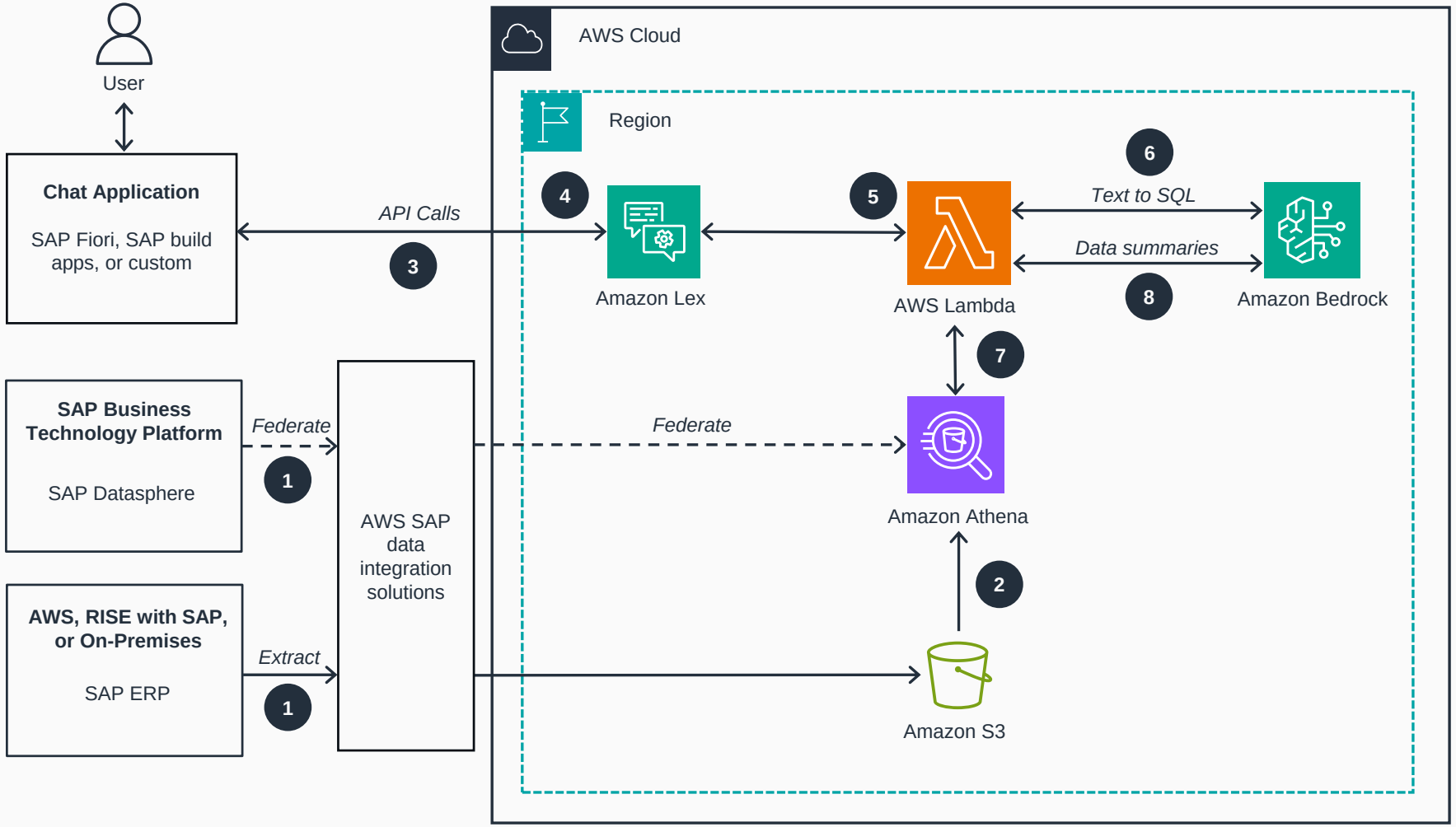
Guidance for SAP Generative AI Assistant on AWS

This architecture diagram demonstrates how to use Amazon Lex, AWS Lambda, LangChain, and Amazon Athena with Amazon Bedrock using SAP data for retrieval augmented generation (RAG).



1. Extract or federate data from SAP ERP or SAP Datasphere using AWS SAP data integration solutions.
2. **Amazon Athena** uses **AWS Glue Data Catalog** to query the tables directly in **Amazon Simple Storage Service (Amazon S3)**.
3. The user interacts with their chat application of choice to perform tasks or answer questions.
4. A natural language chatbot powered by **Amazon Lex** curates communication to handle the response and sends the user's question to **AWS Lambda** for processing.
5. **Lambda** sends the response and message history back to the chat app through **Amazon Lex**. **Amazon Lex** stores the message history in a session.
6. The **Lambda** function invokes an **Amazon Bedrock** endpoint to formulate an **Athena** query using LangChain framework.
7. The **Lambda** function runs generated **Athena** queries and retrieves data.
8. **Amazon Bedrock** interprets the data and generates a response for data retrieved from **Athena** queries to provide a human-readable response.

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AWS Reference Architecture