- C. Create a Cloud Storage Transfer Service Job to copy the files to a Coldline Storage bucket.
- D. Create a Cloud Storage Transfer Service job to copy the files to a Regional Storage bucket.

Correct Answer: A Explanation:

Follow these rules of thumb when deciding whether to use gsutil or Storage Transfer Service:

- When transferring data from an on-premises location, use gsutil.
- When transferring data from another cloud storage provider, use Storage Transfer Service.
- Otherwise, evaluate both tools with respect to your specific scenario.

Use this guidance as a starting point. The specific details of your transfer scenario will also help you determine which tool is more appropriate

https://cloud.google.com/storage-transfer/docs/overview

QUESTION 7

For this question, refer to the Dress4Win case study. The Dress4Win security team has disabled external SSH access into production virtual machines (VMs) on Google Cloud Platform (GCP). The operations team needs to remotely manage the VMs, build and push Docker containers, and manage Google Cloud Storage objects. What can they do?

- A. Grant the operations engineers access to use Google Cloud Shell.
- B. Configure a VPN connection to GCP to allow SSH access to the cloud VMs.
- C. Develop a new access request process that grants temporary SSH access to cloud VMs when an operations engineer needs to perform a task.
- D. Have the development team build an API service that allows the operations team to execute specific remote procedure calls to accomplish their tasks.

Correct Answer: A

QUESTION 8

Dress4win has end to end tests covering 100% of their endpoints. They want to ensure that the move of cloud does not introduce any new bugs. Which additional testing methods should the developers employ to prevent an outage?

- A. They should run the end to end tests in the cloud staging environment to determine if the code is working as intended.
- B. They should enable google stack driver debugger on the application code to show errors in the code
- C. They should add additional unit tests and production scale load tests on their cloud staging environment.
- D. They should add canary tests so developers can measure how much of an impact the new release causes to latency

Correct Answer: B

QUESTION 9

For this question, refer to the Dress4Win case study. As part of their new application experience, Dress4Wm allows customers to upload images of themselves. The customer has exclusive control over who may view these images. Customers should be able to upload images with

minimal latency and also be shown their images quickly on the main application page when they log in. Which configuration should Dress4Win use?

- A. Store image files in a Google Cloud Storage bucket. Use Google Cloud Datastore to maintain metadata that maps each customer's ID and their image files.
- B. Store image files in a Google Cloud Storage bucket. Add custom metadata to the uploaded images in Cloud Storage that contains the customer's unique ID.
- C. Use a distributed file system to store customers' images. As storage needs increase, add more persistent disks and/or nodes. Assign each customer a unique ID, which sets each file's owner attribute, ensuring privacy of images.
- D. Use a distributed file system to store customers' images. As storage needs increase, add more persistent disks and/or nodes. Use a Google Cloud SQL database to maintain metadata that maps each customer's ID to their image files.

Correct Answer: A

QUESTION 10

For this question, refer to the Dress4Win case study. You want to ensure Dress4Win's sales and tax records remain available for infrequent viewing by auditors for at least 10 years. Cost optimization is your top priority. Which cloud services should you choose?

- A. Google Cloud Storage Coldline to store the data, and gsutil to access the data.
- B. Google Cloud Storage Nearline to store the data, and gsutil to access the data.
- C. Google Bigtabte with US or EU as location to store the data, and gcloud to access the data.
- D. BigQuery to store the data, and a web server cluster in a managed instance group to access the data. Google Cloud SQL mirrored across two distinct regions to store the data, and a Redis cluster in a managed instance group to access the data.

Correct Answer: A

Explanation:

https://cloud.google.com/storage/docs/storage-classes

QUESTION 11

The current Dress4win system architecture has high latency to some customers because it is located in one data center. As of a future evaluation and optimizing for performance in the cloud, Dresss4win wants to distribute it's system architecture to multiple locations when Google cloud platform. Which approach should they use?

- A. Use regional managed instance groups and a global load balancer to increase performance because the regional managed instance group can grow instances in each region separately based on traffic.
- B. Use a global load balancer with a set of virtual machines that forward the requests to a closer group of virtual machines managed by your operations team.
- C. Use regional managed instance groups and a global load balancer to increase reliability by providing automatic failover between zones in different regions.
- D. Use a global load balancer with a set of virtual machines that forward the requests to a closer group of virtual machines as part of a separate managed instance groups.

Correct Answer: A

QUESTION 12

For this question, refer to the Dress4Win case study. Dress4Win has end-to-end tests covering 100% of their endpoints. They want to ensure that the move to the cloud does not introduce any new bugs. Which additional testing methods should the developers employ to prevent an outage?

- A. They should enable Google Stackdriver Debugger on the application code to show errors in the code.
- B. They should add additional unit tests and production scale load tests on their cloud staging environment.
- C. They should run the end-to-end tests in the cloud staging environment to determine if the code is working as intended.
- D. They should add canary tests so developers can measure how much of an impact the new release causes to latency.

Correct Answer: B

Topic 5, Dress4Win Case 2

Company Overview

Dress4win is a web-based company that helps their users organize and manage their personal wardrobe using a website and mobile application. The company also cultivates an active social network that connects their users with designers and retailers. They monetize their services through advertising, e-commerce, referrals, and a freemium app model. The application has grown from a few servers in the founder's garage to several hundred servers and appliances in a collocated data center. However, the capacity of their infrastructure is now insufficient for the application's rapid growth. Because of this growth and the company's desire to innovate faster. Dress4Win is committing to a full migration to a public cloud.

Solution Concept

For the first phase of their migration to the cloud, Dress4win is moving their development and test environments. They are also building a disaster recovery site, because their current infrastructure is at a single location. They are not sure which components of their architecture they can migrate as is and which components they need to change before migrating them.

Existing Technical Environment

The Dress4win application is served out of a single data center location. All servers run Ubuntu LTS v16.04.

Databases:

MySQL. 1 server for user data, inventory, static data:

MySQL 5.8 8 core CPUs 128 GB of RAM 2x 5 TB HDD (RAID 1)

Redis 3 server cluster for metadata, social graph, caching. Each server is:

Redis 3.2 4 core CPUs 32GB of RAM

Compute:

40 Web Application servers providing micro-services based APIs and static content.

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

Tomcat - Java Nginx 4 core CPUs 32 GB of RAM

20 Apache Hadoop/Spark servers:

Data analysis Real-time trending calculations 8 core CPUS 128 GB of RAM 4x 5 TB HDD (RAID 1)

3 RabbitMQ servers for messaging, social notifications, and events:

8 core CPUs 32GB of RAM

Miscellaneous servers:

Jenkins, monitoring, bastion hosts, security scanners 8 core CPUs 32GB of RAM

Storage appliances:

iSCSI for VM hosts Fiber channel SAN - MySQL databases 1 PB total storage; 400 TB available NAS - image storage, logs, backups 100 TB total storage; 35 TB available

Business Requirements

Build a reliable and reproducible environment with scaled parity of production.

Improve security by defining and adhering to a set of security and Identity and Access Management (IAM) best practices for cloud.

Improve business agility and speed of innovation through rapid provisioning of new resources.

Analyze and optimize architecture for performance in the cloud.

Technical Requirements

Easily create non-production environment in the cloud.

Implement an automation framework for provisioning resources in cloud.

Implement a continuous deployment process for deploying applications to the on-premises datacenter or cloud.

Support failover of the production environment to cloud during an emergency.

Encrypt data on the wire and at rest.

Support multiple private connections between the production data center and cloud environment.

Executive Statement

Our investors are concerned about our ability to scale and contain costs with our current infrastructure. They are also concerned that a competitor could use a public cloud platform to offset their up-front investment and free them to focus on developing better features. Our traffic patterns are highest in the mornings and weekend evenings; during other times, 80% of our capacity is sitting idle.

Our capital expenditure is now exceeding our quarterly projections. Migrating to the cloud will likely cause an initial increase in spending, but we expect to fully transition before our next hardware refresh cycle. Our total cost of ownership (TCO) analysis over the next 5 years for a public cloud strategy achieves a cost reduction between 30% and 50% over our current model.

QUESTION 1

For this question, refer to the Dress4Win case study. Considering the given business requirements, how would you automate the deployment of web and transactional data layers?

- A. Deploy Nginx and Tomcat using Cloud Deployment Manager to Compute Engine. Deploy a Cloud SQL server to replace MySQL. Deploy Jenkins using Cloud Deployment Manager.
- B. Deploy Nginx and Tomcat using Cloud Launcher. Deploy a MySQL server using Cloud Launcher. Deploy Jenkins to Compute Engine using Cloud Deployment Manager scripts.
- C. Migrate Nginx and Tomcat to App Engine. Deploy a Cloud Datastore server to replace the MySQL server in a high-availability configuration. Deploy Jenkins to Compute Engine using Cloud Launcher.
- D. Migrate Nginx and Tomcat to App Engine. Deploy a MySQL server using Cloud Launcher. Deploy Jenkins to Compute Engine using Cloud Launcher.

Correct Answer: A

QUESTION 2

For this question, refer to the Dress4Win case study. Dress4Win is expected to grow to 10 times its size in 1 year with a corresponding growth in data and traffic that mirrors the existing patterns of usage. The CIO has set the target of migrating production infrastructure to the cloud within the next 6 months. How will you configure the solution to scale for this growth without making major application changes and still maximize the ROI?

- A. Migrate the web application layer to App Engine, and MySQL to Cloud Datastore, and NAS to Cloud Storage. Deploy RabbitMQ, and deploy Hadoop servers using Deployment Manager.
- B. Migrate RabbitMQ to Cloud Pub/Sub, Hadoop to BigQuery, and NAS to Compute Engine with Persistent Disk storage. Deploy Tomcat, and deploy Nginx using Deployment Manager.
- C. Implement managed instance groups for Tomcat and Nginx. Migrate MySQL to Cloud SQL, RabbitMQ to Cloud Pub/Sub, Hadoop to Cloud Dataproc, and NAS to Compute Engine with Persistent Disk storage.
- D. Implement managed instance groups for the Tomcat and Nginx. Migrate MySQL to Cloud SQL, RabbitMQ to Cloud Pub/Sub, Hadoop to Cloud Dataproc, and NAS to Cloud Storage.

Correct Answer: D

QUESTION 3

For this question, refer to the Dress4Win case study. You want to ensure that your on-premises architecture meets business requirements before you migrate your solution. What change in the on-premises architecture should you make?

A. Replace RabbitMQ with Google Pub/Sub.