

20 million cellular and unconnected vehicles in the field How can you accomplish this goal?

- A. Have your engineers inspect the data for patterns, and then create an algorithm with rules that make operational adjustments automatically.
- B. Capture all operating data, train machine learning models that identify ideal operations, and run locally to make operational adjustments automatically.
- C. Implement a Google Cloud Dataflow streaming job with a sliding window, and use Google Cloud Messaging (GCM) to make operational adjustments automatically.
- D. Capture all operating data, train machine learning models that identify ideal operations, and host in Google Cloud Machine Learning (ML) Platform to make operational adjustments automatically.

Correct Answer: B

QUESTION 10

For this question, refer to the TerramEarth case study. TerramEarth plans to connect all 20 million vehicles in the field to the cloud. This increases the volume to 20 million 600 byte records a second for 40 TB an hour. How should you design the data ingestion?

- A. Vehicles write data directly to GCS.
- B. Vehicles write data directly to Google Cloud Pub/Sub.
- C. Vehicles stream data directly to Google BigQuery.
- D. Vehicles continue to write data using the existing system (FTP).

Correct Answer: B

Explanation:

<https://cloud.google.com/solutions/data-lifecycle-cloud-platform>

<https://cloud.google.com/solutions/designing-connected-vehicle-platform>

QUESTION 11

Your agricultural division is experimenting with fully autonomous vehicles. You want your architecture to promote strong security during vehicle operation. Which two architecture should you consider? Choose 2 answers:

- A. Treat every micro service call between modules on the vehicle as untrusted.
- B. Require IPv6 for connectivity to ensure a secure address space.
- C. Use a trusted platform module (TPM) and verify firmware and binaries on boot.
- D. Use a functional programming language to isolate code execution cycles.
- E. Use multiple connectivity subsystems for redundancy.
- F. Enclose the vehicle's drive electronics in a Faraday cage to isolate chips.

Correct Answer: AC

Topic 3, JencoMart Case Study

Company Overview

JencoMart is a global retailer with over 10,000 stores in 16 countries. The stores carry a range of goods, such as groceries, tires, and jewelry. One of the company's core values is excellent customer service. In addition, they recently introduced an environmental policy to reduce their carbon output by 50% over the next 5 years.

Company Background

JencoMart started as a general store in 1931, and has grown into one of the world's leading brands known for great value and customer service. Over time, the company transitioned from only physical stores to a stores and online hybrid model, with 25% of sales online. Currently, JencoMart has little presence in Asia, but considers that market key for future growth.

Solution Concept

JencoMart wants to migrate several critical applications to the cloud but has not completed a technical review to determine their suitability for the cloud and the engineering required for migration. They currently host all of these applications on infrastructure that is at its end of life and is no longer supported.

Existing Technical Environment

JencoMart hosts all of its applications in 4 data centers: 3 in North American and 1 in Europe, most applications are dual-homed.

JencoMart understands the dependencies and resource usage metrics of their on-premises architecture.

Application Customer loyalty portal

LAMP (Linux, Apache, MySQL and PHP) application served from the two JencoMart-owned U.S. data centers.

Database

Oracle Database stores user profiles

- 20 TB
- Complex table structure
- Well maintained, clean data
- Strong backup strategy

PostgreSQL database stores user credentials

- Single-homed in US West
- No redundancy

Backed up every 12 hours

- 100% uptime service level agreement (SLA)
- Authenticates all users

[Download Full Version Professional-Cloud-Architect Exam Dumps\(Updated in Feb/2023\)](#)

Compute

30 machines in US West Coast, each machine has:

Twin, dual core CPUs

32GB of RAM

Twin 250 GB HDD (RAID 1)

20 machines in US East Coast, each machine has:

Single dual-core CPU

24 GB of RAM

Twin 250 GB HDD (RAID 1)

Storage

Access to shared 100 TB SAN in each location

Tape backup every week

Business Requirements

- Optimize for capacity during peak periods and value during off-peak periods
- Guarantee service availability and support
- Reduce on-premises footprint and associated financial and environmental impact.
- Move to outsourcing model to avoid large upfront costs associated with infrastructure purchase
- Expand services into Asia.

Technical Requirements

- Assess key application for cloud suitability.
- Modify application for the cloud.
- Move applications to a new infrastructure.
- Leverage managed services wherever feasible
- Sunset 20% of capacity in existing data centers
- Decrease latency in Asia

CEO Statement

JencoMart will continue to develop personal relationships with our customers as more people access the web. The future of our retail business is in the global market and the connection between online and in-store experiences. As a large global company, we also have a responsibility to the environment through 'green' initiatives and policies.

CTO Statement

The challenges of operating data centers prevents focus on key technologies critical to our long-term success. Migrating our data services to a public cloud infrastructure will allow us to focus on big data and machine learning to improve our service customers.

CFO Statement

Since its founding JencoMart has invested heavily in our data services infrastructure. However, because of changing market trends, we need to outsource our infrastructure to ensure our long-term success. This model will allow us to respond to increasing customer demand during peak and reduce costs.

[Professional-Cloud-Architect Exam Dumps](#) [Professional-Cloud-Architect PDF Dumps](#)

[Professional-Cloud-Architect VCE Dumps](#) [Professional-Cloud-Architect Q&As](#)

<https://www.ensurepass.com/PCA.html>

QUESTION 1

For this question, refer to the JencoMart case study. JencoMart has decided to migrate user profile storage to Google Cloud Datastore and the application servers to Google Compute Engine (GCE). During the migration, the existing infrastructure will need access to Datastore to upload the data. What service account key-management strategy should you recommend?

- A. Provision service account keys for the on-premises infrastructure and for the GCE virtual machines (VMs).
- B. Authenticate the on-premises infrastructure with a user account and provision service account keys for the VMs.
- C. Provision service account keys for the on-premises infrastructure and use Google Cloud Platform (GCP) managed keys for the VMs
- D. Deploy a custom authentication service on GCE/Google Container Engine (GKE) for the on-premises infrastructure and use GCP managed keys for the VMs.

Correct Answer: A

Explanation:

<https://cloud.google.com/iam/docs/understanding-service-accounts>

Migrating data to Google Cloud Platform

Let's say that you have some data processing that happens on another cloud provider and you want to transfer the processed data to Google Cloud Platform. You can use a service account from the virtual machines on the external cloud to push the data to Google Cloud Platform. To do this, you must create and download a service account key when you create the service account and then use that key from the external process to call the Cloud Platform APIs.

References:

https://cloud.google.com/iam/docs/understanding-service-accounts#migrating_data_to_google_cloud_platform

QUESTION 2

For this question, refer to the JencoMart case study. The JencoMart security team requires that all Google Cloud Platform infrastructure is deployed using a least privilege model with separation of duties for administration between production and development resources. What Google domain and project structure should you recommend?

- A. Create two G Suite accounts to manage users: one for development/test/staging and one for production. Each account should contain one project for every application.
- B. Create two G Suite accounts to manage users: one with a single project for all development applications and one with a single project for all production applications.
- C. Create a single G Suite account to manage users with each stage of each application in its own project.
- D. Create a single G Suite account to manage users with one project for the development/test/staging environment and one project for the production environment.

Correct Answer: D

[Professional-Cloud-Architect Exam Dumps](#) [Professional-Cloud-Architect PDF Dumps](#)

[Professional-Cloud-Architect VCE Dumps](#) [Professional-Cloud-Architect Q&As](#)

<https://www.ensurepass.com/PCA.html>

Explanation:

Note: The principle of least privilege and separation of duties are concepts that, although semantically different, are intrinsically related from the standpoint of security. The intent behind both is to prevent people from having higher privilege levels than they actually need

Principle of Least Privilege: Users should only have the least amount of privileges required to perform their job and no more. This reduces authorization exploitation by limiting access to resources such as targets, jobs, or monitoring templates for which they are not authorized.

Separation of Duties: Beyond limiting user privilege level, you also limit user duties, or the specific jobs they can perform. No user should be given responsibility for more than one related function. This limits the ability of a user to perform a malicious action and then cover up that action.

References:

<https://cloud.google.com/kms/docs/separation-of-duties>

QUESTION 3

For this question, refer to the JencoMart case study. A few days after JencoMart migrates the user credentials database to Google Cloud Platform and shuts down the old server, the new database server stops responding to SSH connections. It is still serving database requests to the application servers correctly. What three steps should you take to diagnose the problem? Choose 3 answers

- A. Delete the virtual machine (VM) and disks and create a new one.
- B. Delete the instance, attach the disk to a new VM, and investigate.
- C. Take a snapshot of the disk and connect to a new machine to investigate.
- D. Check inbound firewall rules for the network the machine is connected to.
- E. Connect the machine to another network with very simple firewall rules and investigate.
- F. Print the Serial Console output for the instance for troubleshooting, activate the interactive console, and investigate.

Correct Answer: CDF

Explanation:

<https://cloud.google.com/compute/docs/troubleshooting/troubleshooting-ssh>

D: Handling "Unable to connect on port 22" error message

Possible causes include:

There is no firewall rule allowing SSH access on the port. SSH access on port 22 is enabled on all Compute Engine instances by default. If you have disabled access, SSH from the Browser will not work. If you run sshd on a port other than 22, you need to enable the access to that port with a custom firewall rule.

The firewall rule allowing SSH access is enabled, but is not configured to allow connections from GCP Console services. Source IP addresses for browser-based SSH sessions are dynamically allocated by GCP Console and can vary from session to session.

References:

<https://cloud.google.com/compute/docs/ssh-in-browser>

<https://cloud.google.com/compute/docs/ssh-in-browser>

QUESTION 4

[Professional-Cloud-Architect Exam Dumps](#) [Professional-Cloud-Architect PDF Dumps](#)

[Professional-Cloud-Architect VCE Dumps](#) [Professional-Cloud-Architect Q&As](#)

<https://www.ensurepass.com/PCA.html>