Answer Sheet

Q1)

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?

✅ An External Git service connection

Explanation:-GitLab CI/CD can be used with GitHub or any other Git server such as BitBucket. Instead of moving your entire project to GitLab, you can connect your external repository to get the benefits of GitLab CI/CD.

- A deployment group
- A Microsoft-hosted agent
- Service hooks

✅ A self-hosted agent

Explanation:-GitLab CI/CD can be used with GitHub or any other Git server such as BitBucket. Instead of moving your entire project to GitLab, you can connect your external repository to get the benefits of GitLab CI/CD. Note: When a pipeline uses a remote, 3rd-party repository host such as Bitbucket Cloud, the repository is configured with webhooks that notify Azure Pipelines Server or TFS when code has changed and a build should be triggered. Since on-premises installations are normally protected behind a firewall, 3rd-party webhooks are unable to reach the on-premises server. As a workaround, you can use the External Git repository type which uses polling instead of webhooks to trigger a build when code has changed. References: https://docs.microsoft.com/en-us/azure/devops/pipelines/repos/pipeline-options-for-git

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Q2) 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.)
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

Explanation:-Multi-stage builds (in Docker 17.05 or higher) allow you to drastically reduce the size of your final image, without struggling to reduce the number of intermediate layers and files.
With multi-stage builds, you use multiple FROM statements in your Dockerfile. Each FROM instruction can use a different base, and each of them begins a new stage of the build. You can selectively copy artifacts from one stage to another, leaving behind everything you don't want in the final image.

- 3
- 4
- 7

Q3) 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?

✅ OAuth

Explanation:-Use OAuth to generate tokens for accessing REST APIs. The Accounts and Profiles APIs support only OAuth. Refer - https://docs.microsoft.com/en-us/azure/devops/repos/git/auth-overview?view=azure-devops

- GitHub App
- None of these
- SAML

Q4)

Company ABC ltd. 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?

- Correct

✅ Incorrect

Explanation:-Instead, In Visual Designer you enable continuous integration (CI) by:
1. Select the Triggers tab.
2. Enable Continuous integration.

Q5) 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?

- Incorrect

✅ Correct

Explanation:-In Visual Designer you enable continuous integration (CI) by:
1. Select the Triggers tab.
2. Enable Continuous integration.
A continuous integration trigger on a build pipeline indicates that the system should automatically queue a new build whenever a code change is committed.

Refer: https://docs.microsoft.com/en-us/azure/devops/pipelines/get-started-designer

Q6) A company is currently using Travis as its Continuous Integration tool. They now want to migrate to Azure and use a managed service. They decide to start using Azure Kubernetes.
Would this fulfill the requirement?

- Correct
- ✅ Incorrect

Explanation:-This is a container orchestration tool for container-based applications.

Q7) 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?

- Gulp
- ✅ Maven

Explanation:-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.

- Chef
- Grunt

Q8) 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?

- Define a deployment control that invokes the ServiceNow SOAP API.
- ✅ Define a post-deployment gate after the deployment to the QA stage.

Explanation:-An example of a release pipeline that can be modeled through a release pipeline in shown below:
In this example, a release of a website is created by collecting specific versions of two builds (artifacts), each from a different build pipeline. The release is first deployed to a Dev stage and then forked to two QA stages in parallel. If the deployment succeeds in both the QA stages, the release is deployed to Prod ring 1 and then to Prod ring 2. Each production ring represents multiple instances of the same website deployed at various locations around the globe.

- Define a deployment control that invokes the ServiceNow REST API.
- ✅ Define a pre-deployment gate before the deployment to the Prod stage.

Explanation:-An example of a release pipeline that can be modeled through a release pipeline in shown below:
In this example, a release of a website is created by collecting specific versions of two builds (artifacts), each from a different build pipeline. The release is first deployed to a Dev stage and then forked to two QA stages in parallel. If the deployment succeeds in both the QA stages, the release is deployed to Prod ring 1 and then to Prod ring 2. Each production ring represents multiple instances of the same website deployed at various locations around the globe.

Q9) Robert is administrator at TPT Limited and plans a release pipeline by using Azure Resource Manager templates for deploying Azure resources consisting of 2 resource groups, 4 Azure VMs (virtual machines) in one resource group and 2 Azure SQL databases in other resource group. Robert decides to implement it by creating 2 standalone templates, each will deploy the resources in their specific group. Is the solution suggested by Robert correct ?

- Yes, it is correct
- ✅ No, it is not correct.

Explanation:-Use a main template and two linked templates.

Q10) TPT Limited plans a release pipeline by using Azure Resource Manager templates for deploying Azure resources consisting of 2 resource groups, 4 Azure VMs (virtual machines) in one resource group and 2 Azure SQL databases in other resource group. TPT Limited decides to implement it by creating one standalone template to deploy all the resources. Is the solution implemented by TPT Limited correct?

- ✅ No, it is not correct.

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

- Yes, it is correct

Q11) TPT Limited has Azure DevOps project with the build process creating many artifacts which should also be deployed to on-premises servers. TPT Limited wants to implement it by deploying an on-premises Kubernetes cluster having a Helm agent and adding a Download Build Artifacts task to the deployment pipeline. Does the solution suggested by TPT Limited correct in fulfilling the task?

- ✅ No, it is not correct.

Explanation:-Instead you should deploy an Azure self-hosted agent to an on-premises server.

- Yes, it is correct

Q12) Robert is administrator at TPT Limited having Azure DevOps project with the build process creating many artifacts which should also be deployed to on-premises servers. Robert plans to deploy a Docker build to an on-premises server and add a Download Build Artifacts task to the deployment pipeline. Is the solution suggested by Robert correct to meet the requirement?

- ✅ No, it is not correct.

Explanation:-Instead you should deploy an Azure self-hosted agent to an on-premises server.

Yes, it is correct

Q13) TPT Limited plans to deploy artifacts created in build process in an Azure DevOps project, to on-premises servers. It was suggested to deploy an Azure self-hosted agent to an on-premises server and adding a Copy and Publish Build Artifacts task to the deployment pipeline. Does the solution offered by TPT Ltd. achieve the goal?

Yes, it is correct

Explanation:-To build your code or deploy your software using Azure Pipelines, you need at least one agent.
If your on-premises environments do not have connectivity to a Microsoft-hosted agent pool (which is typically the case due to intermediate firewalls), you'll need to manually configure a self-hosted agent on -premises computer(s). The agents must have connectivity to the target on-premises environments, and access to the Internet to connect to Azure Pipelines or Team Foundation Server.

No, it is not correct.

Q14) Which of the following will prevent the deployment of releases to Azure that fall to meet the performance baseline if using the build and release management of the web application?

An Azure function
A trigger
A gate

Explanation:-Scenarios and use cases for gates include:
• Quality validation. Query metrics from tests on the build artifacts such as pass rate or code coverage and deploy only if they are within required thresholds.
Use Quality Gates to integrate monitoring into your pre-deployment or post-deployment. This ensures that you are meeting the key health/performance metrics (KPIs) as your applications move from dev to production and any differences in the infrastructure environment or scale is not negatively impacting your KPIs.

An Azure Scheduler job
None of these

Q15) 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?

a personal access token
GitHub App
OAuth

Explanation:-You can authenticate as a GitHub App.

SAML

Q16) Tags can be applied to any type of resource on Azure

Incorrect
Correct

Q17) Tags applied at a resource group level are propagated to resources within the resource group.

Incorrect
Correct

Q18) Which of the following features does not apply to resource groups?

Role-based access control can be applied to the resource group.
Resource groups can be nested.
Resources can be moved from one resource group to another resource group.
Resources can be in only one resource group.

Q19) Which of the following approaches might be a good usage of tags?

All of these are good ways to use tags
Using tags to store environment and department association
Using tags in conjunction with Azure Automation to schedule maintenance windows
Using tags to associate a cost center with resources for internal chargeback

Q20) Which of the following approaches would be the most efficient way to ensure a naming convention was followed across your subscription?

Give all other users except for yourself read-only access to the subscription. Have all requests to create resources sent to you so you can review the names being assigned to resources, and then create them.
Create a policy with your naming requirements and assign it to the scope of your subscription
Send out an email with the details of your naming conventions and hope it is followed

Q21) Which of the following items would be good use of a resource lock?

A storage account used to temporarily store images processed in a development environment
A non-production virtual machine used to test occasional application builds

- [x] An ExpressRoute circuit with connectivity back to your on-premises network

Q22)

Suppose you have recently recovered from a bug in your retail app that resulted in users being unable to place any orders.

What service might help you prevent a regression on this issue where you deploy a new release with the same problem?

- [ ] Diagnostics
- [x] Automated user interface tests
- [ ] Continuous integration

Q23)

You have integrated the App Center SDK into your app to collect crash data.

Assuming the user has allowed this data to be collected, where in App Center will the data show up after crash data is received?

- [ ] Distribute
- [ ] Analytics
- [x] Diagnostics