

Vitic Agent V1

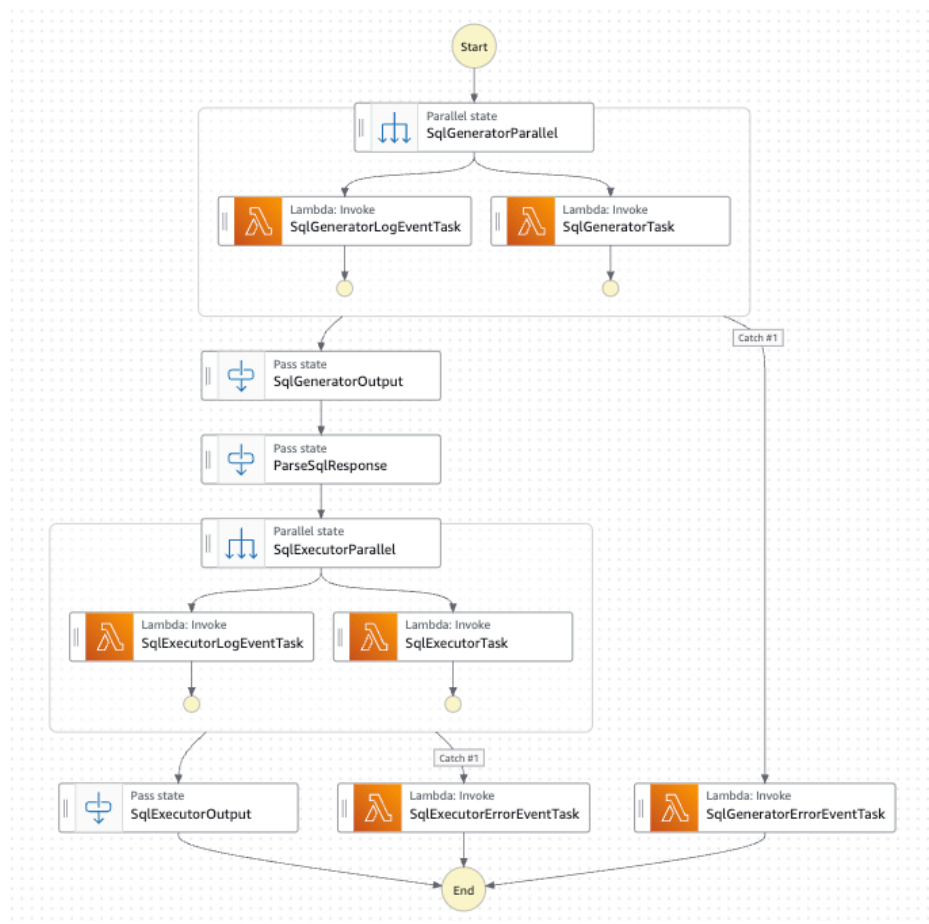
The first version of Vitic Agent is implemented using a combination of Step Function, Lambda functions, and Model invoke actions through Amazon Bedrock.

The agent functionality consist in a sequence of 3 steps:

- **Get database schema** - using a PostgreSQL connection, in the **SQLGeneratorTask** lambda, a database connection is established and the schema is retrieved.

Note: A small optimization is implemented - before connecting to the database, we try to use a previously cached value of the schema, if a similar request was performed before. The schema is cached in a dedicated S3 bucket. If not present, after the schema is retrieved, it is saved in S3.

- **Generate SQL query** - based on the initial natural language query and the database schema, a SQL query is generated. This action is also in **SQLGeneratorTask** lambda. This action is performed using a Bedrock Model, Claude Sonnet, instructed to generate an SQL query based on the two information (natural language query and schema).
- **Execute SQL query** - the output of the SQLGeneratorTask lambda is parsed and passed after validation to **SQLExecutorTask**, which will call a function to execute the SQL query. This function establish a database connection, execute the SQL query and returns the response.



Simple Vitic (SQL) Agent workflow