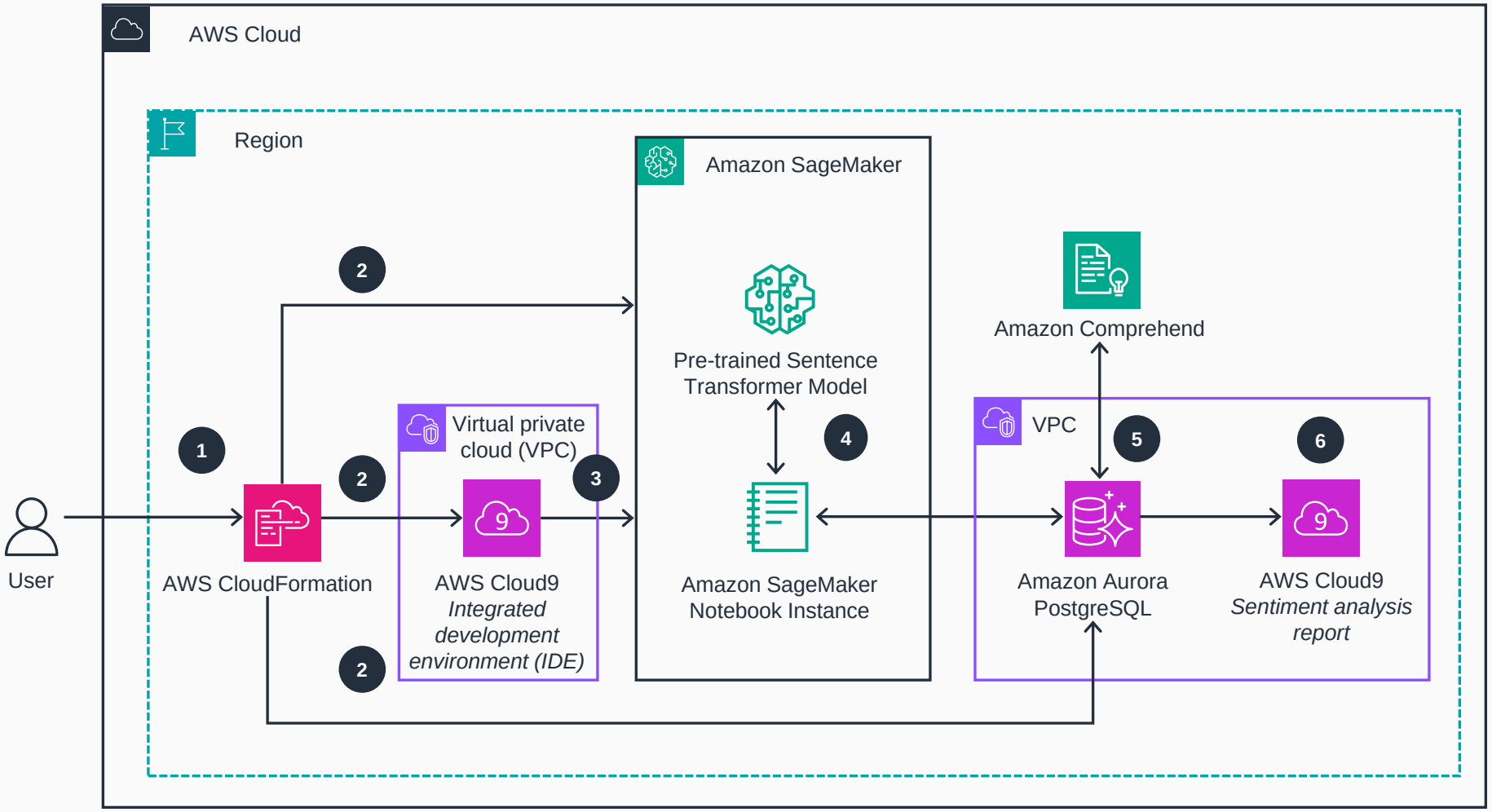
Guidance for Sentiment Analysis on AWS

This architecture diagram shows how to generate sentiment analysis using Amazon Aurora PostgreSQL-Compatible Edition with pgvector enabled as the vector store. It details the process of integrating Amazon Aurora with an Amazon Comprehend Sentiment Analysis API and generating sentiment analysis inferences using SQL commands.



1. Download the **AWS CloudFormation** template from the GitHub repository, and deploy the **CloudFormation** stack.
2. The **CloudFormation** stack deploys an **AWS Cloud9** instance, an **Amazon SageMaker** notebook instance, an **Amazon Aurora PostgreSQL** cluster, and all the other prerequisites required for this Guidance.
3. Set up the environment variables to connect to the **Aurora PostgreSQL** instance and to create pgvector and aws_ml extensions.
4. Set up the environment to access the Hugging Face Sentence-Transformer model and to generate document embeddings in **SageMaker**. Store the vector embeddings in **Aurora PostgreSQL** with pgvector.
5. Run a similarity search on the vector data with the similarity_search_with_score function from pgvector. Integrate **Aurora** with an **Amazon Comprehend** function to retrieve sentiment analysis.
6. Use PostgreSQL plsql client in **AWS Cloud9** IDE to retrieve results with SQL statements.

Reviewed for technical accuracy June 3, 2024

AWS Reference Architecture