Cloud Enterprise Developer

1. What is one of the primary benefits of cloud migration related to performance?

   A. Reduced maintenance

   B. Reduced network latency

   C. Lower cost

   D. Improved scalability

ANSWER: B

2. Which of the following describes a benefit of using AWS CodePipeline?

   A. Automates the entire build, test, and deployment process

   B. Requires coding knowledge for all tasks

   C. Reduces the need for testing in the CI/CD process

   D. Increases manual intervention in deployments

ANSWER: A

3. Which feature allows AWS CodeDeploy to roll back to a previous version if a deployment fails?

   A. On-demand deployment

   B. Automatic rollback

   C. Manual code changes

   D. Continuous integration

ANSWER: B

4. How does AWS CodeCommit enhance collaboration within a development team?

   A. By enabling team members to work on the same codebase using Git repositories

   B. By reducing code visibility

   C. By disabling version control

   D. By providing a chat service

ANSWER: A

5. Which cloud migration strategy involves switching to a different product or service?

   A. Replatform

   B. Refactor

   C. Repurchase

   D. Retain

ANSWER: C

6. Which of the following is a key feature of AWS CodeCommit?

   A. Used for large data storage

   B. Manages cloud networking

   C. Deploys applications across regions

   D. Integrated with Git-based workflows

ANSWER: D

7. Which AWS service would you use to automate your CI/CD pipeline?

   A. AWS Lambda

   B. AWS EC2

   C. AWS RDS

   D. AWS CodePipeline

ANSWER: D

8. What does "Rehosting" in cloud migration commonly refer to?

   A. Moving an application to the cloud without changing its architecture

   B. Creating a new application from scratch

   C. Completely replacing an existing application with a new one

   D. Redesigning an application to optimize for the cloud

ANSWER: A

9. Which stage of application migration planning involves creating a comprehensive catalog of all applications?

   A. Total cost of ownership (TCO) assessment

   B. Application identification and assessment

   C. Risk and project duration assessment

   D. Legacy application migration

ANSWER: B

10. What is a common risk associated with application migration related to technical challenges?

   A. Unforeseen technical challenges due to complex dependencies

   B. Overestimated migration costs

   C. Increased employee training costs

   D. Excessive downtime during the migration

ANSWER: A

11. What is the role of version control in DevOps?

   A. To deploy applications automatically

   B. To remove old versions of code permanently

   C. To manage multiple versions of software code

   D. To control user access to the code

ANSWER: C

12. How does IBM Cloud ensure data security during migration?

   A. By ignoring security policies

   B. By reducing encryption levels

   C. By providing built-in encryption and compliance tools

   D. By limiting access to security features

ANSWER: C

13. Which AWS service is used for automating the deployment of applications?

   A. AWS CodeDeploy

   B. AWS Lambda

   C. AWS S3

   D. AWS EC2

ANSWER: A

14. What is AWS CodeCommit used for?

   A. To store and manage source code in a secure and scalable Git repository

   B. To monitor cloud resources

   C. To create virtual machines

   D. To deploy applications to AWS services

ANSWER: A

15. What does IBM aim to achieve by using DevOps tools and AI-driven automation in application modernization?

   A. Reducing the number of applications an organization uses

   B. Changing how clients operate and helping them scale across their business

   C. Migrating all applications to on-premises servers

   D. Exclusively focusing on reducing operating costs

ANSWER: B

16. Which stage involves the actual transfer of the application to the new environment?

   A. Migration and execution

   B. Planning

   C. Testing

   D. Assessment

ANSWER: A

17. What is IBM's primary approach to helping organizations with application modernization?

   A. Offering a range of DevOps tools, accelerators, and AI-driven automation

   B. Only providing cloud infrastructure

   C. Focusing solely on new application development

   D. Providing standalone consulting services

ANSWER: A

18. What type of modern integration architecture does IBM help build?

   A. Traditional monolithic architecture

   B. Solely on-premises integration systems

   C. Cloud-native, API-led, and event-driven architecture

   D. Static, non-scalable architecture

ANSWER: C

19. What is the primary goal of DevOps?

   A. To avoid using automated tools

   B. To keep development and operations teams separate

   C. To speed up the delivery of higher quality software by combining and automating development and operations

   D. To focus solely on software development

ANSWER: C

20. What is one item typically included in a cloud migration checklist?

   A. Completely redesigning all existing applications

   B. Determining which workloads to migrate and their priority

   C. Establishing a new IT department

   D. Hiring a new project manager

ANSWER: B

21. Which tool is commonly used for continuous integration in DevOps?

   A. Jenkins

   B. Selenium

   C. Docker

   D. Git

ANSWER: A

22. What is the main goal of the continuous feedback phase in DevOps?

   A. To gather and evaluate user feedback for improving future releases

   B. To deploy the application to production

   C. To plan new features

   D. To test the application for bugs

ANSWER: A

23. Which phase of the DevOps lifecycle involves monitoring the health, performance, and reliability of the application?

   A. Continuous Development

   B. Continuous Monitoring

   C. Continuous Deployment

   D. Continuous Testing

ANSWER: B

24. Which cloud migration strategy is also known as "lift and shift"?

   A. Replatforming

   B. Rehosting

   C. Repurchasing

   D. Retiring

ANSWER: B

25. Which risk involves potential data loss during application migration?

   A. Security risk

   B. Data integrity risk

   C. Compatibility risk

   D. Compliance risk

ANSWER: B

26. What is the purpose of the continuous testing phase in DevOps?

    A. To use automated tools to test the code for bugs

    B. To manually review code for errors

    C. To deploy the application to production

    D. To manage project scheduling

ANSWER: A

27. Which risk can occur due to insufficient testing before migration?

    A. Reduced migration time

    B. Post-migration issues and failures

    C. Enhanced application features

    D. Increased migration efficiency

ANSWER: B

28. What tool is mentioned for monitoring infrastructure and alerting users about issues in DevOps?

    A. Nagios

    B. Docker

    C. Git

    D. Jenkins

ANSWER: A

29. What is a common risk related to application compatibility in migration?

    A. Applications may not work in the new environment

    B. Reduced migration costs

    C. Improved application performance

    D. Enhanced security features

ANSWER: A

30. What is one of the primary risks associated with application migration?

    A. Data security breaches

    B. Improved system performance

    C. Increased application availability

    D. Simplified migration process

ANSWER: A

31. In a DevOps model, what is a key benefit of merging development and operations teams?

    A. Increased manual processes

    B. Enhanced collaboration and skill diversity

    C. Decreased team velocity

    D. Better team specialization

ANSWER: B

32. What is the first step in a cloud migration strategy?

    A. Assessing current infrastructure

    B. Migrating the data

    C. Selecting a cloud provider

    D. Automating deployment

ANSWER: A

33. Which tool is commonly used for version control in DevOps?

    A. AWS CodeDeploy

    B. Nagios

    C. Jenkins

    D. Git

ANSWER: D

34. Which practice helps increase the frequency and pace of releases in DevOps?

    A. Long development cycles

    B. Waterfall model

    C. Continuous integration and continuous delivery

    D. Manual deployment

ANSWER: C

35. What is a common challenge faced during application migration?

    A. Data loss or corruption

    B. Improved application performance

    C. Increased security

    D. Enhanced user experience

ANSWER: A

36. Which of the following is a key step in the application migration process?

    A. Ignoring application dependencies

    B. Rewriting the entire application

    C. Assessing current applications and infrastructure

    D. Avoiding application testing

ANSWER: C

37. What is a key benefit of the DevOps model in terms of speed?

    A. Reduced team collaboration

    B. Slower release cycles

    C. Faster innovation and adaptation

    D. Increased manual processes

ANSWER: C

38. What is the final phase in the Waterfall model?

    A. Testing

    B. Maintenance

    C. Implementation

    D. Deployment

ANSWER: B

39. What does the Continuous Development stage involve?

    A. Committing code to version control and packaging it for testing

    B. Gathering user feedback

    C. Monitoring the application for bugs

    D. Deploying code to production servers

ANSWER: A

40. Which of the following is an advantage of the Waterfall model?

    A. Suitable for large and complex projects

    B. Simple to understand and use

    C. High flexibility in requirements changes

    D. High visibility of progress during development

ANSWER: B

41. What does the 'Reliability' benefit of DevOps emphasize?

    A. Reduced testing

    B. Ensuring quality of updates and infrastructure changes

    C. Decreased real-time monitoring

    D. Faster bug fixes

ANSWER: B

42. What is a primary advantage of the Agile methodology?

    A. Lack of customer feedback

    B. Slow release cycles

    C. Ability to adapt to changing requirements

    D. Fixed scope and requirements

ANSWER: C

43. What is the primary function of Ansible?

    A. Configuration management and application deployment

    B. Continuous monitoring

    C. Automated build processes

    D. Software versioning

ANSWER: A

44. Which Agile process involves releasing an application with high-priority features first?

    A. Waterfall Model

    B. Continuous Deployment

    C. Kanban

    D. Iteration

ANSWER: D

45. Which DevOps tool is commonly used for container orchestration?

    A. Jenkins

    B. GitLab

    C. Docker

    D. Kubernetes

ANSWER: D

46. What is the primary function of the IBM Cloud DevOps Toolchain?

    A. Providing storage solutions

    B. Managing databases

    C. Hosting virtual machines

    D. Automating the software delivery process

ANSWER: D

47. What is a key characteristic of the Agile methodology regarding feedback?

    A. Feedback is ignored

    B. Feedback is gathered during each iteration

    C. Feedback is collected only after testing

    D. Feedback is received only at the end of the project

ANSWER: B

48. Which of the following is the first phase in the Waterfall model?

    A. Implementation

    B. Maintenance

    C. Requirements Gathering and Analysis

    D. Design

ANSWER: C

49. In the Waterfall model, what is the purpose of the Verification phase?

    A. To maintain the application after deployment

    B. To gather requirements from the client

    C. To test the application thoroughly

    D. To design the software architecture

ANSWER: C

50. Which tool is known for having a GUI and is cross-platform, running on both Unix and Windows?

    A. Chef

    B. Puppet

    C. SVN

    D. Ansible

ANSWER: B

51. Which tool is used for continuous monitoring of infrastructure, including servers and applications?

    A. Docker

    B. Nagios

    C. Maven

    D. Kubernetes

ANSWER: B

52. What is Splunk primarily used for?

    A. Source code management

    B. Log management, infrastructure, and application monitoring

    C. Continuous integration

    D. Container orchestration

ANSWER: B

53. Which tool integrates with Raygun to automatically link errors back to the source code?

    A. Prometheus

    B. Gremlin

    C. JUnit

    D. Splunk On-Call

ANSWER: D

54. Which tool is used for continuous integration and delivery, and automates code deployments to any instance?

    A. AWS Lambda

    B. AWS CodePipeline

    C. AWS CodeBuild

    D. AWS CodeDeploy

ANSWER: D

55. Which of the following cloud services is typically used to store data for a web application?

    A. Compute instances

    B. Object storage

    C. Load balancer

    D. Content Delivery Network (CDN)

ANSWER: B

56. What is a common use case for a Content Delivery Network (CDN) in a web application?

    A. Distributing static content globally

    B. Managing server logs

    C. Storing user data

    D. Running database queries

ANSWER: A

57. Which cloud service is primarily responsible for hosting the back-end logic of a web application?

    A. Compute services (e.g., EC2, VM instances)

    B. Object storage

    C. Domain Name System (DNS)

    D. API Gateway

ANSWER: A

58. Which service is commonly used to manage databases in cloud-based web applications?

    A. Load balancer

    B. CDN

    C. Relational Database Service (RDS)

    D. Object storage

ANSWER: C

59. What is the purpose of a load balancer in a cloud-based web application?

    A. Deliver static content

    B. Store application logs

    C. Distribute incoming traffic across multiple servers

    D. Manage user authentication

ANSWER: C

60. Which AWS service allows developers to create and manage a collection of related AWS resources using templates?

    A. AWS CodeCommit

    B. AWS OpsWorks

    C. AWS CloudFormation

    D. AWS X-Ray

ANSWER: C

61. What is AWS OpsWorks used for?

    A. Continuous Integration

    B. Configuration management using Chef

    C. Monitoring cloud resources

    D. Source control

ANSWER: B

62. Which AWS service provides monitoring for AWS cloud resources and applications?

    A. AWS CloudTrail

    B. Amazon CloudWatch

    C. AWS Config

    D. AWS Systems Manager

ANSWER: B

63. Which IBM Cloud DevOps tool allows teams to build a backlog of user stories and track tasks through to completion?

    A. GitHub

    B. Jira

    C. Jenkins

    D. Selenium

ANSWER: B

64. What is the primary function of AWS CodePipeline?

    A. Continuous integration

    B. Continuous delivery

    C. Configuration management

    D. Monitoring

ANSWER: B

65. How do serverless architectures impact maintenance?

    A. They require regular server maintenance.

    B. They eliminate the need for system updates.

    C. They simplify maintenance by offloading to the cloud provider.

    D. They increase the complexity of maintenance tasks.

ANSWER: C

66. What type of workloads is FaaS best suited for?

    A. Long-running processes

    B. Batch processing tasks

    C. Short-lived, event-driven tasks

    D. Static web hosting

ANSWER: C

67. What is a key feature of Google Cloud Functions?

    A. Requires physical servers

    B. Offers only Python support

    C. Allows execution of code in response to events

    D. Is not event-driven

ANSWER: C

68. Which of the following is a common use case for serverless architecture?

    A. Traditional enterprise applications

    B. File storage

    C. Static websites

    D. Real-time data processing

ANSWER: D

69. How can serverless architecture be utilized in web applications?

    A. For serving static content only

    B. For running complex databases

    C. For handling user authentication and back-end logic

    D. For managing server infrastructure

ANSWER: C

70. Which protocol is known for being lightweight and simple?

    A. REST

    B. SOAP

    C. XML-RPC

    D. JSON-RPC

ANSWER: C

71. What is the primary role of a cloud provider in a serverless architecture?

    A. Provide and manage the infrastructure

    B. Write user documentation

    C. Monitor network traffic

    D. Develop applications

ANSWER: A

72. Which AWS service provides fully managed build environments and scales continuously?

    A. AWS CodePipeline

    B. AWS CodeDeploy

    C. AWS CodeStar

    D. AWS CodeBuild

ANSWER: D

73. Which of the following is NOT a benefit of serverless architectures?

    A. Increased vendor lock-in

    B. Reduced infrastructure management

    C. Cost efficiency

    D. Automatic scaling

ANSWER: A

74. What does AWS CodePipeline help automate?

    A. Security patches

    B. The release pipeline

    C. Code reviews

    D. Software deployments

ANSWER: B

75. What is AWS CodeCommit used for?

   A. Monitoring application performance

   B. Continuous integration

   C. Source control for Git repositories

   D. Automated software deployments

ANSWER: C

76. What is the main benefit of AWS CodeStar?

   A. Automates software builds

   B. Provides source control

   C. Sets up and manages continuous delivery toolchains quickly

   D. Monitors application performance

ANSWER: C

77. What is the primary function of AWS CodeDeploy?

   A. Automate software deployments

   B. Monitor application performance

   C. Compile source code

   D. Manage source code repositories

ANSWER: A

78. Which tool is used for version-controlled coding environments in DevOps?

   A. Nagios

   B. GitHub

   C. Jenkins

   D. Ansible

ANSWER: B

79. What type of applications are particularly suited for serverless architectures?

   A. Monolithic applications

   B. Static applications

   C. Event-driven applications

   D. Applications with predictable workloads

ANSWER: C

80. Which service allows you to track the status of application deployments through a centralized console?

   A. AWS CodeDeploy

   B. AWS CodePipeline

   C. AWS CloudWatch

   D. AWS CodeBuild

ANSWER: A

81. What is a primary reason for adopting serverless architectures?

   A. Avoid using APIs

   B. Write complex code

   C. Maintain physical servers

   D. Reduce operational costs

ANSWER: D

82. Why might a company choose a serverless architecture for a startup application?

   A. High initial investment

   B. Requirement for complex infrastructure management

   C. Ability to rapidly iterate and adapt

   D. Necessity for dedicated servers

ANSWER: C

83. What feature of AWS CodeCommit helps you collaborate on code with teammates?

   A. Build servers

   B. Continuous scaling

   C. Deployment tracking

   D. Pull requests and branching

ANSWER: D

84. Which of the following best describes serverless architecture?

    A. Architecture that requires user-maintained servers

    B. Architecture only suitable for small applications

    C. Architecture that abstracts server management from developers

    D. Architecture that involves deploying virtual machines

ANSWER: C

85. Which file is used by AWS CodeDeploy to specify deployment instructions?

    A. config.json

    B. appspec.yml

    C. deploy.json

    D. buildspec.yml

ANSWER: B

86. What does a cloud provider offer to ensure high availability in serverless architectures?

    A. Load balancers and auto-scaling

    B. Fixed data centers

    C. Local storage only

    D. Physical servers only

ANSWER: A

87. Which AWS service provides automated software deployments and helps minimize downtime?

    A. AWS CodeDeploy

    B. AWS CodeStar

    C. AWS CodePipeline

    D. AWS CodeBuild

ANSWER: A

88. Which service is primarily responsible for scaling and managing build environments?

    A. AWS CodePipeline

    B. AWS CodeBuild

    C. AWS CodeDeploy

    D. AWS CodeStar

ANSWER: B

89. Who is responsible for server maintenance in serverless architectures?

    A. Cloud provider

    B. IT department

    C. End user

    D. Developer

ANSWER: A

90. What is the core component of a DevOps toolchain?

    A. Database

    B. Version control repository

    C. Web server

    D. Cloud storage

ANSWER: B

91. Which IBM Cloud tool is used for issue tracking and source code collaboration?

    A. IBM Cloud Kubernetes Service

    B. Eclipse Orion Web IDE

    C. Git Repos and Issue Tracking

    D. IBM Cloud DevOps Insights

ANSWER: C

92. Which toolchain is used for developing and deploying a Cloud Foundry app?

    A. Develop a Kubernetes app with Helm

    B. Develop a Cloud Foundry app

    C. Develop a Code Engine app

    D. Develop and test microservices on Kubernetes

ANSWER: B

93. What is the primary purpose of a toolchain in IBM Cloud?

   A. To store data

   B. To automate the building, deployment, and operations tasks of applications

   C. To manage network security

   D. To provide cloud storage solutions

ANSWER: B

94. Which of the following is NOT a method to create a toolchain on IBM Cloud?

   A. Use a template to create a toolchain

   B. Create a toolchain from an app

   C. Use a cloud database

   D. Create a toolchain manually from scratch

ANSWER: C

95. DevOps is an extension of _____.

   A. QA

   B. Agile

   C. Waterfall

   D. None of the above

ANSWER: B

96. Which of the following best describes how APIs work?

   A. APIs create new software applications.

   B. APIs act as intermediaries that allow different software systems to communicate.

   C. APIs are used for data storage only.

   D. APIs replace the need for programming languages.

ANSWER: B

97. APIs are essential for which of the following concepts?

   A. User Interface Design

   B. Software Development

   C. Network Security

   D. Data Encryption

ANSWER: B

98. Which of the following is NOT a benefit of using APIs?

   A. Increased flexibility

   B. Improved security

   C. Slower development

   D. Enhanced collaboration

ANSWER: C

99. What is a common use case for APIs?

   A. Managing databases

   B. Sending emails

   C. Integrating different services

   D. Writing system code

ANSWER: C

100. APIs can be categorized into which of the following types?

   A. Internal and External

   B. Public and Private

   C. Open and Closed

   D. All of the above

ANSWER: D

101. Which of the following is a common example of an API?

   A. Google Maps

   B. Microsoft Word

   C. Adobe Photoshop

   D. Windows OS

ANSWER: A

102. Which type of API is publicly accessible to developers?

   A. Internal API

   B. Partner API

   C. Open API

   D. Composite API

ANSWER: C

103. What type of API is specifically designed for use within an organization?

    A. Public API

    B. Internal API

    C. Partner API

    D. Composite API

ANSWER: B

104. Which of the following is NOT a type of API?

    A. Open API

    B. Internal API

    C. Hybrid API

    D. Partner API

ANSWER: C

105. What does the Deploy stage in a Classic Delivery Pipeline typically specify?

    A. Build instructions

    B. Monitoring tools

    C. Test configuration

    D. Deployment commands

ANSWER: D

106. Which IBM Cloud service provides a visual representation of the toolchain?

    A. IBM Cloud Storage

    B. IBM Cloud Kubernetes Service

    C. IBM Cloud Continuous Delivery

    D. IBM Cloud Monitoring

ANSWER: C

107. Which of the following is NOT a configuration management tool?

    A. Jira

    B. Puppet

    C. Ansible

    D. Chef

ANSWER: A

108. What type of code repository is supported by Classic Delivery Pipelines for integration?

    A. Google Drive

    B. AWS S3

    C. Dropbox

    D. GitHub

ANSWER: D

109. Which of the following components is commonly used to define the steps of a Classic Delivery Pipeline?

    A. Stages

    B. Containers

    C. Webhooks

    D. Virtual Machines

ANSWER: A

110. Which tool is commonly used for Continuous Integration and Continuous Deployment (CI/CD)?

    A. Docker

    B. Jenkins

    C. Ansible

    D. Git

ANSWER: B

111. Which of the following is not a part of DevOps lifecycle _____.

    A. Build

    B. Plan

    C. Code

    D. Operating

ANSWER: D

112. What is Docker primarily used for?

    A. Continuous Integration

    B. Version Control

    C. Project Management

    D. Containerization

ANSWER: D

113. What is the main purpose of the IBM Cloud Classic Delivery Pipeline?

    A. To manage databases

    B. To build, test, and deploy applications

    C. To monitor cloud infrastructure

    D. To provide cloud storage

ANSWER: B

114. Which tool is mainly used for version control in DevOps?

    A. Kubernetes

    B. Git

    C. Docker

    D. Jenkins

ANSWER: B

115. Which file is used to control how your project is deployed to IBM Cloud?

    A. 'pipeline.yml'

    B. 'build.properties'

    C. 'deploy.config'

    D. 'manifest.yml'

ANSWER: D

116. What type of Docker image can be specified in the Deploy stage for fine-grained control over tools?

    A. Custom Docker image

    B. Pre-built Docker image

    C. Base Docker image

    D. Pipeline image version

ANSWER: A

117. What is the purpose of a deploy job in a pipeline?

    A. To run unit tests

    B. To create build artifacts

    C. To upload and deploy the project to a server

    D. To compile source code

ANSWER: C

118. What are the typical layers in a 3-tier application architecture?

    A. Client layer, server layer, data layer

    B. UI layer, middleware layer, storage layer

    C. Presentation layer, application layer, database layer

    D. Frontend layer, backend layer, analytics layer

ANSWER: C

119. Why is Edge Computing important in relation to hybrid cloud solutions?

    A. It eliminates the need for data centers.

    B. It allows decentralized computing and storage as needed.

    C. It only works with public cloud services.

    D. It relies solely on centralized computing resources.

ANSWER: B

120. What is the primary focus of modern application design in consumer-facing applications?

    A. Legacy system integration

    B. Hardware compatibility

    C. User experience, statelessness, and agility

    D. Statefulness and functionality

ANSWER: C

121. What is the default directory where build artifacts are archived in a build job?

    A. '/home/user/build'

    B. '/root/build'

    C. Project root directory

    D. '/tmp/build'

ANSWER: C

122. In event-driven architecture (EDA), how do services communicate?

A. Using events to trigger and communicate between decoupled services

B. By direct method calls

C. Through shared databases

D. Via synchronous requests

ANSWER: A

123. What is a major issue with 3-tier application architecture?

A. It is too simple for modern applications.

B. It can become too large and complex over time.

C. It lacks a clear separation of concerns.

D. It requires excessive hardware resources.

ANSWER: B

124. Which Deployer type is used for deploying applications to Cloud Foundry servers?

A. Custom Docker image

B. Sauce Labs

C. Cloud Foundry

D. Kubernetes

ANSWER: C

125. What does API stand for?

A. Automated Programming Interface

B. Application Protocol Interface

C. Application Programming Interface

D. Advanced Programming Interface

ANSWER: C

126. What allows Docker containers to be easily scalable?

A. Their lightweight nature and independence from the underlying infrastructure

B. Their dependence on physical hardware

C. The need for complex configurations

D. Their integration with legacy systems

ANSWER: A

127. Which command is used to verify the host key fingerprint for a Git server over SSH?

A. 'ssh-keyscan -t rsa'

B. 'ssh-keygen -lf'

C. 'ssh-keyscan -t'

D. 'ssh-keyscan -t dsa'

ANSWER: A

128. In IBM Cloud, what are the worker nodes used for?

A. Running the API Server

B. Storing cluster data

C. Hosting containerized applications

D. Managing the Kubernetes cluster

ANSWER: C

129. What is the primary purpose of an API?

A. To manage hardware resources

B. To store application data

C. To enable communication between applications

D. To create user interfaces

ANSWER: C

130. What architecture does Kubernetes follow?

A. Monolithic architecture

B. Client-server architecture

C. Microservices architecture

D. Peer-to-peer architecture

ANSWER: B

131. Where can you update your display name for Git Repos and Issue Tracking?

A. On the User Settings page

B. On the Account page

C. On the Quality Dashboard page

D. On the Access Tokens page

ANSWER: A

132. What is a personal access token used for in Git?

    A. To verify the authenticity of an SSH key.

    B. To authenticate with your Git repo over HTTPS.

    C. To update the display name in Git.

    D. To increase the size limit of a repository.

ANSWER: B

133. Which of the following best describes cloud bursting in a hybrid cloud environment?

    A. Using only public cloud resources

    B. Combining private and public clouds to manage peak loads

    C. Storing all data on private clouds

    D. Transferring all applications to on-premises infrastructure

ANSWER: B

134. What role does the API Server play in a Kubernetes cluster?

    A. It schedules tasks for the cluster.

    B. It serves as the entry point for all API requests.

    C. It runs the containerized applications.

    D. It manages the state of the cluster.

ANSWER: B

135. What does REST stand for in REST API?

    A. Regular State Transfer

    B. Representational Service Transfer

    C. Representational State Transfer

    D. Real-time State Transfer

ANSWER: C

136. Which protocol uses XML to transfer data?

    A. REST

    B. SOAP

    C. JSON-RPC

    D. XML-RPC

ANSWER: B

137. What is the main advantage of a serverless architecture?

    A. It requires constant server maintenance.

    B. Developers need to manage physical servers.

    C. Developers can focus on core product development without managing infrastructure.

    D. It is limited to on-premises deployments.

ANSWER: C

138. In the API request process, what does the client application send first?

    A. A server request

    B. An authorization token

    C. An API call

    D. A response

ANSWER: C

139. Which HTTP method is used to retrieve data from a server in a REST API?

    A. DELETE

    B. POST

    C. PUT

    D. GET

ANSWER: D

140. Which of the following is a serverless compute service offered by AWS?

    A. Kubernetes

    B. Google Cloud Functions

    C. Azure Functions

    D. AWS Lambda

ANSWER: D

141. What is a common use case for serverless architecture?

    A. Managing virtual machines

    B. Long-running batch processes

    C. Building RESTful APIs

    D. Hosting a static website

ANSWER: C

142. What is a container in software development?

    A. A cloud storage solution

    B. A type of virtual machine

    C. An executable unit that packages application code with its libraries and dependencies

    D. A physical server that hosts applications

ANSWER: C

143. What is the primary purpose of Docker?

    A. To manage cloud resources

    B. To create virtual machines

    C. To develop mobile applications

    D. To run containers

ANSWER: D

144. Which type of API is accessible to anyone with the appropriate credentials and typically found through a public developer portal?

    A. Partner API

    B. Composite API

    C. Internal API

    D. Open API

ANSWER: D

145. Which format is commonly used for data interchange in REST APIs?

    A. XML

    B. CSV

    C. JSON

    D. HTML

ANSWER: C

146. What does FaaS stand for?

    A. Function-as-a-Service

    B. Framework-as-a-Service

    C. File-as-a-Service

    D. Feature-as-a-Service

ANSWER: A

147. What is the purpose of the Developer Portal?

    A. To manage server configurations

    B. To analyze server logs

    C. To create database schemas

    D. To customize self-service portals for API discovery and subscription

ANSWER: D

148. Which gateway is specifically mentioned for enterprise API management?

    A. Amazon API Gateway

    B. Kong Gateway

    C. Nginx Gateway

    D. DataPower Gateway

ANSWER: D

149. What HTTP method is used to retrieve a record in a REST API?

    A. POST

    B. GET

    C. PUT

    D. DELETE

ANSWER: B

150. What component of API Connect is used to manage the API Connect on-premises cloud?

    A. Developer Portal

    B. Cloud Manager

    C. API Gateway

    D. API Manager

ANSWER: D

151. What does the API Manager UI allow users to do?

    A. Promote and track APIs within Products and Plans

    B. Create virtual machines

    C. Write code for APIs

    D. Develop serverless applications

ANSWER: A

152. Which of the following is NOT one of the constraints of REST architecture?

A. Uniform interface

B. Client-server decoupling

C. Cacheability

D. Stateful communication

ANSWER: D

153. What does the Developer Portal provide for application developers?

A. Command line interface tools

B. Security policies for APIs

C. Tools for modeling APIs

D. A customizable self-service web-based portal

ANSWER: D

154. Which API allows developers to interact with public Tweets and post Tweets?

A. Facebook API

B. PayPal API

C. Google Maps API

D. Twitter API

ANSWER: D

155. What is the primary purpose of Partner APIs?

A. To access public data

B. To improve internal productivity

C. To expose APIs to strategic business partners

D. To combine multiple APIs into one

ANSWER: C

156. Which cloud service provides a managed Kubernetes offering with integrated tools for app deployment and management?

A. Google Cloud Storage

B. Amazon ECS

C. IBM Cloud Kubernetes Service

D. Red Hat OpenShift

ANSWER: C

157. What does the Kubernetes Scheduler do?

A. Manages API requests

B. Runs containerized applications

C. Stores configuration data

D. Distributes workloads across nodes

ANSWER: D

158. What are Open APIs also known as?

A. Partner APIs

B. Composite APIs

C. Public APIs

D. Private APIs

ANSWER: C

159. Which of the following is a popular FaaS service offered by AWS?

A. Google Cloud Functions

B. IBM Cloud Functions

C. Azure Functions

D. AWS Lambda

ANSWER: D

160. What is a key feature of Composite APIs?

A. They require extensive documentation

B. They are accessible only by the public

C. They combine multiple data or service APIs into a single call

D. They are used exclusively for internal communication

ANSWER: C

161. Which of the following protocols is built with XML and allows data sharing between different environments?

A. XML-RPC

B. REST

C. JSON-RPC

D. SOAP

ANSWER: D

162. What is the primary benefit of using containers?

    A. They require a full OS for each instance.

    B. They do not support microservices.

    C. They are less portable than virtual machines.

    D. They are lightweight and portable.

ANSWER: D

163. Which component of Kubernetes is responsible for storing configuration information and is accessible only by the Kubernetes API server?

    A. Controller Manager

    B. Scheduler

    C. API Server

    D. etcd

ANSWER: D

164. Which of the following is a benefit of using APIs?

    A. Easier innovation and data monetization

    B. Increased complexity in data handling

    C. Reduced collaboration between departments

    D. Decreased security measures

ANSWER: A

165. What is the key difference between 'Replatforming' and 'Rehosting'?

    A. Replatforming and Rehosting are essentially the same thing.

    B. Replatforming requires changing the application's underlying technology, while Rehosting does not.

    C. Replatforming is always less costly than Rehosting.

    D. Replatforming involves creating a new application, whereas Rehosting involves improving an existing one.

ANSWER: B

166. What does the 'Retire' strategy in cloud migration entail?

    A. Redesigning applications for the cloud

    B. Identifying and discontinuing applications that are no longer needed

    C. Keeping applications on-premises

    D. Moving applications to a new cloud environment

ANSWER: B

167. What happens after a server receives a valid API request?

    A. The server sends a response back to the API with the requested information

    B. The server initiates a new request to another server

    C. The server ignores the request

    D. The server stores the request for future reference

ANSWER: A

168. Which cloud migration strategy is best suited for applications that are too difficult to migrate?

    A. Repurchase

    B. Retain

    C. Refactor

    D. Retire

ANSWER: B

169. What is a primary benefit of microservices architecture?

    A. Single point of failure

    B. Independent deployment of services

    C. Tight coupling of services

    D. Monolithic codebase

ANSWER: B

170. In an API call, what does the request verb specify?

A. The location of the API

B. The time of the request

C. The type of action to be performed (e.g., GET, POST)

D. The format of the response data

ANSWER: C

171. What does the 3-tier architecture model consist of?

A. Database, API, Frontend

B. Presentation, Business Logic, Data

C. User Interface, Web Server, Cloud Storage

D. Frontend, Middleware, Backend

ANSWER: B

172. What is the primary function of an API?

A. To enable integration and communication between different applications

B. To limit data access to internal teams only

C. To store data securely

D. To provide offline access to applications

ANSWER: A

173. What happens after a server receives a valid API request?

A. The server sends a response back to the API with the requested information

B. The server initiates a new request to another server

C. The server stores the request for future reference

D. The server ignores the request

ANSWER: A

174. How can organizations maintain security while adopting a DevOps model?

A. By ignoring compliance and security policies

B. By restricting all access to the system

C. By using automated compliance policies and configuration management techniques

D. By only focusing on development speed

ANSWER: C

175. What is the main focus of Continuous Feedback in the DevOps lifecycle?

A. Testing code without user input

B. Gathering input from stakeholders to improve the development process

C. Delaying releases for extensive testing

D. Ignoring user feedback to expedite releases

ANSWER: B

176. Which migration strategy involves redesigning an application to improve its performance and reliability?

A. Rehost

B. Repurchase

C. Refactor

D. Replatform

ANSWER: C

177. What might be a significant challenge when migrating legacy applications to the cloud?

A. Lower maintenance costs

B. Outdated software, which can be expensive and raise security concerns

C. Simplicity in migration

D. Improved performance in modern environments

ANSWER: B

178. What types of applications can an enterprise application developer build under a DevOps model?

A. Only traditional desktop applications

B. Cognitive, IoT, blockchain, mobile, and data-intensive applications

C. Applications that do not require cloud-native services

D. Only simple web applications

ANSWER: B

179. What does the 'Total Cost of Ownership (TCO)' assessment in migration planning involve?

    A. Evaluating only the costs of cloud provider services

    B. Calculating only the migration costs without considering ongoing expenses

    C. Comparing hardware costs with cloud provider costs and migration expenses

    D. Determining the cost of maintaining legacy applications only

ANSWER: C

180. Which tool is primarily used for containerization in DevOps?

    A. Nagios

    B. Docker

    C. Jenkins

    D. Git

ANSWER: B

181. In IBM's strategy, what is the role of AI-driven insights and visualizations?

    A. To manage all aspects of IT operations permanently

    B. To develop a custom solution and ROI-driven roadmap

    C. To reduce the need for cloud services

    D. To replace existing applications with new ones

ANSWER: B

182. What practices help ensure reliability in a DevOps model?

    A. Continuous integration and continuous delivery

    B. Manual testing only

    C. Ignoring application updates

    D. Releasing software without testing

ANSWER: A

183. How does IBM's approach to application deployment and management benefit organizations?

    A. By increasing manual processes for control

    B. By providing no support for security and compliance

    C. By reducing costs while increasing operational efficiency and visibility

    D. By focusing only on on-premises environments

ANSWER: C

184. What does the term "Pay-As-You-Go" refer to in the context of DevOps services?

    A. A model where users only pay for the resources they consume

    B. Unlimited access to all services for a flat fee

    C. Free services provided by cloud providers

    D. A fixed pricing model

ANSWER: A

185. In which phase does the application get deployed to the production server?

    A. Continuous Operations

    B. Continuous Deployment

    C. Continuous Integration

    D. Continuous Testing

ANSWER: B

186. Which tool is used for version control and maintaining code changes in DevOps?

    A. Selenium

    B. Slack

    C. Git

    D. Jenkins

ANSWER: C

187. How does continuous integration benefit the development process in DevOps?

    A. By avoiding the use of automation tools

    B. By regularly updating the central repository and automating build and test processes

    C. By delaying code integration until the end of the project

    D. By only focusing on manual testing

ANSWER: B

188. What is a key benefit of building containerized applications according to IBM?

    A. Exclusively designed for on-premises servers

    B. Reduced security measures

    C. Optimized for scale and performance with continuous delivery and DevSecOps principles

    D. Increased time to market

ANSWER: C

189. Which of the following is NOT a phase in the DevOps lifecycle?

    A. Code

    B. Deploy

    C. Compile

    D. Monitor

ANSWER: C

190. What is a key benefit of using DevOps practices?

    A. Increased time for software delivery

    B. More manual processes

    C. Improved collaboration and communication between teams

    D. Decreased need for security

ANSWER: C

191. In which phase of the DevOps lifecycle is the application monitored to ensure service uptime and optimal performance?

    A. Code

    B. Plan

    C. Deploy

    D. Monitor

ANSWER: D

192. What does the DevOps lifecycle encompass?

    A. Only software testing and deployment

    B. A combination of different phases of continuous software development, integration, testing, deployment, and monitoring

    C. Only planning and monitoring

    D. Only development and operations

ANSWER: B

193. What is DevOps primarily aimed at achieving?

    A. Reducing the number of applications developed

    B. Slower application delivery

    C. Increased collaboration between developers and operations teams to deliver applications faster

    D. Eliminating the need for automation tools

ANSWER: C

194. What is the purpose of Continuous Integration in the DevOps lifecycle?

    A. To gather and evaluate user feedback

    B. To monitor the performance of deployed applications

    C. To integrate and automate different stages of the DevOps lifecycle

    D. To deploy code to the production environment

ANSWER: C

195. How does DevOps improve collaboration between teams?

A. By maintaining separate workflows for development and operations

B. By focusing solely on development and ignoring operational concerns

C. By reducing the frequency of communication between teams

D. By integrating development and operations teams and sharing responsibilities

ANSWER: D

196. Which Agile framework focuses on frequent releases and responding to changing customer requirements?

A. Lean Development

B. Kanban

C. Extreme Programming (XP)

D. Scrum

ANSWER: C

197. What is a disadvantage of the Agile model?

A. It reduces maintainability risks

B. It allows for flexible response to changes

C. It is difficult to predict time and effort for larger projects

D. It provides detailed documentation

ANSWER: C

198. How does Kubernetes help in the continuous operations phase of DevOps?

A. By automating the testing process

B. By eliminating downtime during software updates

C. By reducing code errors

D. By integrating code changes

ANSWER: B

199. What does Continuous Monitoring involve in the DevOps lifecycle?

A. Deploying applications to production servers

B. Monitoring the deployed application for issues and collecting user feedback

C. Building and packaging code

D. Automating code integration

ANSWER: B

200. What is the purpose of the continuous operations phase in DevOps?

A. To ensure high uptime and manage containerized applications

B. To gather user feedback

C. To monitor application performance

D. To plan and code new features

ANSWER: A

201. Which AWS feature helps you scale from a single instance to thousands?

A. AWS Elastic Beanstalk

B. AWS CloudFormation

C. AWS Auto Scaling

D. AWS Identity and Access Management (IAM)

ANSWER: C

202. In the Waterfall model, what phase comes immediately after the Design phase?

A. Testing

B. Maintenance

C. Verification

D. Implementation

ANSWER: D

203. Which of the following is an advantage of the Waterfall model?

    A. Flexibility in handling changing requirements

    B. Easy testing and analysis

    C. Rapid iteration and feedback

    D. Continuous integration and deployment

ANSWER: B

204. What is the main purpose of AWS CodePipeline?

    A. To manage containerized applications

    B. To provide continuous integration and continuous delivery workflows

    C. To build and test code

    D. To run code without managing servers

ANSWER: B

205. Which AWS service records API calls for your account and delivers log files?

    A. AWS CodePipeline

    B. AWS X-Ray

    C. AWS CloudTrail

    D. AWS Config

ANSWER: C

206. Which of the following tools is used for container orchestration and auto-scaling?

    A. Git

    B. Kubernetes

    C. Apache Ant

    D. Rational ClearCase

ANSWER: B

207. What is the main purpose of Prometheus in DevOps?

    A. Monitoring and time-series data

    B. Configuration management

    C. Version control

    D. Containerization

ANSWER: A

208. What is the primary function of AWS Lambda?

    A. To manage build processes

    B. To handle code deployments

    C. To provide a unified interface for development activities

    D. To run code without provisioning or managing servers

ANSWER: D

209. What does AWS Systems Manager help with?

    A. Building and testing code

    B. Collecting software inventory, applying patches, and configuring OS

    C. Automating code deployments

    D. Managing Git repositories

ANSWER: B

210. Which tool combines synthetic monitoring, real-user monitoring, and network monitoring for detecting errors?

    A. Gremlin

    B. Catchpoint

    C. Raygun

    D. Splunk

ANSWER: B

211. What is the main purpose of AWS Elastic Beanstalk?

    A. Deploying and scaling web applications

    B. Hosting private Git repositories

    C. Managing infrastructure for web applications

    D. Automating code builds

ANSWER: A

212. Which tool is used for containerization in DevOps?

    A. Jenkins

    B. Git

    C. Docker

    D. Selenium

ANSWER: C

213. Which tool uses XML files for the build process and is inspired by the Unix make utility?

A. Ant

B. Maven

C. Chef

D. Docker

ANSWER: A

214. Which AWS service automates the build, test, and deploy phases of your release process?

A. AWS CodeBuild

B. AWS CodeStar

C. AWS CodeDeploy

D. AWS CodePipeline

ANSWER: D

215. What does AWS CodeBuild primarily provide?

A. Monitoring and logging

B. Continuous integration

C. Configuration management

D. Version control

ANSWER: B

216. Which tool is known for automating software deployments to services like Amazon EC2 and AWS Lambda?

A. AWS CodeDeploy

B. AWS X-Ray

C. AWS CodePipeline

D. AWS CodeBuild

ANSWER: A

217. What feature of AWS CodeDeploy helps maximize application availability during deployments?

A. Centralized control

B. Automatic scaling

C. Incremental changes and health tracking

D. Custom build environments

ANSWER: C

218. Which IBM Cloud service helps manage and automate the configuration of IBM Cloud resources?

A. IBM Cloud Key Protect

B. IBM Cloud Monitoring

C. IBM Cloud Schematics

D. IBM Cloud Code Engine

ANSWER: C

219. Which tool is integrated with AWS CodeStar for issue tracking and project management?

A. Jenkins

B. GitHub

C. Selenium

D. Atlassian JIRA Software

ANSWER: D

220. How does AWS CodeBuild handle scaling?

A. It scales automatically based on build volume

B. It requires manual scaling

C. It uses a fixed number of build servers

D. It scales through scheduled upgrades

ANSWER: A

221. Which AWS service integrates with AWS CodeBuild to manage code repositories?

A. AWS CodeDeploy

B. AWS CloudFormation

C. AWS CodePipeline

D. AWS CodeCommit

ANSWER: D

222. What is the primary advantage of AWS CodeCommit's encryption?

A. It encrypts build artifacts only

B. It encrypts files during upload only

C. It encrypts source code repositories only

D. It encrypts files in transit and at rest

ANSWER: D

223. How does AWS CodeDeploy minimize downtime during application deployment?

A. By introducing changes incrementally and tracking application health

B. By deploying changes all at once

C. By deploying only to staging environments

D. By pausing deployments if an error occurs

ANSWER: A

224. What is the main purpose of AWS CodePipeline?

A. To manage containerized applications

B. To run code without managing servers

C. To provide continuous integration and continuous delivery workflows

D. To build and test code

ANSWER: C

225. Which tool uses XML files for the build process and is inspired by the Unix make utility?

A. Ant

B. Maven

C. Docker

D. Chef

ANSWER: A

226. How does AWS CodeDeploy minimize downtime during application deployment?

A. By pausing deployments if an error occurs

B. By deploying changes all at once

C. By introducing changes incrementally and tracking application health

D. By deploying only to staging environments

ANSWER: C

227. What does Continuous Monitoring involve in the DevOps lifecycle?

A. Monitoring the deployed application for issues and collecting user feedback

B. Automating code integration

C. Deploying applications to production servers

D. Building and packaging code

ANSWER: A

228. Which tool is known for automating software deployments to services like Amazon EC2 and AWS Lambda?

A. AWS CodePipeline

B. AWS X-Ray

C. AWS CodeDeploy

D. AWS CodeBuild

ANSWER: C

229. Which of the following tools is used for container orchestration and auto-scaling?

A. Apache Ant

B. Kubernetes

C. Rational ClearCase

D. Git

ANSWER: B

230. Which AWS feature helps you scale from a single instance to thousands?

A. AWS Auto Scaling

B. AWS CloudFormation

C. AWS Identity and Access Management (IAM)

D. AWS Elastic Beanstalk

ANSWER: A

231. What is the main purpose of AWS CodeBuild?

A. Configuration management

B. Continuous integration

C. Monitoring and logging

D. Version control

ANSWER: B

232. What is the maximum recommended size for a Git repository before you might receive an email to reduce its size?

    A. 2 GB

    B. 500 MB

    C. 1 GB

    D. 5 GB

ANSWER: C

233. What does the 'Deploy' stage in a Classic Delivery Pipeline usually do?

    A. It creates a backup of the application

    B. It tests the application

    C. It uploads the application to a production environment

    D. It compiles the code

ANSWER: C

234. In a pipeline, which stage typically comes after the Build stage?

    A. Review stage

    B. Prod stage

    C. Deploy stage

    D. Test stage

ANSWER: D

235. What type of environment property is used for multi-line values that can be base64 encoded?

    A. Text Area

    B. Properties File

    C. Text

    D. Secure

ANSWER: A

236. Which Tester type launches a shell command to run automated tests?

    A. Simple

    B. Custom Docker image

    C. Vulnerability Advisor

    D. Sauce Labs

ANSWER: A

237. How can you avoid route conflicts when deploying to multiple targets using Cloud Foundry?

    A. Use a different manifest file for each target

    B. Deploy all targets in parallel

    C. Specify the route by using cf push command arguments

    D. Use the same route for all targets

ANSWER: C


238. What is the purpose of DevOps Insights in IBM Cloud?

    A. To aggregate and analyze code, test, build, and deployment data

    B. To verify SSH key fingerprints

    C. To create personal access tokens

    D. To update your GitHub profile

ANSWER: A

239. In the context of DevOps Insights, what happens if your code does not meet the predefined policies?

    A. The code is automatically fixed

    B. The deployment is halted

    C. An email is sent to the developer

    D. The build process is accelerated

ANSWER: B
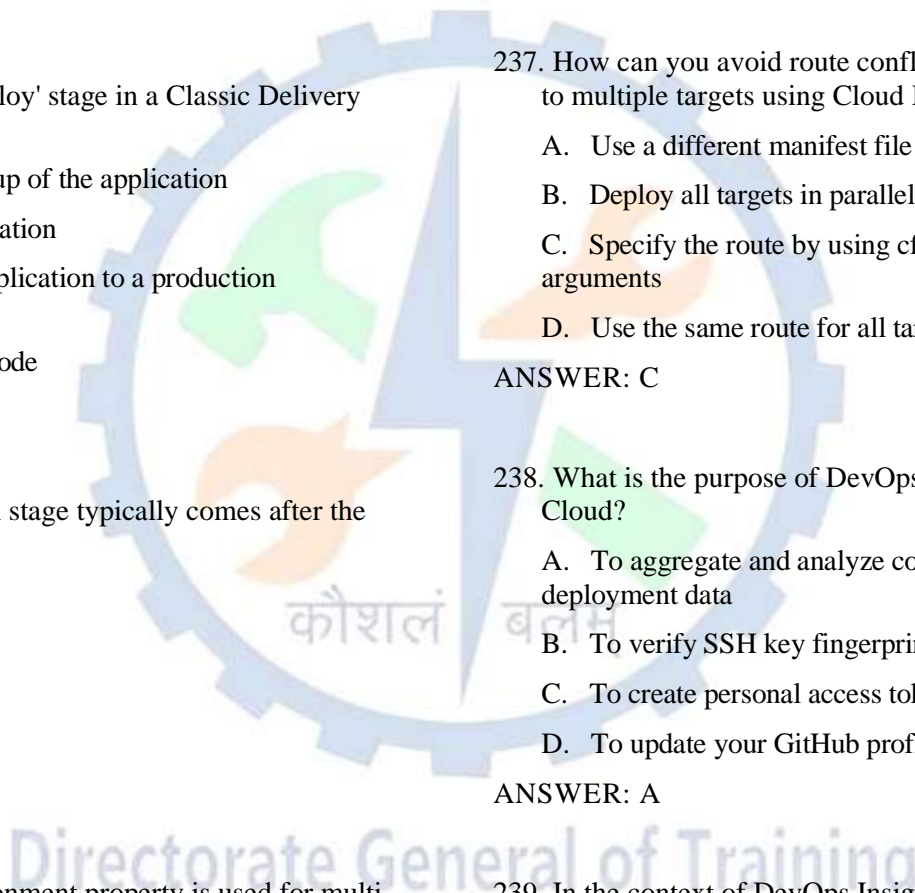
240. Which deprecated job type might still be loaded in the UI with an indicator?

A. Custom Docker image job

B. Sauce Labs Test job

C. Kubernetes Deploy job

D. IBM Globalization Pipeline Build job

ANSWER: D

241. What is required to run jobs in a Kubernetes cluster using the Deploy stage?

A. API key

B. Test script

C. Docker image name

D. Cluster name

ANSWER: D

242. What is the role of an API gateway in managing APIs?

A. To manage and authenticate API traffic

B. To create user interfaces

C. To compile source code

D. To store data logs

ANSWER: A

243. What is the main advantage of using JSON over XML in REST APIs?

A. JSON is more complex than XML

B. JSON is more readable and less verbose

C. XML supports more data types

D. XML is faster to parse

ANSWER: B

244. How does an API enhance security in data transfer?

A. By eliminating the need for encryption

B. By storing sensitive data in plaintext

C. By abstracting functionality and including authorization credentials

D. By increasing server load

ANSWER: C

245. Which of the following is a common use case for an API?

A. Creating hardware drivers

B. Developing internal software tools

C. Allowing users to log in with existing social media profiles

D. Accessing external databases directly

ANSWER: C

246. Which server type in API Connect is responsible for managing API analytics?

A. Developer Portal server

B. Analytics server

C. Management server

D. Gateway server

ANSWER: B

247. Which protocol is simpler and uses minimal bandwidth compared to SOAP?

A. JSON-RPC

B. REST

C. XML-RPC

D. HTTP

ANSWER: C

248. What is the purpose of the HTTP POST method in RESTful APIs?

A. Retrieve data

B. Create a new resource

C. Update an existing resource

D. Delete a resource

ANSWER: B

249. Which of the following principles is NOT part of REST design constraints?

A. Statelessness

B. Caching

C. Uniform Interface

D. Server-side Sessions

ANSWER: D

250. What type of API combines multiple data or service APIs into a single call?

    A. Open API

    B. Internal API

    C. Partner API

    D. Composite API

ANSWER: D

251. What is the primary role of the Kubelet service on a Kubernetes node?

    A. Providing API access

    B. Distributing workloads

    C. Storing configuration data

    D. Managing network rules and port forwarding

ANSWER: D

252. What is the primary role of the Kubelet service on a Kubernetes node?

    A. Providing API access

    B. Distributing workloads

    C. Storing configuration data

    D. Managing network rules and port forwarding

ANSWER: D

253. Which hybrid cloud scenario allows companies to handle peak loads by using public cloud resources temporarily?

    A. Backup and disaster recovery

    B. Burst scenario

    C. Safe harbor

    D. Application development with DevOps

ANSWER: B

254. Which AWS service handles API version management and monitoring?

    A. Amazon EC2

    B. AWS Lambda

    C. Amazon API Gateway

    D. Amazon S3

ANSWER: C

255. In a serverless architecture, what is a "cold start"?

    A. A problem with database integration.

    B. A delay in the function's execution due to container initialization.

    C. A situation where the container is running continuously.

    D. A feature of continuous integration pipelines.

ANSWER: B

256. In Kubernetes, which component is responsible for maintaining the desired state of the cluster by running various controllers?

    A. API Server

    B. Scheduler

    C. Controller Manager

    D. etcd

ANSWER: C

257. What problem does Kubernetes solve?

    A. Managing containerized applications across clusters

    B. Storing Docker images

    C. Deploying single containers on a local machine

    D. Writing code for serverless functions

ANSWER: A

258. Which component is used in Docker to create and manage containerized applications?

    A. Docker Hub

    B. Docker Swarm

    C. Docker Compose

    D. Docker Engine

ANSWER: D

259. Which of the following is NOT a characteristic of cloud-native applications?

A. Container-based deployment

B. Stateless services

C. Large monolithic codebases

D. Continuous Integration and Continuous Delivery (CI/CD)

ANSWER: C

260. In a microservices architecture, how do services typically communicate with each other?

A. Message Queues

B. Shared Database

C. Direct method calls

D. Lightweight protocols (e.g., REST, gRPC)

ANSWER: D

261. What does the DataPower Gateway support in terms of deployment?

A. Only physical appliances

B. Both virtual and physical appliances

C. Only cloud-based environments

D. Only virtual appliances

ANSWER: B

262. Why might an organization choose to 'Refactor' an application during the cloud migration process?

A. To maintain the existing business model without any changes

B. To switch to a completely new product or service

C. To avoid any changes to the application's underlying technology

D. To improve the application's architecture and performance for anticipated traffic spikes

ANSWER: D

263. What does IBM Garage™ focus on when working with clients?

A. Reducing the number of cloud providers used

B. Co-creating cloud-native applications using enterprise design thinking

C. Exclusively migrating legacy applications to the cloud

D. Only providing theoretical frameworks without practical implementation

ANSWER: B

264. What should be considered when assessing the overall risk and project duration of a migration?

A. The specific applications to be migrated

B. Only the cost of the cloud provider

C. The complexity of the migration, potential risks, and timeline for completion

D. The cost of maintaining on-premises hardware

ANSWER: C

265. What are some of the primary goals IBM aims to achieve through modernization efforts?

A. Limit the use of modern development tools and methods

B. Reduce operating costs, free up innovation capital, and enhance application security

C. Focus only on migrating applications without optimizing them

D. Increase technical debt and application complexity

ANSWER: B

266. What does the continuous development phase in DevOps involve?

A. Deploying and operating the application in production environments

B. Monitoring application performance and collecting user feedback

C. Planning and coding the product, using tools like Git and Slack

D. Coding, integrating, and testing the application

ANSWER: D

267. Which of the following is NOT typically considered a benefit of cloud migration?

   A. Improved scalability

   B. Cost savings

   C. Enhanced performance

   D. Increased maintenance costs

ANSWER: D

268. In which phase of migration planning should you conduct a cloud affinity assessment for each application?

   A. Legacy application migration

   B. Application identification and assessment

   C. Total cost of ownership (TCO) assessment

   D. Assess overall risk and project duration

ANSWER: B

269. What type of migration risk involves the potential for major changes to cause conflicts leading to downtime?

   A. Unexpected downtime

   B. Cultural issues or change management difficulties

   C. Unforeseen technical challenges

   D. Unanticipated costs

ANSWER: A

270. What are some potential challenges when migrating applications from bare metal hardware compared to virtualized environments?

   A. Virtualized environments require more complex migration strategies than bare metal.

   B. Bare metal environments often involve more complex dependencies and configurations, making migration more challenging.

   C. Bare metal environments are easier to migrate due to less dependency.

   D. Virtualized environments always require complete redesigns.

ANSWER: B

271. Why is it important for IBM to assess the total cost of ownership (TCO) in application migration?

   A. To compare costs of maintaining on-premises hardware with those of cloud services and migration expenses

   B. To avoid evaluating ongoing maintenance costs for legacy systems

   C. To exclude costs related to employee training and testing

   D. To only consider the cost of new software licenses

ANSWER: A

272. What is a key aspect of the "Learning" phase in the IBM Cloud DevOps lifecycle?

   A. Coding and building new features

   B. Deploying new features to production

   C. Gathering feedback from end users and improving future releases

   D. Monitoring system performance

ANSWER: C

273. How does continuous testing fit into the DevOps lifecycle according to IBM Cloud?

   A. It is a discrete phase between integration and deployment.

   B. It occurs continuously across various phases, including planning, development, and deployment.

   C. It is only performed after deployment.

   D. It is not considered a part of the DevOps lifecycle.

ANSWER: B

274. Which DevOps tool is used to simulate a test environment in a container for continuous testing?

   A. Git

   B. Jenkins

   C. Docker

   D. Slack

ANSWER: C

275. Which workflow in the IBM Cloud DevOps lifecycle involves ensuring features are running smoothly and addressing any issues?

A. Planning

B. Development

C. Operations

D. Integration

ANSWER: C

276. How does DevOps utilize cloud services to improve the development process?

A. By enforcing fixed hardware and software allocations

B. By allowing flexible resource allocation and scaling within budget

C. By eliminating the need for version control

D. By restricting communication between team members

ANSWER: B

277. Which phase in the DevOps lifecycle involves using tools like Ant, Maven, or Gradle?

A. Continuous Integration

B. Continuous Deployment

C. Continuous Development

D. Continuous Testing

ANSWER: C

278. Why is AWS considered beneficial for DevOps practices?

A. It requires extensive setup and installation

B. It offers limited scalability and programmability

C. It provides fully managed services, automation, and scalability

D. It lacks integration with third-party tools

ANSWER: C

279. What does the 'Programmable' feature of AWS allow you to do?

A. Use AWS services only via graphical user interface

B. Manually configure each AWS service

C. Model and provision AWS resources using declarative templates and APIs

D. Only use AWS services via the web interface

ANSWER: C

280. Which of the following is a disadvantage of the Waterfall model?

A. Allows for easy adaptation to changing requirements

B. Provides early visibility of project progress

C. Difficulty in making changes during the testing phase

D. Supports rapid development and deployment cycles

ANSWER: C

281. Which DevOps benefit involves managing infrastructure and development processes efficiently at scale?

A. Speed

B. Reliability

C. Scale

D. Security

ANSWER: C

282. What does the 'Security' benefit of DevOps ensure?

A. Minimal control over compliance and security

B. Automated compliance policies and fine-grained controls

C. Reduced focus on security to accelerate development

D. Faster release cycles at the expense of security

ANSWER: B

283. How does DevOps differ from Agile?

A. Agile is a tool for version control, while DevOps is a testing framework

B. DevOps integrates development and operations for a holistic approach, while Agile focuses on iterative development

C. DevOps is solely focused on development, while Agile focuses on operations

D. Agile emphasizes continuous integration, while DevOps focuses on manual processes

ANSWER: B

284. Which of the following is NOT a practice or framework under Agile methodologies?

A. Kanban

B. Scaled Agile Framework (SAFe)

C. Waterfall Model

D. Scrum

ANSWER: C

285. What is the purpose of Jenkins in a DevOps pipeline?

A. Continuous Integration and Continuous Delivery

B. Automated testing

C. Version control

D. Containerization

ANSWER: A

286. How does Puppet differ from Ansible in terms of architecture?

A. Puppet is only for Unix systems, while Ansible is cross-platform

B. Puppet does not have a GUI, while Ansible does

C. Puppet is agent-based, while Ansible uses a client-server model

D. Puppet uses a client-server model, while Ansible is agent-based

ANSWER: C

287. Which tool provides high cardinality analytics and detailed visualizations for debugging and post-incident reviews?

A. Rational ClearCase

B. Chef

C. SignalFx

D. SVN

ANSWER: C

288. What is the role of the YAML file in Kubernetes?

A. Describes the desired state of a container cluster

B. Automates configuration management

C. Manages version control

D. Defines the build process and dependencies

ANSWER: A

289. Which of the following tools is known for providing detailed insights into user experience, including app crashes and performance metrics?

A. Catchpoint

B. JUnit

C. Splunk Cloud

D. Raygun

ANSWER: D

290. How does Gremlin support chaos engineering?

A. By simulating chaos and stress tests on systems

B. By generating alerts and incident reports

C. By providing real-user monitoring and error management

D. By automating code deployments and build processes

ANSWER: A

291. What unique feature does AWS CodeBuild offer compared to traditional build services?

    A. It automates code deployments

    B. It provides a unified interface for managing software development activities

    C. It manages containerized applications

    D. It scales continuously and processes multiple builds concurrently

ANSWER: D

292. Which AWS service enables security and governance by providing configuration history and change notifications?

    A. AWS X-Ray

    B. AWS Config

    C. AWS OpsWorks

    D. AWS CodeCommit

ANSWER: B

293. How does AWS X-Ray help developers?

    A. By analyzing and debugging distributed applications

    B. By managing build and test processes

    C. By providing real-time API usage tracking

    D. By automatically scaling web applications

ANSWER: A

294. What is the primary function of AWS CodeCommit?

    A. To host secure and scalable private Git repositories

    B. To manage configuration with Chef

    C. To monitor cloud resources and applications

    D. To provide platform-as-a-service for web apps

ANSWER: A

295. What is a key benefit of AWS CodeBuild?

    A. Provides automatic scaling and concurrent builds

    B. Handles real-time monitoring and logging

    C. Eliminates the need for configuration management

    D. Manages source code versioning

ANSWER: A

296. How does AWS CodePipeline enhance the release process?

    A. By automating and integrating build, test, and deploy stages

    B. By providing a test automation framework

    C. By managing source code repositories

    D. By configuring infrastructure as code

ANSWER: A

297. Which AWS DevOps tool is fully managed and used for handling the complexity of updating applications?

    A. AWS CodePipeline

    B. AWS CodeDeploy

    C. AWS CodeBuild

    D. AWS CodeStar

ANSWER: B

298. Which IBM Cloud service provides centralized management of secrets used in applications and services?

    A. IBM Key Protect

    B. IBM Cloud App Configuration

    C. IBM Cloud Secrets Manager

    D. IBM Cloud Activity Tracker

ANSWER: C

299. What is a key challenge associated with DevOps that involves maintaining security practices?

    A. Managing legacy systems

    B. Increased tool diversity

    C. Security in CI/CD processes

    D. Proper mindset across the company

ANSWER: C

300. Which IBM Cloud service helps in deploying and operating Kubernetes clusters?

    A. IBM Cloud Monitoring

    B. IBM Cloud Satellite

    C. IBM Cloud Code Engine

    D. IBM Kubernetes Service

ANSWER: D

301. What type of cost model does AWS CodeBuild use?

    A. Pay-as-you-go based on storage used

    B. Pay-as-you-go based on the number of builds

    C. Subscription-based pricing for build servers

    D. Pay-as-you-go based on the number of minutes for compute resources

ANSWER: D

302. Which file specifies the build commands in AWS CodeBuild?

    A. buildspec.yml

    B. build.json

    C. build.yaml

    D. config.json

ANSWER: A

303. How does AWS CodeBuild ensure that build artifacts are securely managed?

    A. By requiring user-specific access controls only

    B. By encrypting artifacts during transmission only

    C. By storing artifacts in a secure, isolated environment

    D. By encrypting artifacts with customer-specific keys managed by AWS KMS

ANSWER: D

304. What is a key benefit of using AWS CodePipeline for software delivery?

    A. It manually tracks deployment status and errors

    B. It automates the build, test, and deploy phases of the release process

    C. It provides physical servers for hosting applications

    D. It requires manual setup of servers

ANSWER: B

305. How does AWS CodeDeploy ensure the reliability of deployments?

    A. By only deploying to new instances

    B. By deploying only in one region

    C. By allowing deployments to be stopped and rolled back if errors are detected

    D. By creating backup copies of the source code

ANSWER: C

306. What is the advantage of AWS CodePipeline's integration with third-party services?

    A. It eliminates the need for continuous integration

    B. It only works with AWS-native services

    C. It requires no integration with existing tools

    D. It allows for the use of custom plugins and services in the release process

ANSWER: D

307. How does IBM Cloud DevOps Insights help in the delivery process?

    A. By analyzing data from DevOps toolchain to advise on risks and improvements

    B. By automating build processes

    C. By generating code from starter kits

    D. By managing issue tracking

ANSWER: A

308. Which toolchain is specifically designed for canary testing in Kubernetes using Istio?

    A. Progressive rollout in Kubernetes using iter8

    B. Canary testing in Kubernetes using Istio

    C. Develop a Kubernetes app with Helm

    D. Develop a Code Engine app

ANSWER: B

309. What unique feature does the "Develop and test microservices on Kubernetes with Helm" toolchain provide?

    A. Continuous integration and deployment pipelines for microservices

    B. Integration with Google Analytics

    C. Image signing and signature check policy

    D. Automated monitoring and operations

ANSWER: A

310. Which toolchain is used to explore DevOps Insights with no setup required and contains data from reference toolchains and GitHub repos?

    A. Build your own toolchain

    B. DevOps Insights Quick Start Demo

    C. Garage Method tutorial with Cloud Foundry

    D. Continuous Delivery toolchain

ANSWER: B

311. Which step in creating a toolchain includes validating the Key Protect instance for securely storing API keys?

    A. Configuring Delivery Pipeline

    B. Reviewing toolchain settings

    C. Selecting tool integrations

    D. Creating the API key

ANSWER: D

312. What is the purpose of the toolchain diagram shown during toolchain creation?

    A. To illustrate the tool integrations and their lifecycle phases in the toolchain

    B. To display the costs associated with the toolchain

    C. To provide a list of available toolchains

    D. To show the user interface of each tool

ANSWER: A

313. In which scenario would you use the "Develop a Cloud Foundry app" toolchain template?

    A. When you are configuring continuous delivery for Kubernetes apps

    B. When you want to create a microservices app with image signing

    C. When you want to set up a toolchain for monitoring and alerting

    D. When you need to develop and deploy a Cloud Foundry app with preconfigured pipelines

ANSWER: D

314. What happens if you select a source code tool integration such as GitHub when creating a toolchain?

    A. The toolchain sends alerts to PagerDuty

    B. The toolchain is configured to use local storage

    C. The sample GitHub repository is cloned into your GitHub account

    D. The toolchain is set up with automated cloud backups

ANSWER: C

315. How can you control the parallel execution of stages in the Classic Delivery Pipeline?

    A. By using multiple pipeline instances

    B. By defining parallel branches in the pipeline configuration

    C. By configuring concurrent execution limits in the pipeline settings

    D. By setting up separate toolchains for each stage

ANSWER: B

316. What is the role of a 'build trigger' in the Classic Delivery Pipeline?

    A. To deploy artifacts to production

    B. To manage user access to the pipeline

    C. To start a pipeline run based on a specific event or schedule

    D. To generate build reports

ANSWER: C

317. In the Classic Delivery Pipeline, how can you handle sensitive data such as passwords or API keys securely?

    A. By storing them in plaintext in the code repository

    B. By embedding them directly in the pipeline configuration file

    C. By creating public access keys

    D. By using environment variables or secret management tools

ANSWER: D

318. What is the significance of 'pipeline variables' in managing builds in the Classic Delivery Pipeline?

    A. They allow dynamic configuration and parameterization of the pipeline

    B. They store metadata about build artifacts

    C. They manage user permissions and roles

    D. They control the versioning of the code repository

ANSWER: A

319. How can you securely handle sensitive data such as API keys in pipeline jobs?

    A. By including them in the pipeline configuration file

    B. By embedding them in the script

    C. By storing them in plaintext within the job

    D. By using service API keys with restricted access

ANSWER: D

320. Which command can be run with sudo in a pipeline job?

    A. '/usr/bin/grep'

    B. '/usr/bin/ls'

    C. '/usr/bin/rm'

    D. '/usr/bin/apt-get'

ANSWER: D

321. If a job fails in a stage, what is the default behavior regarding subsequent jobs in that stage?

    A. The pipeline restarts the failed job

    B. Subsequent jobs continue to run

    C. The pipeline sends a notification

    D. Subsequent jobs do not run

ANSWER: D

322. How can you access the configuration from a deprecated job type in the Classic Delivery Pipeline?

    A. Use the IBM Cloud Devtool or Delivery Pipeline API

    B. Recreate the pipeline with a new job type

    C. Contact IBM Cloud support

    D. Use an alternative job type within the UI

ANSWER: A

323. When creating computed properties in a pipeline, how can you ensure that subsequent stages use these properties?

    A. Write computed properties to a build.properties file and use it in subsequent stages

    B. Include the computed properties directly in the manifest file

    C. Hardcode properties in the deploy script

    D. Define properties in the environment properties tab of each stage

ANSWER: A

324. What is a key consideration when configuring a deploy job for a Cloud Foundry app with multiple services?

A. Ensure that all services are listed in the manifest file

B. Deploy to a single region only

C. Configure environment variables only in the build job

D. Use the cf push command without any arguments

ANSWER: A

325. How does the integration of Git Repos and Issue Tracking with toolchains benefit a development pipeline?

A. It provides automated build and test triggers based on issue tracking

B. It facilitates fine-grained access controls and code review

C. It allows for direct deployment from Git Repos

D. It replaces the need for a separate issue tracker

ANSWER: B

326. How can you verify the host key fingerprint for a headless connection to Git over SSH using a script?

A. By using 'ssh-keyscan' and comparing the fingerprint with an expected value

B. By setting up a firewall rule to verify the connection

C. By manually checking the host key on the server

D. By using 'ssh-keygen' and updating the 'known_hosts' file directly

ANSWER: A

327. What should you do if the host key fingerprint does not match the expected value?

A. Recreate the personal access token

B. Proceed with the connection anyway

C. Terminate the connection and alert the administrator

D. Update the SSH key on the server

ANSWER: C

328. What is a policy gate in DevOps Insights used for?

A. To authenticate with Git repos

B. To update the display name in the DevOps dashboard

C. To customize rules and standards for code quality

D. To store build artifacts

ANSWER: C

329. What is an example of an API offering data monetization?

A. Google Maps API

B. AccuWeather API

C. Twitter API

D. PayPal API

ANSWER: B

330. How does a travel booking site utilize APIs for flight comparisons?

A. By manually entering data from airlines

B. By directly accessing airline databases

C. By displaying static flight information

D. By aggregating data from multiple sources through APIs

ANSWER: D

331. Which aspect of API functionality allows an application to plot travel routes or track moving items?

A. Google Maps API

B. PayPal API

C. Facebook Login API

D. Twitter API

ANSWER: A

332. What is the purpose of the 'cacheability' constraint in REST API design?

   A. To ensure resources are always fresh and updated

   B. To allow resources to be cached to improve performance and scalability

   C. To restrict the size of the resources

   D. To ensure that server applications do not store any client-side data

ANSWER: B

333. Which API type remains hidden from external users and is intended for internal use within a company?

   A. Partner API

   B. Open API

   C. Internal API

   D. Composite API

ANSWER: C

334. In REST API design, what does 'layered system architecture' refer to?

   A. A system where the client and server applications are directly connected

   B. A system where calls and responses pass through multiple intermediaries

   C. A system where the server stores state information for clients

   D. A system where executable code is sent on-demand

ANSWER: B

335. Which REST constraint ensures that a client and server can evolve independently without affecting each other?

   A. Statelessness

   B. Client-Server Separation

   C. Code on Demand

   D. Layered System

ANSWER: B

336. What does the "Cacheability" constraint in REST design imply?

   A. Resources cannot be cached

   B. All data must be stored in a database

   C. Only static data can be cached

   D. Resources can be cached to improve performance and scalability

ANSWER: D

337. In REST API design, what is a composite API used for?

   A. Handling authentication

   B. Encrypting data during transmission

   C. Generating dynamic content

   D. Combining multiple data or service APIs into one endpoint

ANSWER: D

338. What is the primary role of the OpenAPI Specification (OAS) in API design?

   A. To handle data encryption

   B. To define security protocols

   C. To describe an API's endpoints, operations, and parameters

   D. To manage API lifecycle

ANSWER: C

339. In a serverless architecture, what is the primary role of a cloud provider?

   A. Develop custom server-side applications

   B. Manage physical server hardware

   C. Create and manage container orchestration

   D. Dynamically allocate server resources and run code

ANSWER: D

340. What is the main benefit of using Functions-as-a-Service (FaaS) in serverless computing?

A. Manual scaling of server instances

B. Continuous server maintenance

C. Complete control over hardware configurations

D. Running custom server-side logic without managing the underlying infrastructure

ANSWER: D

341. How does Amazon API Gateway help the UK Driver and Vehicle Licensing Agency (DVLA) handle high transaction volumes?

A. By enabling elastic scaling and rate limiting

B. By providing fixed server capacities

C. By allowing the use of on-premises hardware

D. By reducing the need for serverless computing

ANSWER: A

342. Which of the following is the correct order of steps to create and test an AWS Lambda function?

A. Create a role, write code, create function, test function

B. Write code, create function, configure test event, invoke function

C. Login to AWS, create function, configure test event, invoke function

D. Open Lambda console, write code, create function, configure role

ANSWER: C

343. What is the first step in creating multiple connected AWS Lambda functions?

A. Write the function code

B. Create Function URLs

C. Login into your AWS account and access the Lambda console

D. Configure the test events

ANSWER: C

344. Which runtime is used for the Serverless and ServerlessParam Lambda functions?

A. Ruby

B. Java

C. Node.js

D. Python 3.9

ANSWER: D

345. Which role is used for the Serverless Lambda function?

A. lambda_basic_execution

B. ServerlessRole

C. S3FullAccess

D. AdministratorAccess

ANSWER: A

346. What should you do after creating the Lambda functions?

A. Change the runtime to a different language

B. Create a new AWS account

C. Delete the functions immediately

D. Configure the test events for each function

ANSWER: D

347. What is the purpose of creating a Function URL in the Lambda configuration?

A. To change the execution role

B. To delete the Lambda function

C. To add environment variables

D. To trigger the function through a web request

ANSWER: D

348. Which option allows you to manage multiple Lambda functions as a group?

A. Execution timeout

B. Tags

C. Environment variables

D. Memory allocation

ANSWER: B

349. What should you do after creating the IBM Cloud function to see the initial result?

A. Click the Invoke button

B. Click the Save button

C. Change the runtime

D. Enable Web Action

ANSWER: A

350. How do you modify the function's output message?

A. By creating a new function

B. By disabling the Web Action

C. By changing the runtime environment

D. By editing the function code and clicking Save

ANSWER: D

351. How can you invoke the IBM Cloud function as a REST API?

A. By enabling it as a Web Action

B. By modifying the runtime

C. By adding an API Gateway

D. By setting up a new server

ANSWER: A

352. What is the purpose of creating the Triggers in IBM Cloud Functions?

A. To create a REST API

B. To link multiple connected functions

C. To test the function

D. To deploy the function

ANSWER: B

353. What is a common reason for migrating an application?

A. To reduce software licensing costs

B. To optimize performance

C. To eliminate all dependencies

D. To create a new user interface

ANSWER: B

354. What might be a goal of application migration?

A. To reduce the user base

B. To enhance scalability and security

C. To make the application slower

D. To increase the complexity of the application

ANSWER: B

355. What is application migration?

A. The process of developing a new software application

B. The process of moving a software application from one computing environment to another

C. The process of enhancing an existing application

D. The process of testing an application for bugs

ANSWER: B

356. What is the purpose of "The 6 Rs of Cloud Migration"?

A. To define cloud service types

B. To assess application performance

C. To list cloud service providers

D. To organize strategies for cloud migration

ANSWER: D

357. Which of the following is NOT one of the 6 Rs of Cloud Migration?

A. Retire

B. Rehost

C. Reengineer

D. Repurchase

ANSWER: C

358. What is the first step in the cloud migration process?

A. Perform a cost assessment

B. Determine which workloads will be relocated

C. Assign a team for migration

D. Communicate goals to stakeholders

ANSWER: B

359. What should be prioritized before starting the migration?

    A. Determining the cloud provider's reliability

    B. Establishing KPIs for the migration

    C. Assigning roles to the stakeholders

    D. Prioritizing which workloads to migrate first

ANSWER: D

360. In the context of migration, what does KPI stand for?

    A. Key Project Initiatives

    B. Key Performance Indicator

    C. Knowledge Performance Index

    D. Key Process Improvement

ANSWER: B

361. What does IBM Cloud offer for cloud migration?

    A. Limited migration options

    B. A full suite of cloud migration tools and services

    C. Only virtual servers

    D. Only data storage solutions

ANSWER: B

362. Which of the following Kubernetes components is responsible for ensuring that the desired number of container instances is running?

    A. Pods

    B. Services

    C. ReplicaSets

    D. Deployments

ANSWER: C

363. In Docker, what is the primary purpose of Docker Hub?

    A. To monitor container performance

    B. To provide a registry for storing and sharing Docker images

    C. To run Docker containers

    D. To define and manage Docker Compose files

ANSWER: B

364. Which feature of Kubernetes allows for the automatic scaling of applications based on load?

    A. Horizontal Pod Autoscaler

    B. ConfigMaps

    C. StatefulSets

    D. Kubernetes Dashboard

ANSWER: A

365. What is the key difference between a stateless and a stateful application in the context of FaaS?

    A. Stateless applications require continuous network connections, while stateful applications do not.

    B. Stateless applications do not maintain any state between function invocations, while stateful applications do.

    C. Stateless applications run indefinitely, while stateful applications run for a short time.

    D. Stateless applications use local storage, while stateful applications use cloud storage.

ANSWER: B

366. In a Kubernetes cluster, what is the main purpose of the Kubernetes Proxy service?

    A. Running containerized applications

    B. Forwarding requests to the correct containers and performing basic load balancing

    C. Managing container images

    D. Storing configuration data

ANSWER: B

367. What does the 'develop once, run anywhere' approach refer to in the context of hybrid cloud application development?

    A. Developing applications that run only on private clouds

    B. Ensuring applications can be deployed across both public and private cloud environments seamlessly

    C. Developing applications that are optimized for a single environment

    D. Creating applications that cannot be ported between different cloud environments

ANSWER: B

368. Which Kubernetes component ensures that the number of running instances of a pod matches the desired state specified by the user?

    A. API Server

    B. etcd

    C. Scheduler

    D. ReplicaSet

ANSWER: D

369. What key feature of a hybrid cloud infrastructure allows IT departments to act as cloud brokers and provide a unified service catalog?

    A. Unified technology stack across public and private clouds

    B. Container security policies

    C. Edge Computing integration

    D. Legacy system replacement

ANSWER: A

370. What is the primary advantage of using Kubernetes for managing containers in a microservices architecture?

    A. It allows for single-node deployments only

    B. It provides built-in security for applications

    C. It offers automatic container orchestration and scaling

    D. It replaces the need for a load balancer

ANSWER: C

371. In an event-driven serverless architecture, what triggers the execution of serverless functions?

    A. Scheduled tasks

    B. Events or HTTP requests

    C. Manual triggers

    D. Background services

ANSWER: B

372. Which architecture model focuses on breaking down an application into discrete components that can be developed, deployed, and scaled independently?

    A. Monolithic Architecture

    B. Microservices Architecture

    C. 3-Tier Architecture

    D. Serverless Architecture

ANSWER: B

373. What is a common challenge when transitioning from a monolithic architecture to a microservices architecture?

    A. Reduced scalability

    B. Increased complexity in managing independent services

    C. Simplified deployment

    D. Decreased need for API management

ANSWER: B

374. What is the key difference between 'Replatforming' and 'Rehosting'?

    A. Replatforming involves creating a new application, whereas Rehosting involves improving an existing one.

    B. Replatforming requires changing the application's underlying technology, while Rehosting does not.

    C. Replatforming and Rehosting are essentially the same thing.

    D. Replatforming is always less costly than Rehosting.

ANSWER: B

375. Which cloud migration strategy is best suited for applications that are too difficult to migrate?

    A. Refactor

    B. Repurchase

    C. Retain

    D. Retire

ANSWER: C

376. What does the 'Retire' strategy in cloud migration entail?

   A. Identifying and discontinuing applications that are no longer needed

   B. Moving applications to a new cloud environment

   C. Keeping applications on-premises

   D. Redesigning applications for the cloud

ANSWER: A

377. What does the 'Total Cost of Ownership (TCO)' assessment in migration planning involve?

   A. Evaluating only the costs of cloud provider services

   B. Comparing hardware costs with cloud provider costs and migration expenses

   C. Determining the cost of maintaining legacy applications only

   D. Calculating only the migration costs without considering ongoing expenses

ANSWER: B

378. Which migration strategy involves redesigning an application to improve its performance and reliability?

   A. Repurchase

   B. Refactor

   C. Rehost

   D. Replatform

ANSWER: B

379. What might be a significant challenge when migrating legacy applications to the cloud?

   A. Improved performance in modern environments

   B. Simplicity in migration

   C. Lower maintenance costs

   D. Outdated software, which can be expensive and raise security concerns

ANSWER: D

380. In IBM's strategy, what is the role of AI-driven insights and visualizations?

   A. To reduce the need for cloud services

   B. To manage all aspects of IT operations permanently

   C. To develop a custom solution and ROI-driven roadmap

   D. To replace existing applications with new ones

ANSWER: C

381. How does IBM's approach to application deployment and management benefit organizations?

   A. By increasing manual processes for control

   B. By providing no support for security and compliance

   C. By reducing costs while increasing operational efficiency and visibility

   D. By focusing only on on-premises environments

ANSWER: C

382. After installing the Migration Toolkit, which command will give you a list of help commands for analysis?

   A. 'java -jar binaryAppScanner.jar --help'

   B. 'java -jar binaryAppScannerInstaller.jar --analyze'

   C. 'java -jar binaryAppScannerInstaller.jar --help'

   D. 'java -jar binaryAppScanner.jar binaryInputPath --analyze'

ANSWER: C

383. When running the 'java -jar binaryAppScanner.jar binaryInputPath --analyze' command, what happens if you don't specify a different directory for extraction?

   A. The files will extract to a default directory

   B. The extraction will fail

   C. The files will not extract

   D. The files will extract to a random directory

ANSWER: A

384. Which tool is primarily used to manage application migration from WebSphere Application Server traditional V8.5.5 to Liberty?

    A. Command-line interface

    B. HTTPS download tool

    C. Migration Toolkit for Application Binaries

    D. WebSphere Liberty V22.0.0.5 packages

ANSWER: C

385. What is the first command you run to add all new or modified files into staging before committing?

    A. 'git push origin main'

    B. 'git add .'

    C. 'git commit -m "initial commit"'

    D. 'git pull'

ANSWER: B

386. Which tool is integrated into the IBM Cloud DevOps toolchain to manage code repositories?

    A. Docker

    B. Kubernetes

    C. GitHub

    D. Jenkins

ANSWER: C

387. What is the correct sequence of actions to push changes to the main branch in GitHub?

    A. 'git add .', 'git push origin main', 'git commit -m "initial commit"'

    B. 'git push origin main', 'git add .', 'git commit -m "initial commit"'

    C. 'git add .', 'git commit -m "initial commit"', 'git push origin main'

    D. 'git commit -m "initial commit"', 'git push origin main', 'git add .'

ANSWER: C

388. In the IBM Cloud toolchain, what does the "Delivery Pipeline" tool enable?

    A. Creating GitHub repositories

    B. Continuous integration and continuous delivery (CI/CD)

    C. Managing API services

    D. Deploying on Kubernetes

ANSWER: B

389. What do you need to do if you see an error about needing a continuous delivery service in IBM Cloud?

    A. Add the "Continuous Delivery" service

    B. Restart the pipeline

    C. Create a new toolchain

    D. Reconfigure the GitHub integration

ANSWER: A

390. What should you do to trigger the "Test Stage" in your pipeline?

    A. Open a new GitHub repository

    B. Open or update a pull request

    C. Push a commit directly to the main branch

    D. Delete a branch

ANSWER: B

391. When should the "Deploy" stage be triggered in the toolchain?

    A. When a pull request is opened

    B. When a commit is pushed to the main/master branch

    C. When a new branch is created

    D. When a GitHub repository is deleted

ANSWER: B

392. Which deployment option is commonly used in the "Deploy" stage in IBM Cloud?

    A. Docker Swarm

    B. Terraform

    C. Cloud Foundry

    D. Jenkins

ANSWER: C

393. What is the first step in creating an AWS Lambda function?

    A. Login into your AWS account and access the Lambda console

    B. Write the function code

    C. Create a Function URL

    D. Configure the test event

ANSWER: A

394. Which runtime is selected when creating the lambdaBlog function?

    A. Ruby

    B. Node.js

    C. Java

    D. Python 3.9

ANSWER: D

395. What role should you choose when creating the AWS Lambda function?

    A. Create a new role

    B. Choose a custom role

    C. Choose an existing role: lambda_basic_execution

    D. Choose the default AWS role

ANSWER: C

396. What can you configure in the Lambda function after it is created?

    A. Memory and environment variables

    B. Web server settings

    C. Database connections

    D. Network firewalls

ANSWER: A

397. Which option allows you to trigger the Lambda function with a test event?

    A. Write custom Python code

    B. Click "Create Function"

    C. Choose Test in the Lambda console

    D. Modify the function URL

ANSWER: C

398. What should you do after modifying the JSON code for the test event?

    A. Delete the Lambda function

    B. Click "Invoke"

    C. Click "Test" to invoke the function

    D. Modify the environment variables

ANSWER: C

399. After successfully executing the Lambda function, what should you do next?

    A. Configure additional roles

    B. Restart the AWS Console

    C. Copy the Function URL and test it in a browser

    D. Modify the runtime to a different language

ANSWER: C

400. What should you do after finishing your work with the Lambda function?

    A. Change the runtime environment

    B. Keep the function for future use

    C. Delete the Lambda function

    D. Download the function logs

ANSWER: C

401. Where do you configure the execution timeout and memory allocation for the Lambda function?

    A. In the AWS CLI

    B. In the Lambda function code editor

    C. In the IAM console

    D. In the Lambda console under Configuration

ANSWER: D

402. What is a key benefit of building containerized applications according to IBM?

A. Exclusively designed for on-premises servers

B. Reduced security measures

C. Increased time to market

D. Optimized for scale and performance with continuous delivery and DevSecOps principles

ANSWER: D

403. In which phase of the DevOps lifecycle is the application monitored to ensure service uptime and optimal performance?

A. Deploy

B. Plan

C. Code

D. Monitor

ANSWER: D

404. Which tool is used for version control and maintaining code changes in DevOps?

A. Selenium

B. Git

C. Slack

D. Jenkins

ANSWER: B

405. How does continuous integration benefit the development process in DevOps?

A. By avoiding the use of automation tools

B. By delaying code integration until the end of the project

C. By regularly updating the central repository and automating build and test processes

D. By only focusing on manual testing

ANSWER: C

406. In which phase does the application get deployed to the production server?

A. Continuous Integration

B. Continuous Testing

C. Continuous Operations

D. Continuous Deployment

ANSWER: D

407. How does Kubernetes help in the continuous operations phase of DevOps?

A. By integrating code changes

B. By eliminating downtime during software updates

C. By automating the testing process

D. By reducing code errors

ANSWER: B

408. What is the purpose of the continuous operations phase in DevOps?

A. To ensure high uptime and manage containerized applications

B. To monitor application performance

C. To gather user feedback

D. To plan and code new features

ANSWER: A

409. What is the purpose of Continuous Integration in the DevOps lifecycle?

A. To gather and evaluate user feedback

B. To integrate and automate different stages of the DevOps lifecycle

C. To deploy code to the production environment

D. To monitor the performance of deployed applications

ANSWER: B

410. Which AWS feature helps you scale from a single instance to thousands?

A. AWS Identity and Access Management (IAM)

B. AWS Elastic Beanstalk

C. AWS CloudFormation

D. AWS Auto Scaling

ANSWER: D

411. What does Continuous Monitoring involve in the DevOps lifecycle?

A. Deploying applications to production servers

B. Automating code integration

C. Monitoring the deployed application for issues and collecting user feedback

D. Building and packaging code

ANSWER: C

412. Which of the following is an advantage of the Waterfall model?

A. Flexibility in handling changing requirements

B. Continuous integration and deployment

C. Easy testing and analysis

D. Rapid iteration and feedback

ANSWER: C

413. How does DevOps improve collaboration between teams?

A. By focusing solely on development and ignoring operational concerns

B. By integrating development and operations teams and sharing responsibilities

C. By maintaining separate workflows for development and operations

D. By reducing the frequency of communication between teams

ANSWER: B

414. Which Agile framework focuses on frequent releases and responding to changing customer requirements?

A. Kanban

B. Scrum

C. Lean Development

D. Extreme Programming (XP)

ANSWER: D

415. Which tool is used for containerization in DevOps?

A. Selenium

B. Git

C. Jenkins

D. Docker

ANSWER: D

416. Which of the following tools is used for container orchestration and auto-scaling?

A. Kubernetes

B. Apache Ant

C. Rational ClearCase

D. Git

ANSWER: A

417. Which tool uses XML files for the build process and is inspired by the Unix make utility?

A. Chef

B. Maven

C. Docker

D. Ant

ANSWER: D

418. What is the main purpose of Prometheus in DevOps?

A. Version control

B. Configuration management

C. Monitoring and time-series data

D. Containerization

ANSWER: C

419. What is the main purpose of AWS CodePipeline?

    A. To run code without managing servers

    B. To provide continuous integration and continuous delivery workflows

    C. To build and test code

    D. To manage containerized applications

ANSWER: B

420. What directory is created after running the extraction process in the migration toolkit installation?

    A. wlp

    B. liberty

    C. wamt

    D. binaryAppScanner

ANSWER: C

421. What is the purpose of the Migration Toolkit for Application Binaries?

    A. To unzip files

    B. To analyze applications for migration

    C. To download WebSphere packages

    D. To run command-line scripts

ANSWER: B

422. Which command would you use to display the default report for migration from WebSphere Application Server traditional V8.5.5 to Liberty?

    A. 'java -jar binaryAppScannerInstaller.jar --analyze'

    B. 'java -jar binaryAppScanner.jar binaryInputPath --analyze'

    C. 'java -jar binaryAppScannerInstaller.jar --help'

    D. 'java -jar binaryAppScanner.jar --analyze'

ANSWER: B

423. What is a common challenge when transitioning from a monolithic architecture to a microservices architecture?

    A. Increased complexity in managing independent services

    B. Reduced scalability

    C. Simplified deployment

    D. Decreased need for API management

ANSWER: A

424. In Docker, what is the primary purpose of Docker Hub?

    A. To run Docker containers

    B. To provide a registry for storing and sharing Docker images

    C. To define and manage Docker Compose files

    D. To monitor container performance

ANSWER: B

425. What key feature of a hybrid cloud infrastructure allows IT departments to act as cloud brokers and provide a unified service catalog?

    A. Legacy system replacement

    B. Container security policies

    C. Unified technology stack across public and private clouds

    D. Edge Computing integration

ANSWER: C

426. Which command is used to install the migration analysis tool?

    A. 'java -jar binaryAppScanner.jar'

    B. 'java -jar binaryAppScannerInstaller.jar --help'

    C. 'java -jar binaryAppScannerInstaller.jar'

    D. 'java -jar binaryInputPath --analyze'

ANSWER: C

427. Which Kubernetes component ensures that the number of running instances of a pod matches the desired state specified by the user?

A. Scheduler

B. API Server

C. ReplicaSet

D. etcd

ANSWER: C

428. What does the 'develop once, run anywhere' approach refer to in the context of hybrid cloud application development?

A. Developing applications that are optimized for a single environment

B. Ensuring applications can be deployed across both public and private cloud environments seamlessly

C. Developing applications that run only on private clouds

D. Creating applications that cannot be ported between different cloud environments

ANSWER: B

429. What is the primary advantage of using Kubernetes for managing containers in a microservices architecture?

A. It provides built-in security for applications

B. It offers automatic container orchestration and scaling

C. It allows for single-node deployments only

D. It replaces the need for a load balancer

ANSWER: B

430. In a Kubernetes cluster, what is the main purpose of the Kubernetes Proxy service?

A. Running containerized applications

B. Forwarding requests to the correct containers and performing basic load balancing

C. Managing container images

D. Storing configuration data

ANSWER: B

431. Which feature of Kubernetes allows for the automatic scaling of applications based on load?

A. ConfigMaps

B. Horizontal Pod Autoscaler

C. Kubernetes Dashboard

D. StatefulSets

ANSWER: B

432. What is the first step in the migration analysis procedure?

A. Unzip the folder

B. Download WebSphere Liberty V22.0.0.5 packages

C. Install the Migration Toolkit for Application Binaries

D. Run the migration analysis tool

ANSWER: B

433. What is the key difference between a stateless and a stateful application in the context of FaaS?

A. Stateless applications do not maintain any state between function invocations, while stateful applications do.

B. Stateless applications run indefinitely, while stateful applications run for a short time.

C. Stateless applications require continuous network connections, while stateful applications do not.

D. Stateless applications use local storage, while stateful applications use cloud storage.

ANSWER: A

434. What does AWS CodeBuild primarily provide?

A. Configuration management

B. Continuous integration

C. Monitoring and logging

D. Version control

ANSWER: B

435. Which tool is known for automating software deployments to services like Amazon EC2 and AWS Lambda?

    A. AWS CodePipeline

    B. AWS CodeBuild

    C. AWS CodeDeploy

    D. AWS X-Ray

ANSWER: C

436. Which toolchain uses IBM Cloud Kubernetes Service and Razee for application development and deployment?

    A. Develop a Kubernetes app with Helm

    B. Develop a Kubernetes app with image signing

    C. Develop a Kubernetes app with Razee

    D. Develop and test microservices on Kubernetes with Helm

ANSWER: C

437. What feature of AWS CodeDeploy helps maximize application availability during deployments?

    A. Automatic scaling

    B. Centralized control

    C. Incremental changes and health tracking

    D. Custom build environments

ANSWER: C

438. How does AWS CodeBuild handle scaling?

    A. It requires manual scaling

    B. It scales automatically based on build volume

    C. It uses a fixed number of build servers

    D. It scales through scheduled upgrades

ANSWER: B

439. Which AWS service can be integrated into AWS CodePipeline for continuous integration?

    A. AWS CodeDeploy

    B. AWS CodeCommit

    C. AWS CodeBuild

    D. AWS CloudFormation

ANSWER: C

440. What does the IBM Cloud Continuous Delivery service provide?

    A. Cloud storage

    B. Delivery Pipeline, Git Repos, and Eclipse Orion Web IDE

    C. Code generation technology

    D. Data analytics

ANSWER: B

441. Which toolchain template is preconfigured with Docker image signing and signature check policy?

    A. Develop a Kubernetes app with Razee

    B. Develop a Kubernetes app with Helm

    C. Develop a Kubernetes app with image signing

    D. Develop and test microservices on Kubernetes with Helm

ANSWER: C

442. Which tool is integrated with AWS CodeStar for issue tracking and project management?

    A. Atlassian JIRA Software

    B. GitHub

    C. Jenkins

    D. Selenium

ANSWER: A

443. Which of the following can AWS CodePipeline integrate with for managing source code?

A. Only AWS CodeCommit

B. Only GitHub

C. GitHub or AWS CodeCommit

D. Only AWS CloudFormation

ANSWER: C

444. How does AWS CodeDeploy minimize downtime during application deployment?

A. By deploying changes all at once

B. By introducing changes incrementally and tracking application health

C. By pausing deployments if an error occurs

D. By deploying only to staging environments

ANSWER: B

445. What must be configured in the Tool Integrations section when creating a toolchain with Delivery Pipeline?

A. A cloud storage instance

B. A continuous integration server

C. An IBM Cloud API Key

D. A virtual machine

ANSWER: C

446. Which command is used to install the migration analysis tool?

A. 'java -jar binaryAppScanner.jar'

B. 'java -jar binaryAppScannerInstaller.jar --help'

C. 'java -jar binaryAppScannerInstaller.jar'

D. 'java -jar binaryInputPath --analyze'

ANSWER: C

447. What is the primary advantage of AWS CodeCommit's encryption?

A. It encrypts files during upload only

B. It encrypts files in transit and at rest

C. It encrypts build artifacts only

D. It encrypts source code repositories only

ANSWER: B

448. What is the purpose of the 'cacheability' constraint in REST API design?

A. To ensure resources are always fresh and updated

B. To allow resources to be cached to improve performance and scalability

C. To ensure that server applications do not store any client-side data

D. To restrict the size of the resources

ANSWER: B

449. What does the "Cacheability" constraint in REST design imply?

A. Resources can be cached to improve performance and scalability

B. All data must be stored in a database

C. Resources cannot be cached

D. Only static data can be cached

ANSWER: A

450. In REST API design, what does 'layered system architecture' refer to?

A. A system where the client and server applications are directly connected

B. A system where calls and responses pass through multiple intermediaries

C. A system where the server stores state information for clients

D. A system where executable code is sent on-demand

ANSWER: B

451. Which REST constraint ensures that a client and server can evolve independently without affecting each other?

A. Layered System

B. Client-Server Separation

C. Statelessness

D. Code on Demand

ANSWER: B

452. Which API type remains hidden from external users and is intended for internal use within a company?

A. Composite API

B. Partner API

C. Internal API

D. Open API

ANSWER: C

453. In REST API design, what is a composite API used for?

A. Combining multiple data or service APIs into one endpoint

B. Generating dynamic content

C. Encrypting data during transmission

D. Handling authentication

ANSWER: A

454. What is the primary role of the OpenAPI Specification (OAS) in API design?

A. To define security protocols

B. To describe an API's endpoints, operations, and parameters

C. To manage API lifecycle

D. To handle data encryption

ANSWER: B

455. What is the main benefit of using Functions-as-a-Service (FaaS) in serverless computing?

A. Continuous server maintenance

B. Complete control over hardware configurations

C. Running custom server-side logic without managing the underlying infrastructure

D. Manual scaling of server instances

ANSWER: C

456. How does Amazon API Gateway help the UK Driver and Vehicle Licensing Agency (DVLA) handle high transaction volumes?

A. By providing fixed server capacities

B. By allowing the use of on-premises hardware

C. By enabling elastic scaling and rate limiting

D. By reducing the need for serverless computing

ANSWER: C

457. What unique feature does the "Develop and test microservices on Kubernetes with Helm" toolchain provide?

A. Image signing and signature check policy

B. Continuous integration and deployment pipelines for microservices

C. Automated monitoring and operations

D. Integration with Google Analytics

ANSWER: B

458. Which toolchain is used to explore DevOps Insights with no setup required and contains data from reference toolchains and GitHub repos?

A. DevOps Insights Quick Start Demo

B. Garage Method tutorial with Cloud Foundry

C. Build your own toolchain

D. Continuous Delivery toolchain

ANSWER: A

459. What is the purpose of the toolchain diagram shown during toolchain creation?

A. To display the costs associated with the toolchain

B. To illustrate the tool integrations and their lifecycle phases in the toolchain

C. To provide a list of available toolchains

D. To show the user interface of each tool

ANSWER: B

460. In which scenario would you use the "Develop a Cloud Foundry app" toolchain template?

A. When you want to create a microservices app with image signing

B. When you need to develop and deploy a Cloud Foundry app with preconfigured pipelines

C. When you are configuring continuous delivery for Kubernetes apps

D. When you want to set up a toolchain for monitoring and alerting

ANSWER: B

461. What is the role of a 'build trigger' in the Classic Delivery Pipeline?

A. To start a pipeline run based on a specific event or schedule

B. To generate build reports

C. To deploy artifacts to production

D. To manage user access to the pipeline

ANSWER: A

462. If a job fails in a stage, what is the default behavior regarding subsequent jobs in that stage?

A. Subsequent jobs continue to run

B. The pipeline restarts the failed job

C. Subsequent jobs do not run

D. The pipeline sends a notification

ANSWER: C

463. How can you securely handle sensitive data such as API keys in pipeline jobs?

A. By embedding them in the script

B. By using service API keys with restricted access

C. By storing them in plaintext within the job

D. By including them in the pipeline configuration file

ANSWER: B

464. How can you verify the host key fingerprint for a headless connection to Git over SSH using a script?

A. By using 'ssh-keyscan' and comparing the fingerprint with an expected value

B. By using 'ssh-keygen' and updating the 'known_hosts' file directly

C. By manually checking the host key on the server

D. By setting up a firewall rule to verify the connection

ANSWER: A

465. In which scenario would you use the "Deploy a Kubernetes app" toolchain template?

A. When you want to develop a microservices app with image signing

B. When you need to deploy applications to Kubernetes with preconfigured pipelines

C. When you are configuring continuous delivery for Cloud Foundry apps

D. When you want to set up a toolchain for monitoring and alerting

ANSWER: B

466. What should you do if the host key fingerprint does not match the expected value?

A. Proceed with the connection anyway

B. Terminate the connection and alert the administrator

C. Recreate the personal access token

D. Update the SSH key on the server

ANSWER: B

467. Which step in creating a toolchain includes selecting integrations for continuous delivery?

A. Reviewing toolchain settings

B. Creating the API key

C. Selecting tool integrations

D. Configuring Delivery Pipeline

ANSWER: C

468. How can you access the configuration from a deprecated job type in the Classic Delivery Pipeline?

A. Use the IBM Cloud Devtool or Delivery Pipeline API

B. Contact IBM Cloud support

C. Recreate the pipeline with a new job type

D. Use an alternative job type within the UI

ANSWER: A

469. What happens if you remove a tool integration from a toolchain?

A. The entire toolchain is deleted

B. The toolchain continues to run, but without that tool's functionality

C. The pipeline stops immediately

D. The tool integration is only temporarily removed

ANSWER: B

470. How does the integration of Git Repos and Issue Tracking with toolchains benefit a development pipeline?

A. It allows for direct deployment from Git Repos

B. It provides automated build and test triggers based on issue tracking

C. It facilitates fine-grained access controls and code review

D. It replaces the need for a separate issue tracker

ANSWER: C

471. What should you do if you need to modify a toolchain configuration?

A. Delete the toolchain and create a new one

B. Edit the toolchain configuration from the dashboard

C. Contact support to make changes

D. Modify the configuration file directly on the server

ANSWER: B

472. What is the purpose of the "Create a GitHub repository" step in the toolchain creation process?

A. To host all the pipeline jobs

B. To manage access control for the toolchain

C. To provide a centralized location for source code management

D. To automate the deployment process

ANSWER: C

473. Which file specifies the build commands in AWS CodeBuild?

A. config.json

B. buildspec.yml

C. build.yaml

D. build.json

ANSWER: B

474. How does AWS CodeBuild ensure that build artifacts are securely managed?

A. By encrypting artifacts during transmission only

B. By encrypting artifacts with customer-specific keys managed by AWS KMS

C. By requiring user-specific access controls only

D. By storing artifacts in a secure, isolated environment

ANSWER: B

475. How does AWS CodeDeploy ensure the reliability of deployments?

    A. By deploying only in one region

    B. By allowing deployments to be stopped and rolled back if errors are detected

    C. By only deploying to new instances

    D. By creating backup copies of the source code

ANSWER:

476. What is the advantage of AWS CodePipeline's integration with third-party services?

    A. It allows for the use of custom plugins and services in the release process

    B. It eliminates the need for continuous integration

    C. It requires no integration with existing tools

    D. It only works with AWS-native services

ANSWER: A

477. How does IBM Cloud DevOps Insights help in the delivery process?

    A. By managing issue tracking

    B. By generating code from starter kits

    C. By analyzing data from DevOps toolchain to advise on risks and improvements

    D. By automating build processes

ANSWER: C

478. Which toolchain is specifically designed for canary testing in Kubernetes using Istio?

    A. Develop a Kubernetes app with Helm

    B. Progressive rollout in Kubernetes using iter8

    C. Develop a Code Engine app

    D. Canary testing in Kubernetes using Istio

ANSWER: D

479. What is an example of an API offering data monetization?

    A. PayPal API

    B. AccuWeather API

    C. Google Maps API

    D. Twitter API

ANSWER: B

480. How does a travel booking site utilize APIs for flight comparisons?

    A. By directly accessing airline databases

    B. By aggregating data from multiple sources through APIs

    C. By displaying static flight information

    D. By manually entering data from airlines

ANSWER: B

481. Which aspect of API functionality allows an application to plot travel routes or track moving items?

    A. Facebook Login API

    B. Google Maps API

    C. PayPal API

    D. Twitter API

ANSWER: B

482. Which of the following is a disadvantage of the Waterfall model?

    A. Difficulty in making changes during the testing phase

    B. Allows for easy adaptation to changing requirements

    C. Supports rapid development and deployment cycles

    D. Provides early visibility of project progress

ANSWER: A

483. Which DevOps benefit involves managing infrastructure and development processes efficiently at scale?

A. Reliability

B. Scale

C. Security

D. Speed

ANSWER: B

484. What does the 'Security' benefit of DevOps ensure?

A. Automated compliance policies and fine-grained controls

B. Minimal control over compliance and security

C. Faster release cycles at the expense of security

D. Reduced focus on security to accelerate development

ANSWER: A

485. How does DevOps differ from Agile?

A. Agile emphasizes continuous integration, while DevOps focuses on manual processes

B. DevOps integrates development and operations for a holistic approach, while Agile focuses on iterative development

C. DevOps is solely focused on development, while Agile focuses on operations

D. Agile is a tool for version control, while DevOps is a testing framework

ANSWER: B

486. Which of the following is NOT a practice or framework under Agile methodologies?

A. Scrum

B. Kanban

C. Waterfall Model

D. Scaled Agile Framework (SAFe)

ANSWER: C

487. What is the purpose of Jenkins in a DevOps pipeline?

A. Continuous Integration and Continuous Delivery

B. Version control

C. Containerization

D. Automated testing

ANSWER: A

488. How does Puppet differ from Ansible in terms of architecture?

A. Puppet uses a client-server model, while Ansible is agent-based

B. Puppet is only for Unix systems, while Ansible is cross-platform

C. Puppet is agent-based, while Ansible uses a client-server model

D. Puppet does not have a GUI, while Ansible does

ANSWER: C

489. Which tool provides high cardinality analytics and detailed visualizations for debugging and post-incident reviews?

A. Chef

B. SignalFx

C. SVN

D. Rational ClearCase

ANSWER: B

490. What is the role of the YAML file in Kubernetes?

A. Describes the desired state of a container cluster

B. Automates configuration management

C. Defines the build process and dependencies

D. Manages version control

ANSWER: A

491. Which of the following tools is known for providing detailed insights into user experience, including app crashes and performance metrics?

    A. Raygun

    B. Splunk Cloud

    C. Catchpoint

    D. JUnit

ANSWER: A

492. How does Gremlin support chaos engineering?

    A. By generating alerts and incident reports

    B. By providing real-user monitoring and error management

    C. By simulating chaos and stress tests on systems

    D. By automating code deployments and build processes

ANSWER: C

493. What unique feature does AWS CodeBuild offer compared to traditional build services?

    A. It scales continuously and processes multiple builds concurrently

    B. It manages containerized applications

    C. It automates code deployments

    D. It provides a unified interface for managing software development activities

ANSWER: A

494. Which AWS service enables security and governance by providing configuration history and change notifications?

    A. AWS OpsWorks

    B. AWS Config

    C. AWS X-Ray

    D. AWS CodeCommit

ANSWER: B

495. How does AWS X-Ray help developers?

    A. By analyzing and debugging distributed applications

    B. By managing build and test processes

    C. By automatically scaling web applications

    D. By providing real-time API usage tracking

ANSWER: A

496. What is the primary function of AWS CodeCommit?

    A. To host secure and scalable private Git repositories

    B. To manage configuration with Chef

    C. To monitor cloud resources and applications

    D. To provide platform-as-a-service for web apps

ANSWER: A

497. What is a key benefit of AWS CodeBuild?

    A. Eliminates the need for configuration management

    B. Provides automatic scaling and concurrent builds

    C. Handles real-time monitoring and logging

    D. Manages source code versioning

ANSWER: B

498. How does AWS CodePipeline enhance the release process?

    A. By providing a test automation framework

    B. By managing source code repositories

    C. By automating and integrating build, test, and deploy stages

    D. By configuring infrastructure as code

ANSWER: C

499. Which IBM Cloud service provides centralized management of secrets used in applications and services?

    A. IBM Cloud Activity Tracker

    B. IBM Key Protect

    C. IBM Cloud Secrets Manager

    D. IBM Cloud App Configuration

ANSWER: C

500. What is a key challenge associated with DevOps that involves maintaining security practices?

 A. Increased tool diversity

 B. Security in CI/CD processes

 C. Managing legacy systems

 D. Proper mindset across the company

ANSWER: B

501. What does IBM Garage™ focus on when working with clients?

 A. Reducing the number of cloud providers used

 B. Co-creating cloud-native applications using enterprise design thinking

 C. Only providing theoretical frameworks without practical implementation

 D. Exclusively migrating legacy applications to the cloud

ANSWER: B

502. What is a key aspect of the "Learning" phase in the IBM Cloud DevOps lifecycle?

 A. Monitoring system performance

 B. Deploying new features to production

 C. Coding and building new features

 D. Gathering feedback from end users and improving future releases

ANSWER: D

503. How does DevOps utilize cloud services to improve the development process?

 A. By enforcing fixed hardware and software allocations

 B. By allowing flexible resource allocation and scaling within budget

 C. By eliminating the need for version control

 D.   By restricting communication between team members

ANSWER: B

504. Why is it important for IBM to assess the total cost of ownership (TCO) in application migration?

 A. To only consider the cost of new software licenses

 B. To compare costs of maintaining on-premises hardware with those of cloud services and migration expenses

 C. To avoid evaluating ongoing maintenance costs for legacy systems

 D. To exclude costs related to employee training and testing

ANSWER: B

505. What are some of the primary goals IBM aims to achieve through modernization efforts?

 A. Limit the use of modern development tools and methods

 B. Reduce operating costs, free up innovation capital, and enhance application security

 C. Increase technical debt and application complexity

 D. Focus only on migrating applications without optimizing them

ANSWER: B

506. Which workflow in the IBM Cloud DevOps lifecycle involves ensuring features are running smoothly and addressing any issues?

 A. Integration

 B. Development

 C. Planning

 D. Operations

ANSWER: D

507. Which phase in the DevOps lifecycle involves using tools like Ant, Maven, or Gradle?

 A. Continuous Development

 B. Continuous Integration

 C. Continuous Testing

 D. Continuous Deployment

ANSWER: B

508. Why is AWS considered beneficial for DevOps practices?

A. It requires extensive setup and installation

B. It offers limited scalability and programmability

C. It provides fully managed services, automation, and scalability

D. It lacks integration with third-party tools

ANSWER: C

509. What does the 'Programmable' feature of AWS allow you to do?

A. Model and provision AWS resources using declarative templates and APIs

B. Manually configure each AWS service

C. Only use AWS services via graphical user interface

D. Use AWS services only via the web interface

ANSWER: A

510. What is the primary function of AWS CodeCommit?

A. To host secure and scalable private Git repositories

B. To provide platform-as-a-service for web apps

C. To monitor cloud resources and applications

D. To manage configuration with Chef

ANSWER: A

511. What does the continuous development phase in DevOps involve?

A. Planning and coding the product, using tools like Git and Slack

B. Deploying and operating the application in production environments

C. Monitoring application performance and collecting user feedback

D. Coding, integrating, and testing the application

ANSWER: D

512. What does the DataPower Gateway support in terms of deployment?

A. Both virtual and physical appliances

B. Only physical appliances

C. Only virtual appliances

D. Only cloud-based environments

ANSWER: A

513. Why might an organization choose to 'Refactor' an application during the cloud migration process?

A. To maintain the existing business model without any changes

B. To improve the application's architecture and performance for anticipated traffic spikes

C. To avoid any changes to the application's underlying technology

D. To switch to a completely new product or service

ANSWER: B

514. In Kubernetes, which component is responsible for maintaining the desired state of the cluster by running various controllers?

A. Scheduler

B. API Server

C. Controller Manager

D. etcd

ANSWER: C

515. Which hybrid cloud scenario allows companies to handle peak loads by using public cloud resources temporarily?

A. Safe harbor

B. Backup and disaster recovery

C. Burst scenario

D. Application development with DevOps

ANSWER: C

516. Which server type in API Connect is responsible for managing API analytics?

A. Management server

B. Analytics server

C. Gateway server

D. Developer Portal server

ANSWER: B

517. What are some potential challenges when migrating applications from bare metal hardware compared to virtualized environments?

A. Bare metal environments are easier to migrate due to less dependency.

B. Virtualized environments require more complex migration strategies than bare metal.

C. Bare metal environments often involve more complex dependencies and configurations, making migration more challenging.

D. Virtualized environments always require complete redesigns.

ANSWER: C

518. How do services typically communicate with each other in a microservices architecture?

A. Shared Database

B. Direct method calls

C. Lightweight protocols (e.g., REST, gRPC)

D. Message Queues

ANSWER: C

519. What is the primary role of the Kubelet service on a Kubernetes node?

A. Managing network rules and port forwarding

B. Distributing workloads

C. Storing configuration data

D. Providing API access

ANSWER: A

520. What is the maximum recommended size for a Git repository before you might receive an email to reduce its size?

A. 500 MB

B. 1 GB

C. 2 GB

D. 5 GB

ANSWER: B

521. How does an API enhance security in data transfer?

A. By storing sensitive data in plaintext

B. By abstracting functionality and including authorization credentials

C. By increasing server load

D. By eliminating the need for encryption

ANSWER: B

522. Which principle of REST API design ensures that client and server applications are completely independent of each other?

A. Uniform interface

B. Statelessness

C. Client-server decoupling

D. Cacheability

ANSWER: C

523. What type of API combines multiple data or service APIs into a single call?

A. Open API

B. Composite API

C. Internal API

D. Partner API

ANSWER: B

524. Which protocol is simpler and uses minimal bandwidth compared to SOAP?

A. JSON-RPC

B. XML-RPC

C. REST

D. HTTP

ANSWER: B

525. What is the purpose of DevOps Insights in IBM Cloud?

A. To create personal access tokens

B. To verify SSH key fingerprints

C. To aggregate and analyze code, test, build, and deployment data

D. To update your GitHub profile

ANSWER: C

526. Which of the following is a common use case for an API?

A. Creating hardware drivers

B. Accessing external databases directly

C. Allowing users to log in with existing social media profiles

D. Developing internal software tools

ANSWER: C

527. Which of the following principles is NOT part of REST design constraints?

A. Uniform Interface

B. Statelessness

C. Caching

D. Server-side Sessions

ANSWER: D

528. What is the purpose of the HTTP POST method in RESTful APIs?

A. Retrieve data

B. Create a new resource

C. Update an existing resource

D. Delete a resource

ANSWER: B

529. Which tool combines synthetic monitoring, real-user monitoring, and network monitoring for detecting errors?

A. Catchpoint

B. Splunk

C. Raygun

D. Gremlin

ANSWER: A

530. What does AWS Systems Manager help with?

A. Automating code deployments

B. Collecting software inventory, applying patches, and configuring OS

C. Managing Git repositories

D. Building and testing code

ANSWER: B

531. Which AWS service records API calls for your account and delivers log files?

A. AWS X-Ray

B. AWS Config

C. AWS CloudTrail

D. AWS CodePipeline

ANSWER: C

532. What is the main purpose of AWS Elastic Beanstalk?

A. Hosting private Git repositories

B. Managing infrastructure for web applications

C. Deploying and scaling web applications

D. Automating code builds

ANSWER: C

533. When creating a toolchain from an app, what is the first step to set up continuous delivery?

A. Configure the Delivery Pipeline

B. Review the toolchain diagram

C. Select the source repository provider

D. Click Deploy my app

ANSWER: D

534. In the Classic Delivery Pipeline, what is typically the output of a build stage?

A. Deployment logs

B. Source code

C. Build artifacts

D. Test results

ANSWER: C

535. Which file is used to define the configuration for the Classic Delivery Pipeline?

A. 'pipeline.yml'

B. 'config.xml'

C. 'Dockerfile'

D. 'Jenkinsfile'

ANSWER: A

536. What does the 'Deploy' stage in a Classic Delivery Pipeline usually do?

A. It compiles the code

B. It tests the application

C. It uploads the application to a production environment

D. It creates a backup of the application

ANSWER: C

537. What type of tool integration allows for notifications about deployment status to be sent to a Slack channel?

A. Delivery Pipeline

B. Sauce Labs

C. PagerDuty

D. Slack

ANSWER: D

538. Which Tester type launches a shell command to run automated tests?

A. Vulnerability Advisor

B. Sauce Labs

C. Simple

D. Custom Docker image

ANSWER: C

539. How can you avoid route conflicts when deploying to multiple targets using Cloud Foundry?

A. Use a different manifest file for each target

B. Specify the route by using cf push command arguments

C. Deploy all targets in parallel

D. Use the same route for all targets

ANSWER: B

540. What type of environment property is used for multi-line values that can be base64 encoded?

A. Text

B. Text Area

C. Secure

D. Properties File

ANSWER: B

541. DevOps is an extension of_____

A. QA

B. Waterfall

C. Agile

D. None of the above

ANSWER: C

542. Which of the following is NOT one of the 6 Rs of Cloud Migration?

A. Rehost

B. Retire

C. Repurchase

D. Reengineer

ANSWER: D

543. Which of the following is NOT a responsibility of the cloud provider in a serverless architecture?

    A. Load balancing

    B. Resource scaling

    C. Security of the infrastructure

    D. Application development

ANSWER: D