc queries against the monitoring data.

Which query language should you use?

Azure Log Analytics

PL/pgSQL

PL/SQL

Transact-SQL

Correct Answer: **A**

QUESTION 3

You have a multi-tier application that has an Azure Web Apps front end and an Azure SQL Database back end.

You need to recommend a solution to capture and store telemetry data. The solution must meet the following requirements: Support using ad-hoc queries to identify baselines.

Trigger alerts when metrics in the baseline are exceeded. Store application and database metrics in a central location. What should you include in the recommendation?

Azure Event Hubs

Azure SQL Database Intelligent Insights

Azure Application Insights

Azure Log Analytics

Correct Answer: **D**

QUESTION 4

Your company creates a web application.

You need to recommend a solution that automatically sends to Microsoft Teams a daily summary of the exceptions that occur in the application. Which two Azure services should you recommend? Each Correct Answer presents part of the solution.

NOTE: Each correct selection is worth one point.

Azure Logic Apps

Azure Pipelines

Microsoft Visual Studio App Center

Azure DevOps Project

Azure Application Insights

Correct Answer: AE

QUESTION 5

HOTSPOT

Your company is building a new web application.

You plan to collect feedback from pilot users on the features being delivered.

All the pilot users have a corporate computer that has Google Chrome and the Microsoft Test & Feedback extension installed. The pilot users will test the application by using Chrome. You need to identify which access levels are required to ensure that developers can request and gather feedback from the pilot users. The solution must use the principle of least privilege. Which access levels in Azure DevOps should you identify? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Developers: Basic
 Stakeholder

Pilot users: Basic
 Stakeholder

Correct Answer:

Answer Area

Developers: Basic
 Stakeholder

Pilot users: Basic
 Stakeholder

QUESTION 6

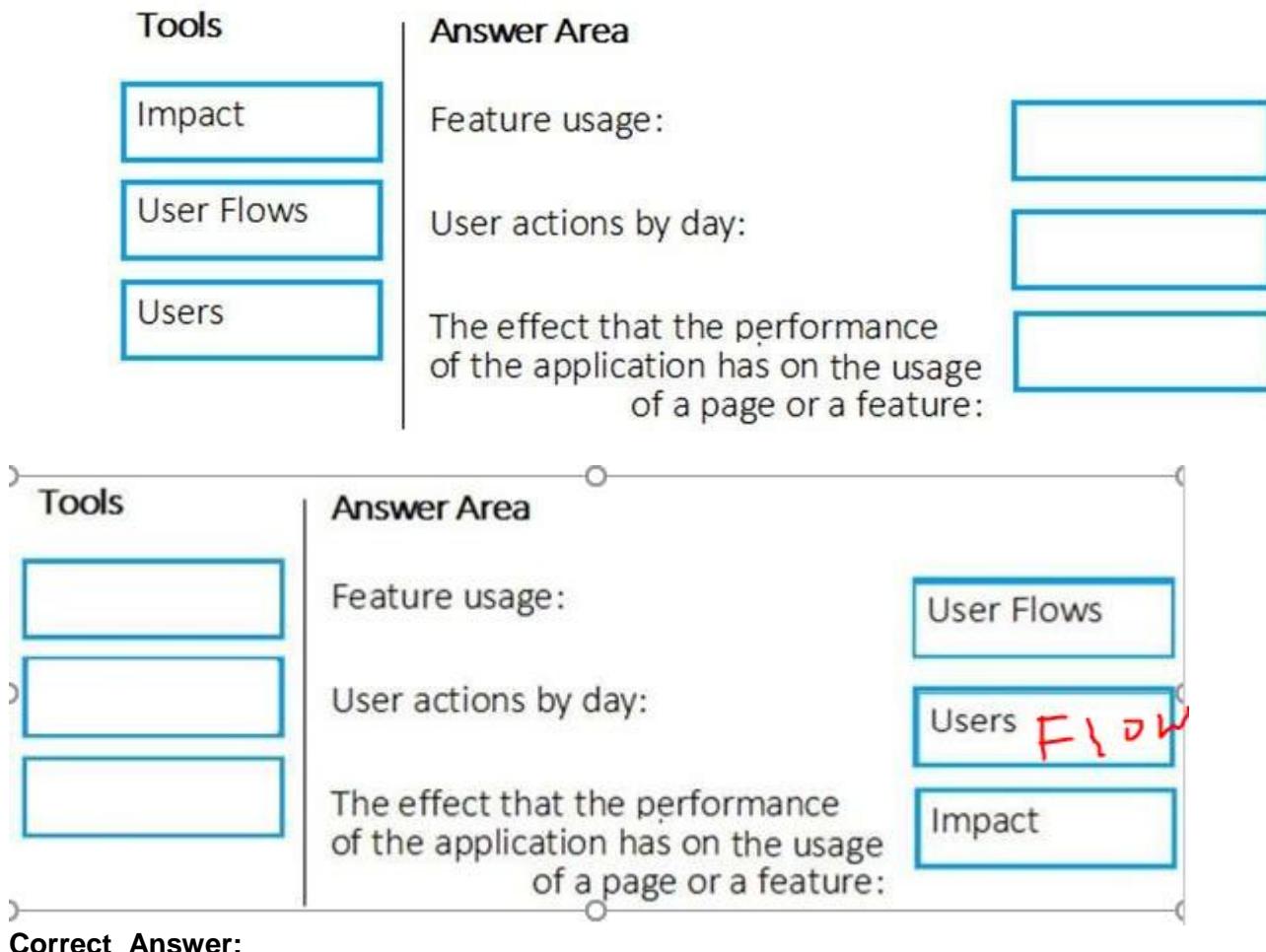
DRAG DROP

Your company wants to use Azure Application Insights to understand how user behaviors affect an application.

Which application Insights tool should you use to analyze each behavior? To answer, drag the appropriate tools to the correct behaviors. Each tool may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:



QUESTION 7

Your company is building a mobile app that targets Android and iOS devices. Your team uses Azure DevOps to manage all work items and release cycles. You need to recommend a solution to perform the following tasks:

Collect crash reports for issue analysis. Distribute beta releases to your testers.

Get user feedback on the functionality of new apps.

What should you include in the recommendation?

- the Microsoft Test & Feedback extension
- Microsoft Visual Studio App Center integration
- Azure Application insights widgets
- Jenkins integration

Correct Answer: A

QUESTION 8

You have an Azure DevOps project named Project1 and an Azure subscription named Sub1. Sub1 contains an Azure virtual machine scale set named VMSS1. VMSS1 hosts a web application named WebApp1. WebApp1 uses stateful sessions.

The WebApp1 installation is managed by using the Custom Script extension. The script resides in an Azure Storage account named sa1. You plan to make a minor change to a UI element of WebApp1 and to gather user feedback about the change.

You need to implement limited user testing for the new version of WebApp1 on VMSS1.

Which three actions should you perform? Each Correct Answer presents part of the solution.

NOTE: Each correct selection is worth one point.

Modify the load balancer settings of VMSS1.

Redeploy VMSS1.

Upload a custom script file to sa1.

Modify the Custom Script extension settings of VMSS1.

Update the configuration of a virtual machine in VMSS1.

Correct Answer: ACD

Answer: A

QUESTION 11

You have a multi-tier application. The front end of the application is hosted in Azure App Service. You need to identify the average load times of the application pages.

What should you use?

Azure Application Insights

the activity log of the App Service

the diagnostics logs of the App Service

Azure Advisor

Correct Answer: A

NO.122 You are configuring an Azure DevOps deployment pipeline. The deployed application will authenticate to a web service by using a secret stored in an Azure key vault.

You need to use the secret in the deployment pipeline.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

The screenshot shows a list of actions for a deployment pipeline. The actions are:

- Add an app registration in Azure Active Directory (Azure AD).
- Generate a self-signed certificate.
- Create a service principal in Azure Active Directory (Azure AD). (Hand cursor)
- Configure an access policy in the key vault.
- Export a certificate from the key vault.

Below the list, there is a blue bar with the text "Add an Azure Resource Manager service connection to the pipeline." At the top right, there is an "Answer Area" with a right arrow (>) and a left arrow (<).

Ans Generate self signed ssl / Configure Access Policy / Add ARM connection

Deploying other secrets from Key Vault

You may ask, deploying a certificate from KVS is fine. But what about deploying other secrets from KV such as connection strings? Currently, our platform only supports certificate deployment through Key Vault. You can however, use this feature and write some custom code to deploy generic Key Vault secrets into your Web App. Say your application requires a symmetric encryption key and a SQL connection string. You can follow these steps to deploy your app secrets through Key Vault:

1. Store the connection string and symmetric key in a Key Vault as individual secrets
2. Create a self-signed certificate and authorize it to read Key Vault Secrets as described here
3. Store this certificate in the Key Vault
4. Deploy the certificate through KVS and create the required App Setting so that it would be available locally for your Web App to use
5. In the Application_Start event, use this certificate to read secrets from Key Vault and update web.config if required

NO.218 You use Azure Pipelines to manage project builds and deployments.

You plan to use Azure Pipelines for Microsoft Teams to notify the legal team when a new build is ready for release. You need to configure the Organization Settings in Azure DevOps to support Azure Pipelines for Microsoft Teams. What should you turn on?

- A. Azure Active Directory Conditional Access Policy Validation
- B. Alternate authentication credentials
- C. Third-party application access via OAuth
- D. SSH authentication

Answer: C

Explanation

Sorry, something went wrong. Please try again.

The Azure Pipelines app uses the OAuth authentication protocol, and requires [Third-party application access via OAuth for the organization](#) to be enabled. To enable this setting, navigate to **Organization Settings > Security > Policies**, and set the **Third-party application access via OAuth for the organization** setting to **On**.

The screenshot shows the Azure DevOps Organization Settings page. The left sidebar has a red box around the 'Security' section, with a red circle containing the number '2' over the 'Permissions' link. The main content area has a red box around the 'Policies' section, with a red circle containing the number '1' over the 'General' link. A red circle containing the number '3' is placed over the 'Third-party application access via OAuth' setting under the 'Application connection policies' section, which is also highlighted with a red border.

Organization Settings

Policy

Application connection policies

- Alternate authentication credentials: Off
- Third-party application access via OAuth**: On (highlighted with a red border)
- SSH authentication: On

Security policies

- Allow public projects: On
- Enable Azure Active Directory Conditional Access Policy Validation: Off

User policies

- External guest access: On

NO.56 You have the Azure DevOps pipeline shown in the following exhibit.

The screenshot shows the Azure DevOps Pipelines interface. On the left, there's a sidebar with icons for Overview, Boards, Repos, Pipelines, Environments, Releases, Library, Task groups, Deployment groups, Test Plans, and Artifacts. The main area is titled 'PartsUnlimitedE2E' and shows a 'Pipeline' step. Under 'Get sources', it says 'Cloud Agent' and 'Run on agent'. Below that is a list of tasks: 'NuGet restore' (NuGet Installer), 'Compile Application (.NET Core)', 'Copy Files (Copy files)', and 'Publish Artifact (Publish build artifacts)'. There are also '+' and '...' buttons at the top right of the pipeline step.

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

Answer Area

The pipeline has job(s).

The pipeline has task(s).

Answer Area

The pipeline has job(s).

The pipeline has task(s).

Ans 1 Job for second option need more info missing

NO.178 You have an Azure DevOps organization named Contoso and an Azure subscription. The subscription contains an Azure virtual machine scale set named VMSS1 and an Azure Standard Load Balancer named LB1. LB1 distributes incoming requests across VMSS1 instances. You use Azure DevOps to build a web app named App1 and deploy App1 to VMSS1. App1 is accessible via HTTPS only and configured to require mutual authentication by using a client certificate. You need to recommend a solution for implementing a health check of App1. The solution must meet the following requirements:

- * Identify whether individual instances of VMSS1 are eligible for an upgrade operation.
- * Minimize administrative effort.

What should you include in the recommendation?

A. the Custom Script Extension
B. an Azure Load Balancer health probe

C. the Application Health extension

D. Azure Monitor autoscale

Answer: B

Ans

Load balancer health probe

Explanation

These disparate sources are collected, consolidated, and placed in reliable data stores in Azure, such as Application Insights, Azure Monitor metrics, Service Health, storage accounts, and Azure Log Analytics.

Creating good health probes

The health and performance of an application can degrade over time, and degradation might not be noticeable until the application fails.

Implement probes or check functions, and run them regularly from outside the application. These checks can be as simple as measuring response time for the application as a whole, for individual parts of the application, for specific services that the application uses, or for separate components.

Check functions can run processes to ensure that they produce valid results, measure latency and check availability, and extract information from the system.

 The [HealthProbesSample](#) sample shows how to set up health probes. It provides an ARM template to set up the infrastructure. A load balancer accepts public requests and load balance to a set of virtual machines. The health probe is set up so that it can check for service's path /Health.

NO.196 You are monitoring the health and performance of an Azure web app by using Azure Application Insights.

You need to ensure that an alert is sent when the web app has a sudden rise in performance issues and failures.

What should you use?

A. Application Insights Profiler

B. Continuous export

C. Smart Detection

D. custom events

E. usage analysis

Answer: A

Ans Azure Insights profiler

<https://docs.microsoft.com/en-us/azure/azure-monitor/learn/tutorial-performance>

NO.156 You manage an Azure web app that supports an e-commerce website.

You need to increase the logging level when the web app exceeds normal usage patterns. The solution must minimize administrative overhead.

Which two resources should you include in the solution? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

A. an Azure Monitor alert that has a dynamic threshold

B. an Azure Automation runbook

C. an Azure Monitor alert that uses an action group that has an email action

D. the Azure Monitor autoscale settings

E. an Azure Monitor alert that has a static threshold

Answer: A D

Explanation : Dynamic threshold due to usage pattern not set value
<https://docs.microsoft.com/en-us/azure/azure-monitor/overview>

- NO.33** You are integrating Azure Pipelines and Microsoft Teams.
You install the Azure Pipelines app in Microsoft Teams.
You have an Azure DevOps organization named Contoso that contains a project name Project1.
You subscribe to Project1 in Microsoft Teams.
You need to ensure that you only receive events about failed builds in Microsoft Teams.
What should you do first?
A. From Microsoft Teams, run @azure pipelines subscribe https://dev.azure.com/Contoso/Project1.
B. From Microsoft Teams, run @azure pipelines subscriptions.
C. From Azure Pipelines, enable continuous integration for Project1.
D. From Azure Pipelines, add a Publish Build Artifacts task to Project1.

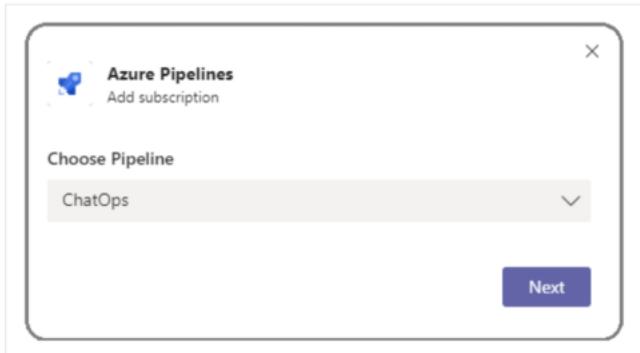
Answer: B

Using filters effectively to customize subscriptions

When a user subscribes to any pipeline, a few subscriptions are created by default without any filters being applied. Often, users have the need to customize these subscriptions. For example, users may want to get notified only when builds fail or when deployments are pushed to a production environment. The Azure Pipelines app supports filters to customize what you see in your channel.

1. Run the @Azure Pipelines subscriptions command
2. Select **View all subscriptions**. In the list of subscriptions, if there is a subscription that is unwanted or should be modified (Example: creating noise in the channel), select **Remove**
3. Scroll down and select the **Add subscription** button
4. Select the required pipeline and the event
5. Select the appropriate filters and save

Example: Get notifications only for failed builds



- NO.176** You have a project in Azure DevOps named Contoso App that contains pipelines in Azure Pipelines for GitHub repositories.

You need to ensure that developers receive Microsoft Teams notifications when there are failures in a pipeline of Contoso App. What should you run in Teams?

To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

Answer Area

@azure pipelines	feedback signin subscribe subscriptions	https://dev.azure.com/contoso/contoso-app/ https://dev.azure.com/contoso/contoso-app/_build https://dev.azure.com/contoso/contoso-app/_packaging https://dev.azure.com/contoso/contoso-app/_work-items
------------------	--	--

Answer Area



Answer Area

@azure pipelines subscribe https://dev.azure.com/contoso/contoso-app/_build

First Option subscribe

Second /_build

Reference <https://docs.microsoft.com/en-us/azure/devops/pipelines/integrations/microsoft-teams?view=azure-devops>

NO.185 You have a build pipeline in Azure Pipelines.

You create a Slack App Integration.

You need to send build notifications to a Slack channel named #Development.

What should you do first?

- A.** Configure a service connection.
- B.** Create a service hook subscription.
- C.** Create a project-level notification.
- D.** Create a global notification.

Answer: B

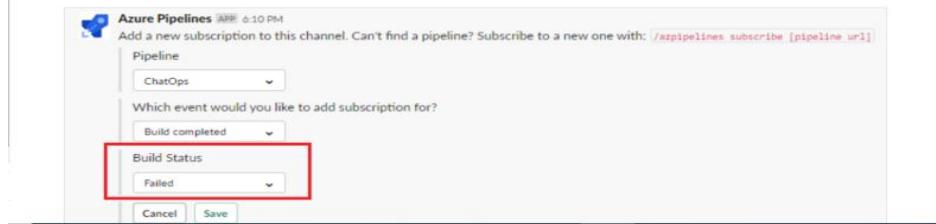
????????????????????????????????/

Using filters effectively to customize subscriptions

When a user subscribes to any pipeline, a few subscriptions are created by default without any filters being applied. Often, users have the need to customize these subscriptions. For example, users may want to hear only about failed builds or get notified only when deployments are pushed to production. The Azure Pipelines app supports filters to customize what you see in your channel.

1. Run the `/azpipelines subscriptions` command
2. In the list of subscriptions, if there is a subscription that is unwanted or must be modified (Example: creating noise in the channel), select the **Remove** button
3. Select the **Add subscription** button
4. Select the required pipeline and the desired event
5. Select the appropriate filters to customize your subscription

Example: Get notifications only for failed builds



NO.202 You have a private GitHub repository.

You need to display the commit status of the repository on Azure Boards.

What should you do first?

- A.** Create a GitHub action in GitHub.
- B.** Add the Azure Pipelines app to the GitHub repository.
- C.** Configure multi-factor authentication (MFA) for your GitHub account.
- D.** Add the Azure Boards app to the repository.

Answer: D

<https://docs.microsoft.com/en-us/azure/devops/boards/github/link-to-from-github?view=azure-devops>

Q1.

You are building a Microsoft ASP.NET application that requires authentication. You need to authenticate users by using Azure Active Directory (Azure AD). What should you do first?

- A. Create an app registration in Azure AD.
- B. Configure the application to use a SAML endpoint.
- C. Create a new OAuth token from the application.
- D. Create a membership database in an Azure SQL database.
- E. Assign an enterprise application to users and groups.

Answer : A

(<https://devblogs.microsoft.com/premier-developer/adding-authentication-to-your-app-easily-with-azure-ad/>)

Q2.

You use GitHub Enterprise Server as a source code repository.

You create an Azure DevOps organization named Contoso.

In the Contoso organization, you create a project named Project1.

You need to link github.com commits, pull requests, and issues to the work items of Project1. The solution must use OAuth-based authentication.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Actions

- From Project Settings in Azure DevOps, create a service hook subscription.
- From Project Settings in Azure DevOps, add a GitHub connection.
- From Developer settings in GitHub Enterprise Server, generate a private key.
- From Organization settings in Azure DevOps, add an OAuth configuration.
- From Developer settings in GitHub Enterprise Server, register a new OAuth app.

Answer Area

Answer

- 1. From Developer settings in GitHub Enterprise Server, register a new OAuth app**
- 2. From Project Settings in Azure DevOps, add a GitHub connection.**
- 3. From Project Settings in Azure DevOps, create a service hook subscription**

Option 6 From Organization setting in azure devops, connect to azure active directory (Azure AD)

Ans (Register a new app Add git hub connection and service hook subscription)

Q3.

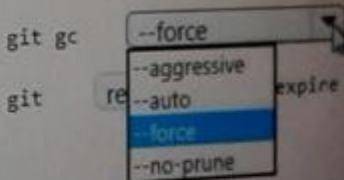
You manage the Git repository for a large enterprise application.

You need to minimize the data size of the repository.

How should you complete the command? To answer, select the appropriate options in the answer area.

Note : Each correct selection is worth one point

Answer Area

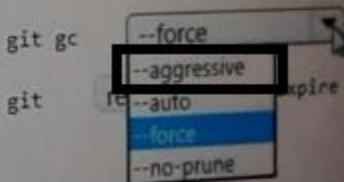


Answer Area

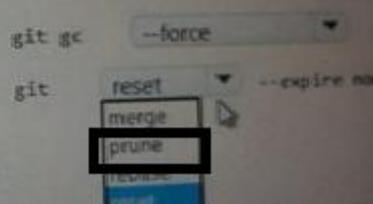


Answer :

Answer Area



Answer Area



git gc --aggressive

git prune

<https://waydev.co/how-to-reduce-the-git-repository-size/>

Q4.

You have an Azure DevOps organization named Contoso.

You need to recommend an authentication mechanism that meets the following requirements:

- *Supports authentication from Git
- *Minimizes the need to provide credentials during authentication

What should you recommend?

- A. Personal access tokens (PATs) in Azure DevOps
- B. User accounts in Azure Active Directory (Azure AD)
- C. Managed identities in Azure Active Directory (Azure AD)
- D. Alternate credentials in Azure DevOps

Answer : A

Ans is A (Personal access token)

NO.10 Your company has a project in Azure DevOps.

You plan to create a release pipeline that will deploy resources by using Azure Resource Manager templates.

The templates will reference secrets stored in Azure Key Vault.

You need to recommend a solution for accessing the secrets stored in the key vault during deployments. The solution must use the principle of least privilege.

What should you include in the recommendation? To answer, drag the appropriate configurations to the correct targets. Each configuration 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.

Configurations

Answer Area

A Key Vault access policy

Enable key vaults for template deployment by using:

A Key Vault advanced access policy

Restrict access to the secrets in Key Vault by using:

RBAC

Answer :

Configurations

Answer Area

A Key Vault access policy

Enable key vaults for template deployment by using:

A Key Vault access policy

A Key Vault advanced access policy

Restrict access to the secrets in Key Vault by using:

A Key Vault access policy

RBAC

Ans Both Option An Azure Key Vault access Policy

NO.31 You ate building an ASP.NET Core application.

You plan to create an application utilization baseline by capturing telemetry data.

You need to add code to the application to capture the telemetry data. The solution must minimize the costs of storing the telemetry data.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

A. From the code of the application, add Azure Application Insights telemetry.

B. From the code of the application, disable adaptive sampling.

C. From the code of the application, enable adaptive sampling.

D. Add the <InitialSamplingPercentage>90</InitialSamplingPercentage> parameter to the ApplicationInsights.config file.

E. Add the <MaxTelemetryItemsPerSecond>5</MaxTelemetryItemsPerSecond> parameter to the ApplicationInsights.config file.

Answer: C,D

Ans is c and D

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/sampling>

NO.41 You have an Azure subscription that contains resources in several resource groups.

You need to design a monitoring strategy that will provide a consolidated view. The solution must support the following requirements:

- * Support role-based access control (RBAC) by using Azure Active Directory (Azure AD) identities.
- * Include visuals from Azure Monitor that are generated by using the Kusto query language.
- * Support documentation written in markdown.
- * Use the latest data available for each visual.

What should you use to create the consolidated view?

- A. Azure Data Explorer**
- B. Azure dashboards**
- C. Azure Monitor**
- D. Microsoft Power BI**

Answer: D

Ans :- Microsoft Power BI

NO.109 As part of your application build process, you need to deploy a group of resources to Azure by using an Azure Resource Manager template located on GitHub.

Which three action 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

Create a release pipeline.

Create a job agent.

Create a package.

Set the template parameters.

Add an Azure Resource Group Deployment task.

Right arrow icon

Left arrow icon

Answer :

1. Set the template parameters.
2. Add an Azure Resource Group Deployment Task
3. Create a release pipeline

Ans Set Template / add Azure Resource / Create a release pipeline

Reference : <https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/deploy-github-actions>

NO.138 You have an Azure DevOps organization named Contoso.

You have 10 Azure virtual machines that run Windows Server 2019. The virtual machines host an application that you build and deploy by using Azure Pipelines. Each virtual machine has the Web Server (IIS) role installed and configured.

You need to ensure that the web server configurations on the virtual machines are maintained automatically. The solution must provide centralized management of the configuration settings and minimize management overhead.

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	Answer Area
Install the custom Desired State Configuration (DSC) extension on the virtual machines.	
Compile the Desired State Configuration (DSC) configuration.	
Import a Desired State Configuration (DSC) configuration into the Azure Automation account.	
Create an Azure Automation account.	
Onboard the virtual machines to the Azure Automation account.	

**Answer**

Actions	Answer Area
Install the custom Desired State Configuration (DSC) extension on the virtual machines.	
Compile the Desired State Configuration (DSC) configuration.	
Import a Desired State Configuration (DSC) configuration into the Azure Automation account.	
Create an Azure Automation account.	
Onboard the virtual machines to the Azure Automation account.	



Ans :- Create automation / import DSC configuration / Compile / onboard Virtual machine

Lab - Azure Automation

59 of 92 complete

Implement application infrastructure

Lab – Azure Automation

What are we going to see

- Create an automation account
- Upload the Desired State configuration
- Compile the configuration
- Add the virtual machine as a node to the automation account

NO.155 You have a build pipeline in Azure Pipelines that occasionally fails.

You discover that a test measuring the response time of an API endpoint causes the failures.

You need to prevent the build pipeline from failing due to the test.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point

- A.** Enable Test Impact Analysis (TIA).
- B.** Enable test slicing.
- C.** Clear Flaky tests included in test pass percentage
- D.** Set Flaky test detection to Off

E. Manually mark the test as flaky.

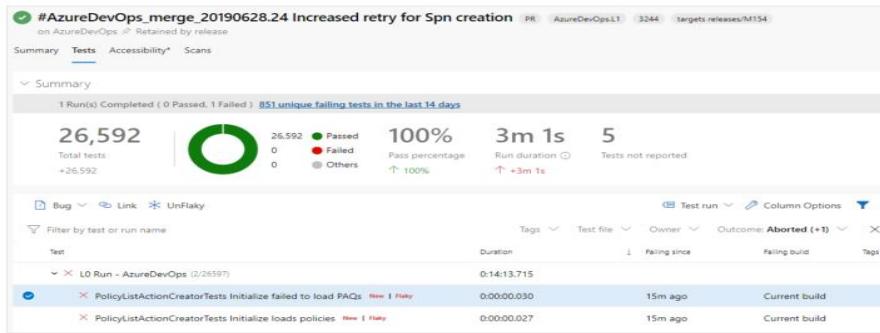
Answer: D E

Ans is C and D Set Flaky test detection off ,/ Manually mark the test

Flaky test management and reporting

Flaky test data for both passed and failed test is available in [Test reporting](#). The **Flaky** tag helps you identify flaky tests.

By default, flaky tests are included in the Test Summary. However, if you want to ensure flaky test failures don't fail your pipeline, you can choose to not include them in your test summary and suppress the test failure. This will ensure flaky tests (both passed and failed) are removed from the pass percentage and shown in **Tests not reported**, as shown in the screenshot below. This setting is available in [Project settings](#) under **Flaky test options**. Note: Test summary will be updated only for [Visual Studio Test task](#) and [Publish Test Results task](#). You might need to add a custom script to suppress flaky test failure for other scenarios.



NO.2 You have an Azure DevOps project named Project1 and an Azure subscription named Sub1.

You need to prevent releases from being deployed unless the releases comply with the Azure Policy rules assigned to Sub1.

What should you do in the release pipeline of Project1?

- A. Create a pipeline variable.
- B. Add a deployment gate.
- C. Configure a deployment trigger.
- D. Modify the Deployment queue settings.

Answer: B

Ans Add deployment gate

<https://docs.microsoft.com/en-us/azure/devops/pipelines/release/deploy-using-approvals?view=azure-devops>

NO.199 You have an Azure DevOps project that uses many package feeds.

You need to simplify the project by using a single feed that stores packages produced by your company and packages consumed from remote feeds. The solution must support public feeds and authenticated feeds.

What should you enable in DevOps?

- A. Universal Packages
- B. views in Azure Artifacts
- C. upstream sources
- D. a symbol server

Answer: C

Ans Upstream Sources (For multiple and External)

Q5.

You have an existing build pipeline in Azure Pipelines.

You need to use incremental builds without purging the environment between pipeline executions. What should you use?

- A. a self-hosted agent
- B. a File Transform task
- C. Microsoft-hosted parallel jobs

Answer : A

Ans Self Hosted Agent

<https://developercommunity.visualstudio.com/content/problem/711018/azure-pipeline-incremental-builds.html>

NO.143 You have a project in Azure DevOps that uses packages from multiple public feeds. Some of the feeds are unreliable.

You need to consolidate the packages into a single feed.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Actions	Answer Area
Create an npm package.	
Create an Azure Artifacts feed that uses upstream sources.	
Modify the configuration files to reference the Azure Artifacts feed.	
Run an initial package restore.	
Create a NuGet package.	
Create a Microsoft Visual Studio project that includes all the packages.	

Answer :

Actions	Answer Area
Create an npm package.	
Create an Azure Artifacts feed that uses upstream sources.	
Modify the configuration files to reference the Azure Artifacts feed.	
Run an initial package restore.	
Create a NuGet package.	
Create a Microsoft Visual Studio project that includes all the packages.	

Ans Create Feed with Upstream / Modify / Create Nuget pACKAGE

<https://docs.microsoft.com/en-us/azure/devops/artifacts/how-to/set-up-upstream-sources?view=azure-devops>

Q6.

Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review section.

You need to recommend an integration strategy for the build process of a java application. The solution must meet the following requirements.

- * The builds must access an on-premises dependency management system.
- * The build outputs must be stored as Server artifacts in Azure DevOps.
- * The source code must be stored in a Git repository in Azure DevOps.

Solution: Configure the build pipeline to use a Hosted Linux agent pool. Include the Java Tool Installer task in the build pipeline.

Does this meet the goal?

- A. Yes
- B. No

Answer : B

Q7.

You have a project in Azure DevOps.

You plan to deploy a self-hosted agent by using an unattended configuration script.

Which two values should you define in the configuration script? Each correct answer presents part of the solution.

Note: Each correct selection is worth one point.

- A. the project name
- B. the deployment group name
- C. the agent pool name

D. authorization credentials

E. the organization URL

Answer : D,E

ans is organization URL and Auth credentials

New Q1

Question 51 (of 53)

Review later

Leave feedback (after answering all questions)

Time remaining 00:12:02

Overall exam progress (56 of 58 total questions)

Your company uses a Git source-code repository.

You plan to implement GitFlow as a workflow strategy.

You need to identify which branch types are used for production code and preproduction code in the strategy.

Which branch type should you identify for each code type? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Answer Area

Production code: [dropdown]

Preproduction code: [dropdown]

Help Calculator Color scheme Reset Previous Next

Ans (Master / Develop)

<https://www.atlassian.com/git/tutorials/comparing-workflows/gitflow-workflow#:~:text=Gitflow%20Workflow%20is%20a%20Git%20workflow%20design%20that,for%20projects%20that%20have%20a%20scheduled%20release%20cycle.>

New Q2

Question 41 (of 53)

Time remaining 00:23:47
Overall exam progress (46 of 58 total questions)

You have an Azure DevOps organization named Contoso.
You need to receive Microsoft Teams notifications when work items are updated.
What should you do?

A. From Azure DevOps, install an extension.
 B. From Microsoft Teams, add a channel.
 C. From the Microsoft Teams admin center, configure external access.
 D. From Azure DevOps, configure a service hook subscription.
 E. From Microsoft Teams, configure a connector.

Help Calculator Color scheme Reset Previous Next

Ans is E

<https://www.azuredevopslabs.com/labs/vstsextend/teams/#:~:text=%20Now%20that%20you%20have%20connected%20Microsoft%20Teams,from%20Azure%20DevOps%20or%20other%20data...%20More%20>

New Q3

Question 45 (of 53)

Time remaining 00:15:55
Overall exam progress (50 of 58 total questions)

You have a project in Azure DevOps named Contoso App that contains the following repositories:

- https://dev.azure.com/contoso/contoso-app/core-api
- https://dev.azure.com/contoso/contoso-app/core-spa
- https://dev.azure.com/contoso/contoso-app/core-db

You need to ensure that developers receive Slack notifications when there are pull requests created for Contoso App.
What should you run in Slack? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.

Answer Area

/azrepos feedback https://dev.azure.com/contoso/contoso-app/core-api

Help Calculator Color scheme Reset Previous Next

/azrepos subscribe

URL ending with -api

<https://docs.microsoft.com/en-us/azure/devops/repos/integrations/repos-slack?view=azure-devops>

New Q4

Question 50 (of 53)

Time remaining 00:13:46
Overall exam progress (55 of 58 total questions)

You plan to create a project in Azure DevOps. Multiple developers will work on the project. The developers will work offline frequently and will require access to the full project history while they are offline.

Which version control solution should you use?

A. Team Foundation Version Control

B. Git

C. Subversion

D. TortoiseSVN

Help Calculator Color scheme Reset Previous Next

Ans Team foundation Version Control

<https://docs.microsoft.com/en-us/azure/devops/repos/tfvc/comparison-git-tfvc?view=azure-devops>

New Q5

Question 34 (of 53)

Time remaining 00:53:34
Overall exam progress (39 of 58 total questions)

You have a project in Azure DevOps.

You need to associate an automated test to a test case.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Actions

- Add the automated test to a build pipeline.
- Check in a project to the Azure DevOps repository.
- Debug the project.
- Create a work item.
- Create a test project.

Answer Area

Up and down arrows for reordering items.

Help Calculator Color scheme Reset Previous Next

Ans

- Create a Test Project
- Check in Project
- Add the Automated Test to Build Pipe line

New Q6

Question 33 (of 53)

Time remaining 00:59:00
Overall exam progress (38 of 58 total questions)

You have an Azure subscription that contains a resources group named RG1. RG1 contains the following resources:

- Four Azure virtual machines that run Windows Server and have Internet Information Services (IIS) installed
- SQL Server on an Azure virtual machine
- An Azure Load Balancer

You need to deploy an application to the virtual machines in RG1 by using Azure Pipelines.

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

VIRTUAL MACHINES

- Add and configure a deployment group job for the pipeline.
- Execute the pipeline.
- Create a deployment group.
- Create an agent pool.

Answer Area

Up and down arrows for reordering items.

Help Calculator Color scheme Reset Previous Next

Ans Create pool / install agent on VM / Add pipeline / Execute pipe line

New Q7

Question 35 (of 53)

Time remaining 00:42:22
Overall exam progress (40 of 58 total questions)

You have a build pipeline in Azure Pipelines that uses different jobs to compile an application for 10 different architectures. The build pipeline takes approximately one day to complete. You need to reduce the time it takes to execute the build pipeline. Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

A. Create an agent pool.
B. Move to a blue/green deployment pattern.
C. Reduce the size of the repository.
D. Increase the number of parallel jobs.
E. Create a deployment group.

Help Calculator Color scheme Reset Previous Next

Ans D and C

<https://docs.microsoft.com/en-us/azure/architecture/framework/devops/performance>

New Q8

Question 29 (of 53)

Time remaining 01:02:04
Overall exam progress (34 of 58 total questions)

You plan to provision a self-hosted Linux agent. Which authentication mechanism should you use to register the self-hosted agent?

A. SSH key
B. Alternate credentials
C. personal access token (PAT)
D. certificate

Help Calculator Color scheme Reset Previous Next

Ans : - Personal Access Token

New Q9

Question 28 (of 53)

Time remaining 01:11:27

Overall exam progress (33 of 58 total questions)

You are creating a build pipeline in Azure Pipelines.

You define several tests that might fail due to third-party applications.

You need to ensure that the build pipeline completes successfully if the third-party applications are unavailable.

What should you do?

A. Add the Requirements quality widget to your dashboard.

B. Configure flaky tests.

C. Increase the test pass percentage.

D. Configure the build pipeline to use parallel jobs.

Help Calculator Color scheme Reset Previous Next

Correct B

New Q10

QUESTION 9 (OF 53)

Time remaining 01:11:27

Overall exam progress (13 of 58 total questions)

```
{
    "field": "Microsoft.Storage/storageAccounts/supportsHttpsTrafficOnly",
    "notEquals": "true"
},
then: {
    effect: "deny"
}
```

You assign the policy to the Tenant root group.

What is the effect of the policy?

A. prevents HTTPS traffic to new Azure Storage accounts when the accounts are accessed over the internet

B. ensures that all data for new Azure Storage accounts is encrypted at rest

C. prevents all HTTP traffic to existing Azure Storage accounts

D. ensures that all traffic to new Azure Storage accounts is encrypted

Help Calculator Color scheme Reset Previous

Question 8 (of 53)

Review later

Leave feedback (after answering all questions)

Time remaining

Overall exam progress (13 of 58 total questions)

You have the following Azure policy.

```
if: {
    allof: [
        {
            "field": "type",
            "equals": "Microsoft.Storage/storageAccounts"
        },
        {
            "field": "Microsoft.Storage/storageAccounts/supportsHttpsTrafficOnly",
            "notEquals": "true"
        }
    ]
}
```

- A. prevents HTTPS traffic to new Azure Storage accounts when the accounts are accessed over the internet
- B. ensures that all data for new Azure Storage accounts is encrypted at rest
- C. prevents all HTTP traffic to existing Azure Storage accounts
- D. ensures that all traffic to new Azure Storage accounts is encrypted



Ans : - A

New Q11

Question 25 (of 53)

Review later

Leave feedback (after answering all questions)

Time remaining 01:11:3

Overall exam progress (30 of 58 total questions)

You use Azure DevOps to manage the build and deployment of an app named App1.

You have a release pipeline that deploys a virtual machine named VM1.

You plan to monitor the release pipeline by using Azure Monitor.

You need to create an alert to monitor the performance of VM1. The alert must be triggered when the average CPU usage exceeds 70 percent for five minutes. The alert must calculate the average once every minute.

How should you configure the alert rule? To answer, select the appropriate options in the answer area.

Answer Area

Aggregation granularity (Period):	5 minutes
Threshold value:	Static
Operator:	Greater than



Color

Reset



Previous

 Question 25 (of 53)

Review later
 Leave feedback (after answering all questions)

Time remaining 01:21:4
Overall exam progress (30 of 58 total questions)

You use Azure DevOps to manage the build and deployment of an app named App1.
You have a release pipeline that deploys a virtual machine named VM1.
You plan to monitor the release pipeline by using Azure Monitor.
You need to create an alert to monitor the performance of VM1. The alert must be triggered when the average CPU usage exceeds 70 percent for five minutes. The alert must calculate the average once every minute.
How should you configure the alert rule? To answer, select the appropriate options in the answer area.

Answer Area

Aggregation granularity (Period):
Threshold value:
Operator:

Help Calculator Color scheme Reset Previous Next

Ans Aggregation 1 / Threshold Static / Operator Greater than
<https://docs.microsoft.com/en-us/azure/azure-monitor/platform/alerts-metric-overview>

New Q12

 Question 23 (of 53)

Review later
 Leave feedback (after answering all questions)

Time remaining 01:26:4
Overall exam progress (28 of 58 total questions)

You have a web app hosted on Azure App Service. The web app stores data in an Azure SQL database.
You need to generate an alert when there are 10,000 simultaneous connections to the database. The solution must minimize development effort.
Which option should you select in the Diagnostics settings of the database?

A. Archive to a storage account
B. Send to Log Analytics
C. Stream to an event hub

?

Previous

Ans Send to Log Analytics

New Q13

Question 21 (of 53)

Time remaining 01:27:06
Overall exam progress (26 of 58 total questions)

Review later
 Leave feedback (after answering all questions)

ACTIONS GROUPS (optional)

Action group name: Application Insights Smart Detection

Contain actions: 2 Email Azure Resource Manager Role(s)

Add Create

Which action will trigger an alert?

A. a change to a role assignment for the ASP-9bb7 resource
 B. a failed attempt to scale up the ASP-9bb7 resource
 C. a successful attempt to delete the ASP-9bb7 resource
 D. a failed attempt to delete the ASP-9bb7 resource

Help Calculator Color scheme Reset Previous Next

Not enough info

New Q14

Question 20 (of 53)

Time remaining 01:34:53
Overall exam progress (25 of 58 total questions)

Review later
 Leave feedback (after answering all questions)

You have an application named App1 that has a custom domain of app.contoso.com.
You create a test in Azure Application Insights as shown in the following exhibit.

Create test

Basic Information

Test name * availability

Answer Area

The test will execute [answer choice].

The test will pass if [answer choice] within 30 seconds.

Calculator Color scheme Reset Previous Next

Not enough info

New Q15

Question 14 (of 53)

Time remaining 02:21:58
Overall exam progress (19 of 58 total questions)

You need to execute inline testing of an Azure DevOps pipeline that uses a Docker deployment model. The solution must prevent the results from being published to the pipeline.

What should you use for the inline testing?

A. a multi-stage Dockerfile

B. a Docker Compose file

C. an Azure Kubernetes Service (AKS) pod

D. a single stage Dockerfile

Help Calculator Color scheme Reset Previous Next

Ans B a docker compose file

<https://codingcanvas.com/using-docker-compose-in-azure-devops-pipeline/>

New Q16

Question 13 (of 53)

Time remaining 02:22
Overall exam progress (18 of 58 total questions)

You use Azure Pipelines to manage the build and deployment of apps.

You are planning the release strategies for a new app.

You need to choose strategies for the following scenarios:

- Releases will be made available to users who are grouped by their tolerance for software faults.
- Code will be deployed to enable functionality that will be available in later releases of the app.
- When a new release occurs, the existing deployment will remain active to minimize recovery time if a return to the previous version is required.

Answer Area

Releases will be made available to users who are grouped by their tolerance for software faults:

Code will be deployed to enable functionality that will be available in later releases of the app:

When a new release occurs, the existing deployment will remain active to minimize recovery time if a return to the previous version is required:

Help Calculator Color scheme Reset Previous Next

Overall exam progress (18 of 58 total questions) 06.22.09

After answering all questions)

The release strategies for a new app.

Use strategies for the following scenarios:

will be made available to users who are grouped by their tolerance for software faults.

will be deployed to enable functionality that will be available in later releases of the app.

When a new release occurs, the existing deployment will remain active to minimize recovery time if a return to the previous version is required.

Should you choose for each scenario? To answer, select the appropriate options in the answer area.

Correct selection is worth one point.

Releases will be made available to users who are grouped by their tolerance for software faults:

will be deployed to enable functionality that will be available in later releases of the app:

When a new release occurs, the existing deployment will remain active to minimize recovery time if a return to the previous version is required:

Progressive exposure
Blue/green
Feature flags

Simulator Color scheme Reset

Previous Next

Ans :- 1 and 2 Feature Flag 3rd Blue /green