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Amazon

MLA-C01

AWS Certified Machine Learning Engineer - Associate MLA-C01 Exam

QUESTION: 1
Case Study

A company is building a web-based AI application by using Amazon SageMaker. The application will provide the following capabilities and features: ML experimentation, training, a central model registry, model deployment, and model monitoring.

The application must ensure secure and isolated use of training data during the ML lifecycle. The training data is stored in Amazon S3.

The company needs to use the central model registry to manage different versions of models in the application.

Which action will meet this requirement with the LEAST operational overhead?

A. Create a separate Amazon Elastic Container Registry (Amazon ECR) repository for each model.
B. Use Amazon Elastic Container Registry (Amazon ECR) and unique tags for each model version.
C. Use the SageMaker Model Registry and model groups to catalog the models.
D. Use the SageMaker Model Registry and unique tags for each model version.

Answer(s): C

Explanation:
The SageMaker Model Registry is specifically designed to manage the lifecycle of machine learning models, including versioning, deployment, and monitoring. By using model groups, the registry allows cataloging and organizing models based on different criteria, such as use case or project. This approach minimizes operational overhead by providing an integrated solution within SageMaker for model versioning and management.

QUESTION: 2
Case Study

A company is building a web-based AI application by using Amazon SageMaker. The application will provide the following capabilities and features: ML experimentation, training, a central model registry, model deployment, and model monitoring.

The application must ensure secure and isolated use of training data during the ML lifecycle. The training data is stored in Amazon S3.

The company is experimenting with consecutive training jobs.

How can the company MINIMIZE infrastructure startup times for these jobs?

A. Use Managed Spot Training.
B. Use SageMaker managed warm pools.
C. Use SageMaker Training Compiler.
D. Use the SageMaker distributed data parallelism (SMDDP) library.

Answer(s): B

Explanation:
SageMaker managed warm pools help minimize infrastructure startup times for training jobs by keeping instances warm and ready to be reused for subsequent jobs. This significantly reduces the initialization time that is typically required when starting new training jobs, making it ideal for scenarios involving consecutive training jobs. This approach ensures efficient utilization of resources with minimal delays between jobs.

QUESTION: 3
Case Study

A company is building a web-based AI application by using Amazon SageMaker. The application will provide the following capabilities and features: ML experimentation, training, a central model registry, model deployment, and model monitoring.

The application must ensure secure and isolated use of training data during the ML lifecycle. The training data is stored in Amazon S3.

The company must implement a manual approval-based workflow to ensure that only approved models can be deployed to production endpoints.

Which solution will meet this requirement?

A. Use SageMaker Experiments to facilitate the approval process during model registration.
B. Use SageMaker ML Lineage Tracking on the central model registry. Create tracking entities for the approval process.
C. Use SageMaker Model Monitor to evaluate the performance of the model and to manage the approval.
D. Use SageMaker Pipelines. When a model version is registered, use the AWS SDK to change the approval status to "Approved."

Answer(s): D

Explanation:
SageMaker Pipelines is a purpose-built feature for creating, automating, and managing ML workflows. It integrates seamlessly with the SageMaker Model Registry, which supports setting approval statuses for model versions. By using the AWS SDK to update the model's status to "Approved," the company can implement a manual approval process that ensures only approved models are deployed to production. This approach is efficient and aligns well with the requirement for manual approvals while leveraging SageMaker's built-in capabilities.

QUESTION: 4
Case Study

A company is building a web-based AI application by using Amazon SageMaker. The application will provide the following capabilities and features: ML experimentation, training, a central model registry, model deployment, and model monitoring.