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EXAM PROFESSIONAL DATA ENGINEER TOPIC 1 QUESTION 205 DISCUSSION

Actual exam question from Google's Professional Data Engineer

Question #: 205

Topic #: 1

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You have a data processing application that runs on Google Kubernetes Engine (GKE). Containers need to be launched with their latest available configurations from a container registry. Your GKE nodes need to have GPUs, local SSDs, and 8 Gbps bandwidth. You want to efficiently provision the data processing infrastructure and manage the deployment process. What should you do?

- A. Use Compute Engine startup scripts to pull container images, and use gcloud commands to provision the infrastructure.
- B. Use Cloud Build to schedule a job using Terraform build to provision the infrastructure and launch with the most current container images.
- C. Use GKE to autoscale containers, and use gcloud commands to provision the infrastructure.
- D. Use Dataflow to provision the data pipeline, and use Cloud Scheduler to run the job.


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by  [Atnafu](#) at Nov. 30, 2022, 11:10 p.m.

Comments

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 [MaxNRG](#) [Highly Voted](#) 1 year, 4 months ago

Selected Answer: B

B is the best option to efficiently provision and manage the deployment process for this data processing application on GKE:

   upvoted 5 times

  **MaxNRG** 1 year, 4 months ago

- Cloud Build allows you to automate the building, testing, and deployment of your application using Docker containers.
- Using Terraform with Cloud Build provides Infrastructure as Code capabilities to provision the GKE cluster with GPUs, SSDs, and network bandwidth.
- Terraform can be configured to pull the latest container images from the registry when deploying.
- Cloud Build triggers provide event-based automation to rebuild and redeploy when container images are updated.
- This provides an automated CI/CD pipeline to launch the application on GKE using the desired infrastructure and latest images.
- Dataflow and Cloud Scheduler don't directly provide infrastructure provisioning or deployment orchestration for GKE.
- gcloud commands can be used but don't provide the same automation benefits as Cloud Build + Terraform.

   upvoted 2 times

  **MaxNRG** 1 year, 4 months ago

So using Cloud Build with Terraform templates provides the most efficient way to provision and deploy this data processing application on GKE.



   upvoted 2 times

  **SamuelTsch** **Most Recent**  6 months, 1 week ago


Selected Answer: B


I would go to option B. That is from my point of view a CI/CD question. Only B covers the deployment and set up the latest container image.

   upvoted 1 times

  **anyone_99** 10 months ago

another wrong answer?

   upvoted 2 times



  **raaad** 1 year, 4 months ago

Selected Answer: B

- Dataflow is a fully managed service for stream and batch data processing and is well-suited for real-time data processing tasks like identifying longtail and outlier data points.

- Using BigQuery as a sink allows to efficiently store the cleansed and processed data for further analysis and serving it to AI models.

   upvoted 2 times

  **spicebits** 1 year, 6 months ago

Selected Answer: B

I don't really like B or C... but given the choices I would go with B.

B-Use Cloud Build to schedule a job using Terraform build to provision the infrastructure and launch with the most current container images. {The Terraform command is Terraform Apply and not Terraform build, but also why not use gcloud container command instead of introducing 3rd party builder image?}... I don't like this choice but it is the best one.

C. Use GKE to autoscale containers, and use gcloud commands to provision the infrastructure. {This doesn't handle the building of the infra, or the deployment of the latest images, this one is clearly wrong, not sure why it is marked as the right choice}

   upvoted 1 times

  **vamgcp** 1 year, 9 months ago

Selected Answer: B

B is correct

   upvoted 2 times

  **whorillo** 2 years ago

Selected Answer: B

B is correct

   upvoted 1 times

  **charline** 2 years, 2 months ago


Selected Answer: B

b is ok

   upvoted 1 times

  **AzureDP900** 2 years, 4 months ago

B. Use Cloud Build to schedule a job using Terraform build to provision the infrastructure and launch with the most current container images.

   unvoted 1 times

📄 **zellick** 2 years, 5 months ago

Selected Answer: B

B is the answer.

👍 ↩ 🚩 upvoted 2 times

📄 **hauhau** 2 years, 5 months ago

Selected Answer: B

Maybe B

ref: <https://cloud.google.com/architecture/managing-infrastructure-as-code>

👍 ↩ 🚩 upvoted 3 times

📄 **Atnafu** 2 years, 5 months ago

C is correct answer

👍 ↩ 🚩 upvoted 1 times

📄 **Atnafu** 2 years, 5 months ago

Sorry I meant B

👍 ↩ 🚩 upvoted 3 times



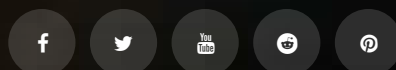
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