Question 1

tb.564416.02.004
Lesson Reference: Chapter 2: Google Cloud Computing Services
Difficulty: easy
You are deploying an API to the public Internet and are concerned that your service will be subject to DDoS attacks. Which GCP service should you consider to protect your API?

- A. Cloud Armor
- B. Cloud CDN
- C. Cloud IAM
- D. VPCs

Rationale

A. Cloud Armor
Cloud Armor builds on GCP's load balancing services to provide the ability to allow or restrict access based on IP address, deploy rules to counter cross-site scripting attacks, and provide counter measures to SQL injection attacks. Cloud CDN is a content distribution service, not a security service. IAM is a security service, but it is for authentication and authorization, not denial-of-service mitigation. VPCs are used to restrict network access to an organization's resources, but it does not have features to mitigate DoS attacks. Also, Cloud CDN acts as a first line of defense in the case of DDoS attacks.

Rationale

B. Cloud CDN
Cloud Armor builds on GCP's load balancing services to provide the ability to allow or restrict access based on IP address, deploy rules to counter cross-site scripting attacks, and provide counter measures to SQL injection attacks. Cloud CDN is a content distribution service, not a security service. IAM is a security service, but it is for authentication and authorization, not denial-of-service mitigation. VPCs are used to restrict network access to an organization's resources, but it does not have features to mitigate DoS attacks. Also, Cloud CDN acts as a first line of defense in the case of DDoS attacks.

Rationale

C. Cloud IAM

Cloud Armor builds on GCP's load balancing services to provide the ability to allow or restrict access based on IP address, deploy rules to counter cross-site scripting attacks, and provide counter measures to SQL injection attacks. Cloud CDN is a content distribution service, not a security service. IAM is a security service, but it is for authentication and authorization, not denial-of-service mitigation. VPCs are used to restrict network access to an organization's resources, but it does not have features to mitigate DoS attacks. Also, Cloud CDN acts as a first line of defense in the case of DDoS attacks.

Rationale

D. VPCs

Cloud Armor builds on GCP's load balancing services to provide the ability to allow or restrict access based on IP address, deploy rules to counter cross-site scripting attacks, and provide counter measures to SQL injection attacks. Cloud CDN is a content distribution service, not a security service. IAM is a security service, but it is for authentication and authorization, not denial-of-service mitigation. VPCs are used to restrict network access to an organization's resources, but it does not have features to mitigate DoS attacks. Also, Cloud CDN acts as a first line of defense in the case of DDoS attacks.

Question 2

tb.564416.02.006
Lesson Reference: Chapter 2: Google Cloud Computing Services
Difficulty: medium

Your department is deploying an application that has a database backend. You are concerned about the read load on the database server and want to have data available in memory to reduce the time to respond to queries and to reduce the load on the database server. Which GCP service would you use to keep data in memory?

- A. Cloud SQL
- B. Cloud Memorystore
- C. Cloud Spanner
- D. Cloud Datastore

Rationale

A. Cloud SQL

Cloud Memorystore is the only GCP designed to cache data in memory. Cloud SQL is a relational database service and might be a good option for the backend database. Cloud Spanner is a global relational database and is a good option when you need a globally consistent database. Cloud Datastore is a document database suitable for product catalogs, user profiles, and other semistructured data.

Rationale

B. Cloud Memorystore

Cloud Memorystore is the only GCP designed to cache data in memory. Cloud SQL is a relational database service and might be a good option for the backend database. Cloud Spanner is a global relational database and is a good option when you need a globally consistent database. Cloud Datastore is a document database suitable for product catalogs, user profiles, and other semistructured data.

Rationale

C. Cloud Spanner

Cloud Memorystore is the only GCP designed to cache data in memory. Cloud SQL is a relational database service and might be a good option for the backend database. Cloud Spanner is a global relational database and is a good option when you need a globally consistent database. Cloud Datastore is a document database suitable for product catalogs, user profiles, and other semistructured data.

Rationale

D. Cloud Datastore

Cloud Memorystore is the only GCP designed to cache data in memory. Cloud SQL is a relational database service and might be a good option for the backend database. Cloud Spanner is a global relational database and is a good option when you need a globally consistent database. Cloud Datastore is a document database suitable for product catalogs, user profiles, and other semistructured data.

Question 3

tb.564416.02.007
Lesson Reference: Chapter 2: Google Cloud Computing Services
Difficulty: medium
The Cloud SDK can be used to configure and manage resources in which of the following services?

- A. Compute Engine
- B. Cloud Storage
- C. Network firewalls
- D. All of the above

Rationale

A. Compute Engine
All three of the services listed, Compute Engine, Cloud Storage, and network firewalls can be managed and configured using the Cloud SDK.

Rationale

B. Cloud Storage
All three of the services listed, Compute Engine, Cloud Storage, and network firewalls can be managed and configured using the Cloud SDK.

Rationale

C. Network firewalls
All three of the services listed, Compute Engine, Cloud Storage, and network firewalls can be managed and configured using the Cloud SDK.

Rationale

D. All of the above
All three of the services listed, Compute Engine, Cloud Storage, and network firewalls can be managed and configured using the Cloud SDK.

Question 4

tb.564416.02.003
Lesson Reference: Chapter 2: Google Cloud Computing Services
Difficulty: medium
Why would an API developer want to use the Apigee API platform?

- A. To get the benefits of routing and rate-limiting
- B. Authentication services
- C. Version control of code
- D. A and B
- E. All of the above

Rationale

A. To get the benefits of routing and rate-limiting
Options A and B are both correct answers. The Apigee API platform provides policy-based rate-limiting and routing services to help accommodate spikes in traffic. It also provides OAuth 2.0 and SAML authentication. It does not provide version control; Cloud Source Repositories is the service user for version control.

Rationale

B. Authentication services
Options A and B are both correct answers. The Apigee API platform provides policy-based rate-limiting and routing services to help accommodate spikes in traffic. It also provides OAuth 2.0 and SAML authentication. It does not provide version control; Cloud Source Repositories is the service user for version control.

Rationale

C. Version control of code
Options A and B are both correct answers. The Apigee API platform provides policy-based rate-limiting and routing services to help accommodate spikes in traffic. It also provides OAuth 2.0 and SAML authentication. It does not provide version control; Cloud Source Repositories is the service user for version control.

Rationale

D. A and B

Options A and B are both correct answers. The Apigee API platform provides policy-based rate-limiting and routing services to help accommodate spikes in traffic. It also provides OAuth 2.0 and SAML authentication. It does not provide version control; Cloud Source Repositories is the service user for version control.

Rationale

E. All of the above

Options A and B are both correct answers. The Apigee API platform provides policy-based rate-limiting and routing services to help accommodate spikes in traffic. It also provides OAuth 2.0 and SAML authentication. It does not provide version control; Cloud Source Repositories is the service user for version control.

Question 5

tb.564416.02.011

Lesson Reference: Chapter 2: Google Cloud Computing Services

Difficulty: hard

Your company has deployed 100,000 Internet of Things (IoT) sensors to collect data on the state of equipment in several factories. Each sensor will collect and send data to a data store every 5 seconds. Sensors will run continuously. Daily reports will produce data on the maximum, minimum, and average value for each metric collected on each sensor. There is no need to support transactions in this application. Which database product would you recommend?

- A. Spanner
- B. Bigtable
- C. Cloud SQL MySQL
- D. Cloud SQL PostgreSQL

Rationale

A. Spanner

Bigtable is designed to accept billions of rows of data. Collecting data from 100,000 sensors every 5 seconds will generate 6,000,000 data points every minute, or 8,640,000,000 data points per day. Spanner is a relational database and supports transactions, but they are not needed. Cloud SQL MySQL and Cloud SQL PostgreSQL would be difficult to scale to this level of read and write performance.

Rationale

B. Bigtable

Bigtable is designed to accept billions of rows of data. Collecting data from 100,000 sensors every 5 seconds will generate 6,000,000 data points every minute, or 8,640,000,000 data points per day. Spanner is a relational database and supports transactions, but they are not needed. Cloud SQL MySQL and Cloud SQL PostgreSQL would be difficult to scale to this level of read and write performance.

Rationale

C. Cloud SQL MySQL

Bigtable is designed to accept billions of rows of data. Collecting data from 100,000 sensors every 5 seconds will generate 6,000,000 data points every minute, or 8,640,000,000 data points per day. Spanner is a relational database and supports transactions, but they are not needed. Cloud SQL MySQL and Cloud SQL PostgreSQL would be difficult to scale to this level of read and write performance.

Rationale

D. Cloud SQL PostgreSQL

Bigtable is designed to accept billions of rows of data. Collecting data from 100,000 sensors every 5 seconds will generate 6,000,000 data points every minute, or 8,640,000,000 data points per day. Spanner is a relational database and supports transactions, but they are not needed. Cloud SQL MySQL and Cloud SQL PostgreSQL would be difficult to scale to this level of read and write performance.

Question 6

tb.564416.02.010
Lesson Reference: Chapter 2: Google Cloud Computing Services
Difficulty: medium
Which specialized services are most likely to be used to build a data warehousing platform that requires complex extraction, transformation, and loading operations on batch data as well as processing streaming data?

- A. Apigee API platform
- B. Data analytics
- C. AI and machine learning
- D. Cloud SDK

Rationale

A. Apigee API platform

The data analytics set of specialized services include products that help with extraction, transformation, and loading (ETL) and work with both batch and streaming data. The Apigee API platform is used for managing APIs and does not meet the needs described. AI and machine learning might be useful for analyzing data in the data warehouse, but the services in that set are not always helpful for ETL operations. The Cloud SDK is used to control services but by itself is not directly able to perform the operations needed.

Rationale

B. Data analytics

The data analytics set of specialized services include products that help with extraction, transformation, and loading (ETL) and work with both batch and streaming data. The Apigee API platform is used for managing APIs and does not meet the needs described. AI and machine learning might be useful for analyzing data in the data warehouse, but the services in that set are not always helpful for ETL operations. The Cloud SDK is used to control services but by itself is not directly able to perform the operations needed.

Rationale

C. AI and machine learning

The data analytics set of specialized services include products that help with extraction, transformation, and loading (ETL) and work with both batch and streaming data. The Apigee API platform is used for managing APIs and does not meet the needs described. AI and machine

learning might be useful for analyzing data in the data warehouse, but the services in that set are not always helpful for ETL operations. The Cloud SDK is used to control services but by itself is not directly able to perform the operations needed.

Rationale

D. Cloud SDK

The data analytics set of specialized services include products that help with extraction, transformation, and loading (ETL) and work with both batch and streaming data. The Apigee API platform is used for managing APIs and does not meet the needs described. AI and machine learning might be useful for analyzing data in the data warehouse, but the services in that set are not always helpful for ETL operations. The Cloud SDK is used to control services but by itself is not directly able to perform the operations needed.

Question 7

tb.564416.02.005
Lesson Reference: Chapter 2: Google Cloud Computing Services
Difficulty: medium

You have an application that uses a Pub/Sub message queue to maintain a list of tasks that are to be processed by another application. The application that consumes messages from the Pub/Sub queue removes the message only after completing the task. It takes approximately 10 seconds to complete a task. It is not a problem if two or more VMs perform the same task. What is a cost-effective configuration for processing this workload?

- (●) A. Use preemptible virtual machines
- ( ) B. Use standard virtual machines
- ( ) C. Use DataProc
- ( ) D. Use Spanner

Rationale

✓ **A. Use preemptible virtual machines**

This is a good use case for preemptible VMs because they could reduce the cost of running the second application without the risk of losing work. Since tasks are deleted from the queue only after they are completed if a preemptible VM is shut down before completing the task, another VM can perform the task. Also, there is no harm in running a task more than once, so if two VMs do the same task, it will not adversely affect the output of the application. DataProc and Spanner are not appropriate products for this task.

Rationale

✗ **B. Use standard virtual machines**

This is a good use case for preemptible VMs because they could reduce the cost of running the second application without the risk of losing work. Since tasks are deleted from the queue only after they are completed if a preemptible VM is shut down before completing the task, another VM can perform the task. Also, there is no harm in running a task more than once, so if two VMs do the same task, it will not adversely affect the output of the application. DataProc and Spanner are not appropriate products for this task.

Rationale

✗ **C. Use DataProc**

This is a good use case for preemptible VMs because they could reduce the cost of running the second application without the risk of losing work. Since tasks are deleted from the queue only after they are completed if a preemptible VM is shut down before completing the task, another VM can perform the task. Also, there is no harm in running a task more than once, so if two VMs do the same task, it will not adversely affect the output of the application. DataProc and Spanner are not appropriate products for this task.

Rationale

D. Use Spanner

This is a good use case for preemptible VMs because they could reduce the cost of running the second application without the risk of losing work. Since tasks are deleted from the queue only after they are completed if a preemptible VM is shut down before completing the task, another VM can perform the task. Also, there is no harm in running a task more than once, so if two VMs do the same task, it will not adversely affect the output of the application. DataProc and Spanner are not appropriate products for this task.

Question 8

tb.564416.02.019
Lesson Reference: Chapter 2: Google Cloud Computing Services
Difficulty: easy
You have a Python application you'd like to run in a scalable environment with the least amount of management overhead. Which GCP product would you select?

- A. App Engine flexible environment
- B. Cloud Engine
- C. App Engine standard environment
- D. Kubernetes Engine

Rationale

A. App Engine flexible environment

App Engine standard environment provides a serverless Python sandbox that scales automatically, so option C is correct. App Engine flexible environment runs containers and requires more configuration. Cloud Engine and Kubernetes Engine both require significant management and monitoring.

Rationale

B. Cloud Engine

App Engine standard environment provides a serverless Python sandbox that scales automatically, so option C is correct. App Engine flexible environment runs containers and requires more configuration. Cloud Engine and Kubernetes Engine both require significant management and monitoring.

Rationale

C. App Engine standard environment

App Engine standard environment provides a serverless Python sandbox that scales automatically, so option C is correct. App Engine flexible environment runs containers and requires more configuration. Cloud Engine and Kubernetes Engine both require significant management and monitoring.

Rationale

D. Kubernetes Engine

App Engine standard environment provides a serverless Python sandbox that scales automatically, so option C is correct. App Engine flexible environment runs containers and requires more configuration. Cloud Engine and Kubernetes Engine both require significant management and monitoring.

Question 9

tb.564416.02.016
Lesson Reference: Chapter 2: Google Cloud Computing Services
Difficulty: medium
Data scientists in your company want to use a machine learning library available only in Apache Spark. They want to minimize the amount of administration and DevOps work. How would you recommend they proceed?

- A. Use Cloud Spark
- B. Use Cloud Dataproc
- C. Use Bigquery
- D. Install Apache Spark on a cluster of virtual machines

Rationale

A. Use Cloud Spark

Both options B and D would meet the need of running Spark, which would give the data scientists access to the machine library they need. However, option D requires that they manage and monitor the cluster of servers, which would be more DevOps and administration work than if they used the Dataproc service. Option C, Bigquery, is a scalable database, not a platform for running Spark. Cloud Spark is a fictious product and does not exist in the GCP.

Rationale

B. Use Cloud Dataproc

Both options B and D would meet the need of running Spark, which would give the data scientists access to the machine library they need. However, option D requires that they manage and monitor the cluster of servers, which would be more DevOps and administration work than if they used the Dataproc service. Option C, Bigquery, is a scalable database, not a platform for running Spark. Cloud Spark is a fictious product and does not exist in the GCP.

Rationale

C. Use Bigquery

Both options B and D would meet the need of running Spark, which would give the data scientists access to the machine library they need. However, option D requires that they manage and monitor the cluster of servers, which would be more DevOps and administration work than

if they used the Dataproc service. Option C, Bigquery, is a scalable database, not a platform for running Spark. Cloud Spark is a fictious product and does not exist in the GCP.

Rationale

D. Install Apache Spark on a cluster of virtual machines

Both options B and D would meet the need of running Spark, which would give the data scientists access to the machine library they need. However, option D requires that they manage and monitor the cluster of servers, which would be more DevOps and administration work than if they used the Dataproc service. Option C, Bigquery, is a scalable database, not a platform for running Spark. Cloud Spark is a fictious product and does not exist in the GCP.

Question 10

tb.564416.02.015

Lesson Reference: Chapter 2: Google Cloud Computing Services

Difficulty: medium

A client is developing an application that will need to analyze large volumes of text information. The client is not expert in text mining or working with language. What GCP service would you recommend they use?

- A. Cloud Vision
- B. Cloud ML
- C. Cloud Natural Language Processing
- D. Cloud Text Miner

Rationale

A. Cloud Vision

Cloud Natural Language Processing provides functionality for analyzing text. Cloud Text Miner does not exist. Cloud ML is a general-purpose machine learning service that could be applied to text analysis but that would require knowledge of language processing, which the client does not have. Cloud Vision is for image processing.

Rationale

B. Cloud ML

Cloud Natural Language Processing provides functionality for analyzing text. Cloud Text Miner does not exist. Cloud ML is a general-purpose machine learning service that could be applied to text analysis but that would require knowledge of language processing, which the client does not have. Cloud Vision is for image processing.

Rationale

C. Cloud Natural Language Processing

Cloud Natural Language Processing provides functionality for analyzing text. Cloud Text Miner does not exist. Cloud ML is a general-purpose machine learning service that could be applied to text analysis but that would require knowledge of language processing, which the client does not have. Cloud Vision is for image processing.

Rationale

D. Cloud Text Miner

Cloud Natural Language Processing provides functionality for analyzing text. Cloud Text Miner does not exist. Cloud ML is a general-purpose machine learning service that could be applied to text analysis but that would require knowledge of language processing, which the client does not have. Cloud Vision is for image processing.

Question 11

tb.564416.02.018
Lesson Reference: Chapter 2: Google Cloud Computing Services
Difficulty: easy
Which specialized service supports both batch and stream processing workflows?

- A. Dataproc
- B. Bigquery
- C. Datastore
- D. AutoML

Rationale

A. Dataproc
Dataproc is designed to execute workflows in both batch and streaming modes, which makes option A correct. Bigquery is a data warehouse service. Datastore is a document database. AutoML is a machine learning service.

Rationale

B. Bigquery
Dataproc is designed to execute workflows in both batch and streaming modes, which makes option A correct. Bigquery is a data warehouse service. Datastore is a document database. AutoML is a machine learning service.

Rationale

C. Datastore
Dataproc is designed to execute workflows in both batch and streaming modes, which makes option A correct. Bigquery is a data warehouse service. Datastore is a document database. AutoML is a machine learning service.

Rationale

D. AutoML

Dataproc is designed to execute workflows in both batch and streaming modes, which makes option A correct. Bigquery is a data warehouse service. Datastore is a document database. AutoML is a machine learning service.

Question 12

tb.564416.02.017

Lesson Reference: Chapter 2: Google Cloud Computing Services

Difficulty: easy

Database designers at your company are debating the best way to move a database to GCP. The database supports an application with a global user base. Users expect support for transactions and the ability to query data using commonly used query tools. The database designers decide that any database service they choose will need to support ANSI 2011 and global transactions. Which database service would you recommend?

- A. Cloud SQL
- B. Spanner
- C. Datastore
- D. Bigtable

Rationale

A. Cloud SQL

Option B is correct. Spanner supports ANSI 2011 standard SQL and global transactions. Cloud SQL supports standard SQL but does not have global transaction. Datastore and Bigtable are NoSQL databases.

Rationale

B. Spanner

Option B is correct. Spanner supports ANSI 2011 standard SQL and global transactions. Cloud SQL supports standard SQL but does not have global transaction. Datastore and Bigtable are NoSQL databases.

Rationale

C. Datastore

Option B is correct. Spanner supports ANSI 2011 standard SQL and global transactions. Cloud SQL supports standard SQL but does not have global transaction. Datastore and Bigtable are NoSQL databases.

Rationale

D. Bigtable

Option B is correct. Spanner supports ANSI 2011 standard SQL and global transactions. Cloud SQL supports standard SQL but does not have global transaction. Datastore and Bigtable are NoSQL databases.

Question 13

tb.564416.02.012

Lesson Reference: Chapter 2: Google Cloud Computing Services

Difficulty: hard

You are the lead developer on a medical application that uses patients' smartphones to capture biometric data. The app is required to collect data and store it on the smartphone when data cannot be reliably transmitted to the backend application. You want to minimize the amount of development you have to do to keep data synchronized between smartphones and backend data stores. Which data store option should you recommend?

- (●) A. Cloud Firestore
- ( ) B. Spanner
- ( ) C. Datastore
- ( ) D. Cloud SQL

Rationale

A. Cloud Firestore

Cloud Firestore is a mobile database service that can synchronize data between mobile devices and centralized storage. Spanner is a global relational database for large-scale applications that require transaction support in highly scaled databases. Datastore and Cloud SQL could be used but would require more custom development to synchronize data between mobile devices and the centralized data store.

Rationale

B. Spanner

Cloud Firestore is a mobile database service that can synchronize data between mobile devices and centralized storage. Spanner is a global relational database for large-scale applications that require transaction support in highly scaled databases. Datastore and Cloud SQL could be used but would require more custom development to synchronize data between mobile devices and the centralized data store.

Rationale

C. Datastore

Cloud Firestore is a mobile database service that can synchronize data between mobile devices and centralized storage. Spanner is a global relational database for large-scale applications that require transaction support in highly scaled databases. Datastore and Cloud SQL could be used but would require more custom development to synchronize data between mobile devices and the centralized data store.

Rationale

D. Cloud SQL

Cloud Firestore is a mobile database service that can synchronize data between mobile devices and centralized storage. Spanner is a global relational database for large-scale applications that require transaction support in highly scaled databases. Datastore and Cloud SQL could be used but would require more custom development to synchronize data between mobile devices and the centralized data store.

Question 14

tb.564416.02.014
Lesson Reference: Chapter 2: Google Cloud Computing Services
Difficulty: medium

You are tasked with mapping the authentication and authorization policies of your on-premise applications to GCP's authentication and authorization mechanisms. You come across documentation which states that an identity must be authenticated in order to exercise privileges granted to that identity. The GCP documentation states that an identity must be authenticated in order to grant privileges to that identity. What does the term *identity* refer to?

- A. Virtual machine ID
- B. User
- C. Role
- D. Set of privileges

Rationale

A. Virtual machine ID

Identities are abstractions of users. They can also represent characteristics of processes that run on behalf of a human user or a virtual machine in the GCP. Identities are not related to virtual machine IDs. Roles are collections of privileges that can be granted to identities. Option D is synonymous with option C.

Rationale

B. User

Identities are abstractions of users. They can also represent characteristics of processes that run on behalf of a human user or a virtual machine in the GCP. Identities are not related to virtual machine IDs. Roles are collections of privileges that can be granted to identities. Option D is synonymous with option C.

Rationale

C. Role

Identities are abstractions of users. They can also represent characteristics of processes that run on behalf of a human user or a virtual machine in the GCP. Identities are not related to virtual machine IDs. Roles are collections of privileges that can be granted to identities. Option D is synonymous with option C.

Rationale

D. Set of privileges

Identities are abstractions of users. They can also represent characteristics of processes that run on behalf of a human user or a virtual machine in the GCP. Identities are not related to virtual machine IDs. Roles are collections of privileges that can be granted to identities. Option D is synonymous with option C.

Question 15

tb.564416.02.002

Lesson Reference: Chapter 2: Google Cloud Computing Services

Difficulty: medium

You have decided to deploy a set of microservices using containers. You could install and manage Docker on Compute Engine instances, but you'd rather have GCP provide some container management services. Which two GCP services allow you to run containers in a managed service?

- A. App Engine standard environment and App Engine flexible environment
- B. Kubernetes Engine and App Engine standard environment
- C. Kubernetes Engine and App Engine flexible environment
- D. App Engine standard environment and Cloud Functions

Rationale

A. App Engine standard environment and App Engine flexible environment

App Engine flexible environments allow you to run containers on the App Engine PaaS. Kubernetes Engine is an orchestration platform for running containers. Both provide container management services. The App Engine standard environment runs applications in language-specific sandboxes and is not a general container management system. Cloud Functions is a serverless service for running code in response to events. It does not provide container services.

Rationale

B. Kubernetes Engine and App Engine standard environment

App Engine flexible environments allow you to run containers on the App Engine PaaS. Kubernetes Engine is an orchestration platform for running containers. Both provide container management services. The App Engine standard environment runs applications in language-specific sandboxes and is not a general container management system. Cloud Functions is a serverless service for running code in response to events. It does not provide container services.

Rationale

C. Kubernetes Engine and App Engine flexible environment

App Engine flexible environments allow you to run containers on the App Engine PaaS. Kubernetes Engine is an orchestration platform for running containers. Both provide container management services. The App Engine standard environment runs applications in language-

specific sandboxes and is not a general container management system. Cloud Functions is a serverless service for running code in response to events. It does not provide container services.

Rationale

D. App Engine standard environment and Cloud Functions

App Engine flexible environments allow you to run containers on the App Engine PaaS. Kubernetes Engine is an orchestration platform for running containers. Both provide container management services. The App Engine standard environment runs applications in language-specific sandboxes and is not a general container management system. Cloud Functions is a serverless service for running code in response to events. It does not provide container services.

Question 16

tb.564416.02.020

Lesson Reference: Chapter 2: Google Cloud Computing Services

Difficulty: easy

A product manager at your company reports that customers are complaining about the reliability of one of your applications. The application is crashing periodically, but developers have not found a common pattern that triggers the crashes. They are concerned that they do not have good insight into the behavior of the application and want to perform a detailed review of all crash data. Which Stackdriver tool would you use to view consolidated crash information?

- A. DataProc
- B. Monitoring
- C. Logging
- D. Error Reporting

Rationale

A. DataProc

Error reporting consolidates crash information, which makes Error Reporting the right answer. Monitoring collects metrics on application and server performance. Logging is a log management service. DataProc is not part of Stackdriver; it is a managed Hadoop and Spark service.

Rationale

B. Monitoring

Error reporting consolidates crash information, which makes Error Reporting the right answer. Monitoring collects metrics on application and server performance. Logging is a log management service. DataProc is not part of Stackdriver; it is a managed Hadoop and Spark service.

Rationale

C. Logging

Error reporting consolidates crash information, which makes Error Reporting the right answer. Monitoring collects metrics on application and server performance. Logging is a log management service. DataProc is not part of Stackdriver; it is a managed Hadoop and Spark service.

Rationale

D. Error Reporting

Error reporting consolidates crash information, which makes Error Reporting the right answer. Monitoring collects metrics on application and server performance. Logging is a log management service. DataProc is not part of Stackdriver; it is a managed Hadoop and Spark service.

Question 17

tb.564416.02.009

Lesson Reference: Chapter 2: Google Cloud Computing Services

Difficulty: easy

You have been assigned the task of consolidating log data generated by each instance of an application. Which of the Stackdriver management tools would you use?

- A. Monitoring
- B. Trace
- C. Debugger
- D. Logging

Rationale

A. Monitoring

The Stackdriver Logging product is used to consolidate and manage logs generated by applications and servers.

Rationale

B. Trace

The Stackdriver Logging product is used to consolidate and manage logs generated by applications and servers.

Rationale

C. Debugger

The Stackdriver Logging product is used to consolidate and manage logs generated by applications and servers.

Rationale

D. Logging

The Stackdriver Logging product is used to consolidate and manage logs generated by applications and servers.

Question 18

tb.564416.02.001
Lesson Reference: Chapter 2: Google Cloud Computing Services
Difficulty: easy

You are planning to deploy a SaaS application for customers in North America, Europe, and Asia. To maintain scalability, you will need to distribute workload across servers in multiple regions. Which GCP service would you use to implement the workload distribution?

- A. Cloud DNS
- B. Cloud Spanner
- C. Cloud Load Balancing
- D. Cloud CDN

Rationale

A. Cloud DNS

Cloud Load Balancing distributes workloads within and across regions, provides health checks, and implements autoscaling. Cloud DNS provides domain name services, such as translating a URL like www.example.com to an IP address. Cloud Spanner is distributed relational database but does not implement workload distribution. Cloud CDN distributes content across regions to reduce latency when delivering content to users across the globe.

Rationale

B. Cloud Spanner

Cloud Load Balancing distributes workloads within and across regions, provides health checks, and implements autoscaling. Cloud DNS provides domain name services, such as translating a URL like www.example.com to an IP address. Cloud Spanner is distributed relational database but does not implement workload distribution. Cloud CDN distributes content across regions to reduce latency when delivering content to users across the globe.

Rationale

C. Cloud Load Balancing

Cloud Load Balancing distributes workloads within and across regions, provides health checks, and implements autoscaling. Cloud DNS provides domain name services, such as translating a URL like www.example.com to an IP address. Cloud Spanner is distributed relational

database but does not implement workload distribution. Cloud CDN distributes content across regions to reduce latency when delivering content to users across the globe.

Rationale

D. Cloud CDN

Cloud Load Balancing distributes workloads within and across regions, provides health checks, and implements autoscaling. Cloud DNS provides domain name services, such as translating a URL like www.example.com to an IP address. Cloud Spanner is distributed relational database but does not implement workload distribution. Cloud CDN distributes content across regions to reduce latency when delivering content to users across the globe.

Question 19

tb.564416.02.013
Lesson Reference: Chapter 2: Google Cloud Computing Services
Difficulty: hard

A software engineer comes to you for a recommendation. She has implemented a machine learning algorithm to identify cancerous cells in medical images. The algorithm is computationally intensive, makes many mathematical calculations, requires immediate access to large amounts of data, and cannot be easily distributed over multiple servers. What kind of Compute Engine configuration would you recommend?

- A. High memory, high CPU
- B. High memory, high CPU, GPU
- C. Mid-level memory, high CPU
- D. High CPU, GPU

Rationale

A. High memory, high CPU

A computationally intensive application obviously requires high CPUs, but the fact that there are many mathematical calculations indicates that a GPU should be use. You might consider running this in a cluster, but the work is not easily distributed over multiple servers, so you will need to have a single server capable of meeting the load. Immediate access to large amounts of data indicates a high-memory machine should be recommended.

Rationale

B. High memory, high CPU, GPU

A computationally intensive application obviously requires high CPUs, but the fact that there are many mathematical calculations indicates that a GPU should be use. You might consider running this in a cluster, but the work is not easily distributed over multiple servers, so you will need to have a single server capable of meeting the load. Immediate access to large amounts of data indicates a high-memory machine should be recommended.

Rationale

C. Mid-level memory, high CPU

A computationally intensive application obviously requires high CPUs, but the fact that there are many mathematical calculations indicates that a GPU should be use. You might consider running this in a cluster, but the work is not easily distributed over multiple servers, so you will

need to have a single server capable of meeting the load. Immediate access to large amounts of data indicates a high-memory machine should be recommended.

Rationale

D. High CPU, GPU

A computationally intensive application obviously requires high CPUs, but the fact that there are many mathematical calculations indicates that a GPU should be use. You might consider running this in a cluster, but the work is not easily distributed over multiple servers, so you will need to have a single server capable of meeting the load. Immediate access to large amounts of data indicates a high-memory machine should be recommended.

Question 20

tb.564416.02.008
Lesson Reference: Chapter 2: Google Cloud Computing Services
Difficulty: medium
What server configuration is required to use Cloud Functions?

- A. Virtual machine configuration
- B. Cluster configuration
- C. Pub/Sub configuration
- D. None

Rationale

A. Virtual machine configuration
Cloud Functions is a serverless product, no configuration is required.

Rationale

B. Cluster configuration
Cloud Functions is a serverless product, no configuration is required.

Rationale

C. Pub/Sub configuration
Cloud Functions is a serverless product, no configuration is required.

Rationale

D. None
Cloud Functions is a serverless product, no configuration is required.