Comprehension:

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 Configuration nodes are registered by using the following command.

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

Q1) What should you use to implement the code quality restriction on the release pipeline for the investment planning applications suite?

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

Explanation:-
"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 between stages if any active bugs are logged against the release."

Q2) Which property of a service, system or product does SRE primarily focus on?

⦾ Cost to run
✅ Reliability
Explanation:-SRE's primary focus is indeed on reliability.
⦾ Security
⦾ Maintainability

Q3) For almost all services, systems and products, what level of reliability does an SRE strive for?

⦾ 100% is the goal
⦾ It should be as reliable as possible
✅ A specific level identified as appropriate by the key stakeholders
Explanation:-Setting a goal for a service is a collaborative effort between SRE, development resources and the business decision makers.

Q4) Given the origin of SRE, which discipline has had the most impact on it?

⦾ Architecture
✅ Software engineering
Explanation:-SRE was started with software engineering mindset.
⦾ Mainframe operations
⦾ Customer service

Q5) Which came first, DevOps or SRE?

✅ Neither, they developed roughly in parallel.
⦾ SRE
⦾ DevOps

Q6) Is SRE the next evolutionary step from DevOps?

⦾ Yes, SRE is the future of DevOps. DevOps personnel should strive to become SREs
✅ No, SRE and DevOps are separate operations practices
Explanation:-DevOps and SRE are indeed separate even though they attempt to address similar challenges.

Q7) What are two best practices that are central to both DevOps and SRE?

⦾ Help desk automation and bug tracking
⦾ Coding and ticket systems
✅ Automation and monitoring/observability

Q8) What does SLI stand for (in an SRE context)?

⦾ System Level Interface
⦾ Safe Load Indicator
✅ Service Level Indicator
⦾ Standard Level Indicator

Q9) What does SLO stand for (in an SRE context)?

✅ Service Level Objective
⦾ Service Load Objective
⦾ Standard Line Operations
⦾ Service Level Outcome

Q10) If you exhaust your error budget for a service, what should you do?

⦾ Immediately restart the service involved so it can be brought back into compliance
⦾ Put a hold on further releases of that software until the service has returned to the agreed upon level of reliability
⦾ Immediately redirect engineering resources associated with this service from feature development to fixing the reliability problem
✅ React in the service- or organizationally-specific way previously agreed upon when creating that error budget
Explanation:-When setting up an error budget for a service, it is important to decide (and document) how the organization will respond should it be exhausted. There are many possible responses, you need to choose and stick to the ones that work best in your particular context. An error budget is a way of tracking the aggregate reliability of a service over time. It is important to accompany this with a shared understanding of how the organization will react should the amount of acceptable unreliability be exceeded. There are many possible responses, you need to choose and stick to the ones that work best in your particular context. There is no one right reaction for every one and every situation.

Q11) If you exceed your error budget for a service, what should you do?

⦾ Speed up the release cadence for that service
⦾ 100% is the goal

⚪ Focus more on feature development for that service and deploy those features faster

✅ It depends

Explanation:-There are many ways to "spend" an excess error budget. Increasing the release cadency or feature velocity, deploying more beta features, conducting more disruptive testing, and so on. It is also fine (though this comes with its own set of problems) to do nothing and simply operate at a greater level of reliability. All of these responses are situation specific and should be decided in your specific context.

Comprehension:

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.

Q12)

In Azure DevOps, you create Project3.

You need to meet the requirements of the project.

What should you do first?

⚪ From SonarQube, create a project.

✅ From Azure DevOps, create a service endpoint.

Explanation:-
The first thing to do is to declare your SonarQube server as a service endpoint in your VSTS/DevOps project settings.

⚪ From Azure DevOps, modify the build definition.

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• 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.

Q13)

You need to implement Project4.

What should you do first?

⚪ Add the MAINTAINER instruction in the Dockerfile file.
✅ Add a Docker task to the build pipeline.

Explanation:-

Scenario: Implement Project4 and configure the project to push Docker images to Azure Container Registry.

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.

You use Azure Container Registry Tasks commands to quickly build, push, and run a Docker container image natively within Azure, showing how to offload your "inner-loop" development cycle to the cloud. ACR Tasks is a suite of features within Azure Container Registry to help you manage and modify container images across the container lifecycle.

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

Comprehension:

Overview

Montana is an online training provider.

Current System - Financial Processing

Montana currently has a system that consists of 3 tiers

Front end Web App

Middle tier API

Back end datastore

Below is the current set of the system

The backend is running on Microsoft SQL server 2016

All servers are running on Windows

The Front and Middle tiers are written in C# and hosted on Internet Information Services

The database is currently 1 TB in size. The growth of the database is not expected to grow beyond 3 TB.

Currently, an on-premise version of Team Foundation Server 2018 is being used for the source code management

Planned Changes

Whizlabs wants to migrate the Financial Processing system to Azure. Below are the key requirements when it comes to the migration of the application onto Azure.

Key requirements

Developers now need to use Azure DevOps for versioning of source code.

All Continuous Integration and deployment will be managed via Azure Pipelines.

Azure Automation will be used to spin up machines for the Test and UAT environment

Separate build machines will be used for the build phase in Azure pipelines

The machines will have self-hosted agents

The company wants to have tools in place for code quality, code coverage and for managing technical debt.

The company wants to use a managed service to maintain all the Nuget packages created by the development teams.

Q14) "Your team needs to ensure that the runbooks for the Azure Automation Account are stored in the Azure Repo in Azure DevOps.How would you configure this?"

- ⬤ Create a service connection from Azure Devops
- ✅ Configure source control integration in Azure Automation
Explanation:-This can be done with the help of source control integration in Azure Automation
- ⬤ Create a service connection from Azure Automation
- ⬤ Import the runbooks into Azure Devops

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Q15) "You need to assign permissions so that a particular user can add the agent machines to an agent pool. You need to ensure you provide the least privilege required.Which of the following would you consider assigning to the user?"

- ⬤ Service Account
- ✅ Administrator
Explanation:-This can only be accomplished via the Administrator role. The Microsoft documentation mentions the following when it comes to the security of agent pools.
- ⬤ Reader
- ⬤ Contributor

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The company wants to use a managed service to maintain all the Nuget packages created by the development teams.

Q16) Which of the following would you use to centralize all of the Nuget packages for the company?

- Azure Kubernetes
- Azure Pipelines
- Git
- ✅ Azure Artifact

Explanation:-The right tool to use for this is Azure Artifact. The Microsoft documentation mentions the following

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The company wants to have tools in place for code quality, code coverage and for managing technical debt.

The company wants to use a managed service to maintain all the Nuget packages created by the development teams.

Q17) Which of the following can be used by the company to manage technical debt for applications?

- PMD
- Jenkins

✅ SonarQube

Explanation:-The right tool for this is SonarQube. Below is what the documentation on Azure DevOps mentions about the tool

⚪ WhiteSource Bolt

Q18) A team is planning on using Azure Automation for a set of Azure Virtual machines. They need to use Azure state configuration to manage the state of the virtual machines.
Which of the following actions would need to be performed to ensure the state of the virtual machines are managed effectively? Choose 5 answers from the options given below

✅ Upload a configuration

Explanation:-The Microsoft documentation lists the various steps for onboarding machines onto Azure Automation state configuration

The first step is to import an existing configuration

2. The next step is to compile the configuration

3. The next step is to on-board the set of virtual machines onto Azure Automation state configuration

4. Ensure to assign the node configuration

5. And then check the status of the nodes

⚪ Create a node management group

✅ Compile the configuration

Explanation:-The Microsoft documentation lists the various steps for onboarding machines onto Azure Automation state configuration

The first step is to import an existing configuration

2. The next step is to compile the configuration

3. The next step is to on-board the set of virtual machines onto Azure Automation state configuration

4. Ensure to assign the node configuration

5. And then check the status of the nodes

✅ Assign the node configuration

Explanation:-The Microsoft documentation lists the various steps for onboarding machines onto Azure Automation state configuration

The first step is to import an existing configuration

2. The next step is to compile the configuration

3. The next step is to on-board the set of virtual machines onto Azure Automation state configuration

4. Ensure to assign the node configuration

5. And then check the status of the nodes

✅ Check the status of the node

Explanation:-The Microsoft documentation lists the various steps for onboarding machines onto Azure Automation state configuration

The first step is to import an existing configuration

2. The next step is to compile the configuration

3. The next step is to on-board the set of virtual machines onto Azure Automation state configuration

4. Ensure to assign the node configuration

5. And then check the status of the nodes

✅ Onboard the set of virtual machines onto Azure Automation state configuration

Explanation:-The Microsoft documentation lists the various steps for onboarding machines onto Azure Automation state configuration

The first step is to import an existing configuration

2. The next step is to compile the configuration

3. The next step is to on-board the set of virtual machines onto Azure Automation state configuration

4. Ensure to assign the node configuration

5. And then check the status of the nodes

Q19)

A team is currently using Azure Devops for a Java based project.

They need to use a static code analysis tool for the java project.

Which of the following are tools that can be used along with Azure Devops for this purpose?

⚪ Jenkins

✅ FindBugs

Explanation:-You can use tools such as PMD and FindBugs along with Azure Devops for static code analysis. The Microsoft documentation mentions the following

⚪ Bamboo

✅ PMD

Explanation:-You can use tools such as PMD and FindBugs along with Azure Devops for static code analysis. The Microsoft documentation mentions the following

---

Q20) A company is developing a new web application. The Web application is going to be given to a set of users for testing. All of those test users will use the Microsoft Test and Feedback extension which would be installed in Chrome. You need to ensure you provide the right level of access for development teams and the test users. The developers would need to request and gather feedback from the test users.
You would need to collect feedback from the test users.
What is the access level in DevOps you would give for the test users?

⚪ Basic

⚪ Standard

⚪ Premium

✅ Stakeholder

Explanation:-The right level of access is the Stakeholder access which allows you to provide feedback and respond to feedback requests

The access levels are given in the Microsoft documentation:

Q21) A company is developing a new web application. The Web application is going to be given to a set of users for testing. All of those test users will use the Microsoft Test and Feedback extension which would be installed in Chrome. You need to ensure you provide the right level of access for development teams and the test users. The developers would need to request and

gather feedback from the test users.
You would need to collect feedback from the test users.
What is the access level in DevOps you would give for the developers?

- ⚪ Basic
- ⚪ Standard
- ⚪ Premium
- ✅ Stakeholder

Explanation:-The right level of access is the Stakeholder access which allows you to provide feedback and respond to feedback requests.
The access levels are given in the Microsoft documentation

Q22) Your team is currently using Azure DevOps to manage a production-based environment. The team now wants to use Azure DevOps to deploy Azure virtual machines to a staging environment. Below are the key requirements:
- Ensure the cost of hosting Azure resources is minimized
- Provide the ability to automatically provision virtual machines
- Use a custom Azure Resource Manager template to provision the virtual machines
Which of the following would you use as the implementation step for this requirement?

- ✅ Make use of the Azure DevTest Labs extension for Azure Devops

Explanation:-You can use Azure Dev Test Labs into Azure Devops to manage the creation of virtual machines. The Microsoft documentation mentions the following

- ⚪ Run Azure CLI commands in Azure Cloud shell to create and delete virtual machines
- ⚪ Run powershell commands in Azure Cloud shell to create and delete virtual machines
- ⚪ In Azure Devops , create new tasks in the release pipeline to deploy the new virtual machines

---

Q23) A team wants to implement Azure Automation DSC for a set of servers. They have currently defined the following configuration
configuration TestConfig {
Node WebServer {
WindowsFeature IIS {
Ensure = 'Present'
Name = 'Web-Server'
IncludeAllSubFeature = $true
}
}
}
What should they do next?

- ⚪ Run the Get-AzureRmAutomationDscNode powershell command
- ⚪ Run the Register-AzureRmAutomationDscNode powershell command
- ✅ Run the Import-AzureRmAutomationDscConfiguration powershell command

Explanation:-The next step is to import the configuration into Azure Automation. The Microsoft documentation mentions the following

- ⚪ Run the Start-AzureRmAutomationDscCompilationJob powershell command

---

Q24) A team needs to create a Kubernetes cluster using the Azure CLI. The Kubernetes cluster needs to have monitoring enabled. You need to complete the following script for this purpose.
Which of the following would go into Slot1?

- ⚪ monitoring
- ⚪ aks
- ✅ group

Explanation:-This is clearly given in the Microsoft documentation

- ⚪ template

Q25) A team is currently building and deploying an application using Azure services which includes the Devops service. You have to advise on the right security tool to use to during the following phase of the development lifecycle:
- After a pull request
- During the continuous integration phase
- During the continuous delivery phase
Which of the following would you use for the continuous integration phase?

- ⚪ Load Testing
- ⚪ Threat Modeling
- ✅ Static Code Analysis

Explanation:-During the CI phase it is always preferential to use static code analyser tools. The Microsoft documentation mentions the following

- ⚪ Penetration Testing

Q26) A team is currently building and deploying an application using Azure services which include the DevOps service. You have to advise on the right security tool to use to during the following phase of the development lifecycle:
- After a pull request
- During the continuous integration phase
- During the continuous delivery phase
Which of the following would you use for the continuous delivery phase?

- ⚪ Load Testing
- ⚪ Threat Modeling
- ⚪ Static Code Analysis
- ✅ Penetration Testing

Explanation:-During the deployment phase we can use penetration testing tools. The Microsoft documentation mentions the following

Q27) A team needs to deploy resources using Azure Resource Manager templates. You have to ensure that the users performing the deployment don't have the ability to view the connecting strings required by the application being deployed via the template.
Which of the following would you use for this requirement?

- ⬤ A parameter file
- ⬤ A Storage account
- ✅ Azure Key vault

Explanation:-The ideal service to use for this purpose is the Azure Key vault service. The Microsoft documentation mentions the following
- ⬤ Web.config file

Q28) A company has a set of teams working on mobile applications. They currently used App Center to build and test the applications. The following requirement needs to be met for the development environment:
"Access to the applications builds must be managed at the organization level"
Which of the following would you set as the group to control access to the builds?

- ⬤ Active Directory Groups
- ⬤ Azure Active Directory Groups
- ✅ Visual Studio App Center distribution Groups

Explanation:-This can be managed with the help of Visual Studio App Center distribution Groups. The Microsoft documentation mentions the following
- ⬤ Active Directory Federation Groups

Q29) A company has a set of teams working on mobile applications. They currently used App Center to build and test the applications. The following requirement needs to be met for the development environment
"Access to the applications builds must be managed at the organization level"
Which of the following distribution group type would you create for this requirement?

- ⬤ Public
- ⬤ Private
- ⬤ Standard
- ✅ Shared

Explanation:-The ideal group type to create is the Shared group type which allows access across multiple applications. The Microsoft documentation mentions the following

---

Q30)

A team is currently working on a repository in Azure Repos for managing all of the source code. There are a high number of feature requests that are making it difficult to follow the history of the changes to the master branch. You need to enforce a strategy that would:

- Allow consolidation of all commit histories

- Merge the changes into a single commit

You decide to implement the squash merge strategy.

Would this fulfill the requirement?

- ✅ Correct

Explanation:-Squash merging is a merge option that allows you to condense the Git history of topic branches when you complete a pull request. Instead of each commit on the topic branch being added to the history of the default branch, a squash merge takes all the file changes and adds them to a single new commit on the default branch. Link - https://docs.microsoft.com/en-us/azure/devops/repos/git/merging-with-squash?view=azure-devops
- ⬤ Incorrect

Q31) A team is currently developing an application. A project has been created in Azure DevOps for this. The source code is hosted in an open-source public repository in Github. Azure Pipelines are going to be used for continuous builds. You need to recommend an authentication type that would also support the Github checks API.
Which of the following would you choose for this purpose?

- ⬤ Personal Access token
- ⬤ SAML
- ✅ Github App

Explanation:-You would need to choose Github App which has support for the Github checks API. The Microsoft documentation mentions the following
- ⬤ OAuth

Q32) A team currently makes use of Docker containers for building their application. The application lifecycle also makes use of Azure DevOps. Exploits need to be detected in the Docker images before the container can be used. These exploits must be detected as early on in the lifecycle as possible.
Which of the following would you configure as part of the lifecycle?

- ⬤ Run manual tasks to analyse the docker containers in the planning phase
- ✅ Ensure a scheduled task runs against the image registry to analyse the images

Explanation:-It's always good to have an on-going process to analyse the images in the image registry itself. There are some points also given in a whitepaper which relates to security for containers
- ⬤ Ensure a scheduled task runs against the staging container in the continuous deployment pipeline
- ⬤ Ensure a scheduled task runs against the production container in the continuous deployment pipeline

Q33) A company wants to set up a private repository for NuGet packages which could be used across the company's development teams. You have to set up Azure Artifacts for this purpose.
The following feed has been set up in Azure Artifacts:
Which of the following would you need to change to comply with the requirements of the repository?

- ⬤ Add permissions for Nuget.org
- ✅ Remove the Upstream source

Explanation:-Since this is going to be a private repository, you should ensure to remove any upstream sources.

- ⬤ Add a view for the package source
- ⬤ Disable the setting of "Hide deleted package versions"

Q34) A company wants to set up a private repository for NuGet packages which could be used across the company's development teams. You have to set up Azure Artifacts for this purpose.
The following feed has been set up in Azure Artifacts:
You have to ensure that developers can connect to the feed.
Which of the following would you do to implement this requirement?

- ⬤ Ask the developers to ensure that their Integrated Development environment has the package source setting set to the DevOps server URL
- ⬤ Ask the developers to ensure that their Integrated Development environment has the package source setting set to the DevOps project URL
- ✅ Ask the developers to ensure that their Integrated Development environment has the package source setting set to the package feed URL

Explanation:-You have to take the package source URL as shown below
And then setup it up in Visual Studio as shown below.

- ⬤ Ask the developers to ensure that their Integrated Development environment has the package source setting set to "Nuget.org"

Q35) A team has the following DockerFile that will create an image:
FROM windowsservercore
RUN powershell.exe -Command Invoke-WebRequest "https://www.python.org/ftp/python/3.5.1/python-3.5.1.exe" -OutFile c:\python-3.5.1.exe
RUN powershell.exe -Command Start-Process c:\python-3.5.1.exe -ArgumentList '/quiet InstallAllUsers=1 PrependPath=1' -Wait
RUN powershell.exe -Command Remove-Item c:\python-3.5.1.exe -Force You need to ensure that you optimize the DockerFile.
Which of the following can you do to create an optimized DockerFile?

- ⬤ Change the base image
- ⬤ Place an ENTRYPOINT
- ✅ Ensure to have only one RUN command

Explanation:-An example of such an optimization is given in the Microsoft documentation. You can just have one RUN command in the DockerFile.

- ⬤ Create a working directory

Q36) A team is planning on creating, testing, validating and deploying packages by using Azure Artifacts. It needs to be ensured that the multiple builds of each package can be released via a single feed.
Which of the following would be ideal for this scenario?

- ⬤ Local symbols
- ⬤ Downstream sources
- ⬤ Views
- ✅ Upstream sources

Explanation:-You need to use upstream sources for this requirement. The Microsoft documentation mentions the following

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Q37) A company is setting up Azure Artifacts. Several fees are being created in Azure Artifacts. You need to set the permissions for the feed for the following groups:
GroupA – This group should be able to list and install packages from the feed
GroupB - This group should be able to push packages to the feed
You need to ensure the least privileges are given to each group.
Which of the following permission would you assign to GroupA?

- ⬤ Contributor
- ⬤ Collaborator
- ✅ Reader

Explanation:-Based on the Microsoft documentation, assigning the Reader role is the right role for this requirement

- ⬤ Owner

Q38) A company is setting up Azure Artifacts. Several fees are being created in Azure Artifacts. You need to set the permissions for the feed for the following groups:
GroupA – This group should be able to list and install packages from the feed
GroupB - This group should be able to push packages to the feed
You need to ensure the least privileges are given to each group.
Which of the following permission would you assign to GroupB?

- ⬤ Collaborator
- ✅ Contributor

Explanation:-Based on the Microsoft documentation, assigning the Contributor role is the right role for this requirement

- ⬤ Reader
- ⬤ Owner

Q39) A team is planning on using Azure Devops for the development and release of multiple systems. They want to maintain their source control and have versioning in place.
Which of the following source code versioning systems are supported by Azure Devops?

- ✅ Team Foundation Version Control

Explanation:-This is mentioned in the Microsoft documentation

✅ Git

Explanation:-This is mentioned in the Microsoft documentation

⚪ Subversion

⚪ Perforce

Q40)

Your team has set up a build pipeline in Azure DevOps.

You have to be notified in Slack whenever a build is completed in the build pipeline.

Which of the following would you need within your Slack channel first to receive the notifications

⚪ Create a Personal Access Token

✅ Sign in to Azure Devops

Explanation:-You would have to sign into Azure DevOps.

This is also mentioned in the Microsoft documentation:

⚪ Add a service hook in Azure DevOps

⚪ Add a service hook in Slack

Q41)

Your team has set up a build pipeline in Azure DevOps.

You have to be notified in Slack whenever a build is completed in the build pipeline.

Which of the following command would you need to enter in the chat channel to get notifications on an Azure Build pipeline?

⚪ /azpipelines register

⚪ /azpipelines build

✅ /azpipelines subscribe

Explanation:-You have to issue the /azpipelines subscribe command.

This is also mentioned in the Microsoft documentation.

⚪ /azpipelines login

Q42) A company has created a new project in Azure DevOps for a web application. The company currently uses ServiceNow for change and release management. The company wants to ensure a change request is processed before any changes are released to production.
Which of the following are 2 ways that ServiceNow can be integrated into the Azure DevOps Release pipeline?

✅ Ensure a pre deployment gate is defined before the deployment to the production stage.

Explanation:-Azure Devops has direct integration with ServiceNow. You don't need to create a SOAP or REST API for this. The Microsoft documentation mentions the following

⚪ Create a deployment control that invokes the ServiceNow SOAP API

⚪ Create a deployment control that invokes the ServiceNow REST API

✅ Ensure a post deployment gate is defined after the deployment to the QA stage.

Explanation:-Azure Devops has direct integration with ServiceNow. You don't need to create a SOAP or REST API for this. The Microsoft documentation mentions the following

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Q43) A team is currently building and deploying an application using Azure services which include the DevOps service. The development team needs to have an efficient way to communicate with each other. The tool should have the following capabilities:
- Provide the ability to have different communication channels for each team
- Have the ability to integrate with Azure DevOps
- Be able on a variety of platforms such as Windows 10, Mac OS, iOS and Android
Which of the following would you use for this purpose?

⚪ Microsoft Project

✅ Slack

Explanation:-Slack is the perfect communication tool for this requirement. The following is provided on the tool in the Azure marketplace

⚪ Jenkins

⚪ Bamboo

Q44) A company is currently planning on using the Azure DevOps service for managing the CI/CD pipeline for various applications. The team wants to have an effective communication tool that can be used across the project. The tool should integrate with Azure DevOps and also have a separation of channels for each team.
You decide to implement Slack.
Does this fulfill the requirement?

⚪ Incorrect

✅ Correct

Explanation:-Slack is the perfect communication tool for this requirement. The following is provided on the tool in the Azure marketplace

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Q45) A company is currently planning on using the Azure DevOps service for managing the CI/CD pipeline for various applications. The team wants to have an effective communication tool that can be used across the project.
The tool should integrate with Azure DevOps and also have a separation of channels for each team.
You decide to implement Bamboo.
Does this fulfill the requirement?

○ Correct
✅ Incorrect
Explanation:-This is a CI/CD tool from a company called Atlassian.

Q46) A company is currently planning on using the Azure DevOps service for managing the CI/CD pipeline for various applications. The team wants to have an effective communication tool that can be used across the project. The tool should integrate with Azure DevOps and also have a separation of channels for each team.
You decide to implement Microsoft teams.
Does this fulfil the requirement?

○ Incorrect
✅ Correct
Explanation:-Yes, you can also use Microsoft teams for this requirement
The Azure Devops Lab has a complete tutorial on using Microsoft teams along with Azure Devops

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Q47) A team is currently using Github for maintaining their source code. They are using Azure Pipelines for their Continuous Integration process. They are currently configuring Azure Pipelines to trigger a build when commits are made to a specific branch montanamaster. There are many changes uploaded to the source code repository by the development team.
You need to ensure Azure Pipeline will queue the build when changes are committed whilst any existing build is running.
Which of the following would be used in the YAML file to specify the branch which needs to be built?

○ tags
○ exclude
✅ include
Explanation:-You can use the include clause in the YAML file to specify which branch to include for the build. The Microsoft documentation mentions the following
○ pr

Q48) A team is currently using Github for maintaining its source code. They are using Azure Pipelines for their Continuous Integration process. They are currently configuring Azure Pipelines to trigger a build when commits are made to a specific branch montanamaster. There are many changes uploaded to the source code repository by the development team.
You need to ensure the Azure Pipeline will queue the build when changes are committed whilst any existing build is running.
Which of the following would be used in the YAML file to fulfill the below requirement?
"You need to ensure Azure Pipeline will queue the build when changes are committed whilst any existing build is running"

○ exclude
✅ batch
Explanation:-You would use the batch command for this. The Microsoft documentation mentions the following
○ include
○ pr

Q49) A team is planning on using the testing tools available in Azure DevOps services. They want to have the following defined in Azure DevOps:
- Ability to group test suite sand individual test cases together
- Ability to group test cases into separate testing scenarios within a test plan
- Ability to add testing steps for testing an application
Which of the following would you use for the following requirement?
"Ability to group test cases into separate testing scenarios within a test plan

○ Test plans
○ Load Tests
○ Test cases
✅ Test suites
Explanation:-You have to use Test suites for this requirement.
The Microsoft documentation mentions the following.

Q50) A team is planning on using the testing tools available in Azure DevOps services. They want to have the following defined in Azure DevOps:
- Ability to group test suite sand individual test cases together
- Ability to group test cases into separate testing scenarios within a test plan
- Ability to add testing steps for testing an application
Which of the following would you use for the following requirement?
"Ability to add testing steps for testing an application"

○ Test plans
○ Load Tests
✅ Test cases
Explanation:-You have to use Test cases for this requirement.
The Microsoft documentation mentions the following.
○ Test suites

Q51) A team is currently working on a Java-based project in an Azure DevOps environment. A solution needs to be recommended to improve the quality of code within the DevOps project.
Which of the following would you recommend?

○ For a Gradle build task, enable CheckStyle
○ For a Maven build task, enable CheckStyle
✅ For a Maven build task, enable PMD
Explanation:-PMD is a source code analyser tool. Below is what is mentioned on the PMD tool

In Azure Devops , you can enable this as shown in the Microsoft documentation below
- ⚪ For an ANT build task, enable FindBugs

Q52) A team needs to track project metrics in the dashboards available in Azure DevOps You need to recommend the right chart widgets to use for each of the following requirement:
- Ability to provide the elapsed time from the creation of work items to their completion
- Ability to provide the elapsed time to complete work items once they are marked as active
- Ability to provide a view on the work remaining.
Which of the following chart widget would you use for the following requirement:
"Ability to provide the elapsed time from the creation of work items to their completion"

- ⚪ Burndown
- ⚪ Cycle Time
- ✅ Lead Time

Explanation:-You can use the Lead time chart for this. The Microsoft documentation mentions the following
- ⚪ Velocity

Q53) A team needs to track project metrics in the dashboards available in Azure DevOps You need to recommend the right chart widgets to use for each of the following requirement:
- Ability to provide the elapsed time from the creation of work items to their completion
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- Ability to provide a view on the work remaining.
Which of the following chart widget would you use for the following requirement:
"Ability to provide the elapsed time to complete work items once they are marked as active"

- ⚪ Velocity
- ⚪ Lead Time
- ✅ Cycle Time

Explanation:-You can use the Cycle time chart for this. The Microsoft documentation mentions the following
- ⚪ Burndown

Q54) A team needs to track project metrics in the dashboards available in Azure DevOps You need to recommend the right chart widgets to use for each of the following requirement:
- Ability to provide the elapsed time from the creation of work items to their completion
- Ability to provide the elapsed time to complete work items once they are marked as active
- Ability to provide a view of the work remaining.
Which of the following chart widget would you use for the following requirement:
"Ability to provide the view on the work remaining"

- ⚪ Velocity
- ⚪ Lead Time
- ⚪ Cycle Time
- ✅ Burndown

Explanation:-You can use the Burndown chart for this. The Microsoft documentation mentions the following

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Q55) A company is currently using Team Foundation Server 2013. They want to now migrate to Azure DevOps. Below are the key points that need to be observed for the migration:
- All dates for the Team Foundation Version Control changesets need to be preserved
- All TFS artifacts need to be migrated
- The migration effort should be minimized
Which of the following step needs to be performed on the Team Foundation Server?

- ✅ The TFS server needs to be upgraded to the latest RTW release

Explanation:-In the whitepaper showcasing how to migrate from TFS to Azure Devops , there is a section which states that the TFS server needs to be migrated to the latest version. This would help ensure that the TFS schema is close to the one represented in Azure Devops services. Below is what is mentioned in the whitepaper
- ⚪ The latest powershell version needs to be installed.
- ⚪ The latest .Net framework needs to be installed.
- ⚪ The TFS Java SDK needs to be installed.

Q56) A company is planning on Azure Pipelines for their CI/CD processes. They want to use their own servers to run the jobs as part of the pipeline. This is because custom software needs to be installed on the server that would process the build.
Which of the following would you setup on the server?

- ⚪ A Microsoft-hosted agent
- ✅ A Self-hosted agent

Explanation:-If you need to setup your own server, then you would use a self-hosted agent. The Microsoft documentation mentions the following
- ⚪ A docker container
- ⚪ An Artifact

Q57) A company is planning on Azure Pipelines for their CI/CD processes. They want to use their own servers to run the jobs as part of the pipeline. This is because custom software needs to be installed on the server that would process the build.
Which of the following would help in ensuring you could manage the servers collectively?

- ⚪ Using Azure policies
- ✅ Using agent pools

Explanation:-The following is mentioned in the Microsoft documentation
- ⚪ Using resource groups
- ⚪ Using the Azure Container Service

Q58) A company is currently managing their build process via a Jenkins server hosted on a virtual machine in Azure. They want to make use of Azure Pipelines for their release process. They want to connect their existing Jenkins server to Azure Pipelines. Which of the following would you need to create for this requirement?

⚪ An Azure AD application
✅ A service connection
Explanation:-To connect a Jenkins server to Azure Pipelines, you need to create a service connection. The Microsoft documentation mentions the following
⚪ An Azure Artifact
⚪ A database connection

Q59) A company wants to store NuGet packages which are created by the internal development team. These packages need to be streamed to different departments. Each department must have its own container for consuming the NuGet packages. Which of the following would you create for each department?

⚪ A binary
⚪ A repository
✅ A feed
Explanation:-Feeds are used as a container for packages. The Microsoft documentation mentions the following
⚪ A pipeline