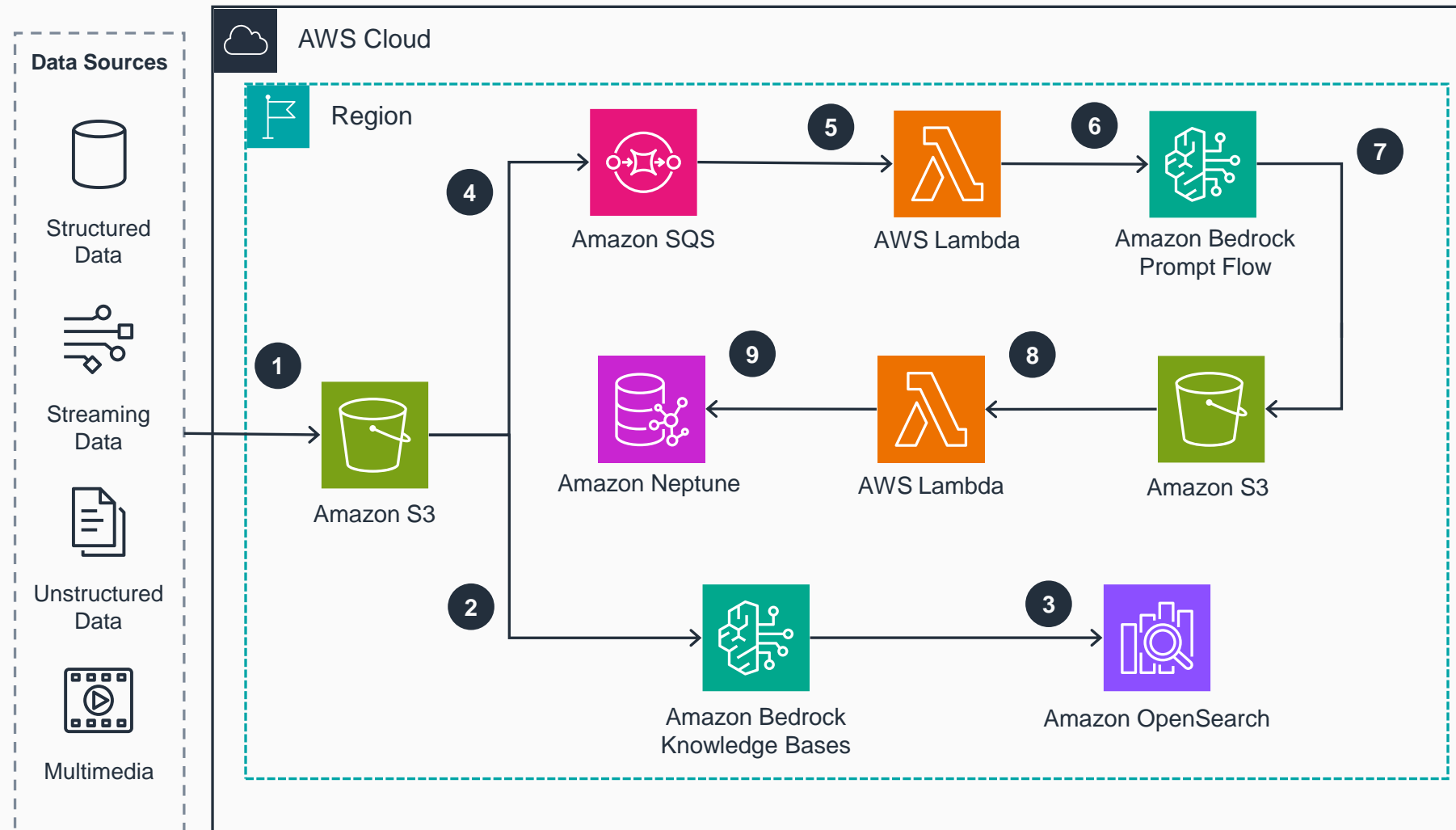


Guidance for Agentic Data Exploration on AWS

Data Ingestion

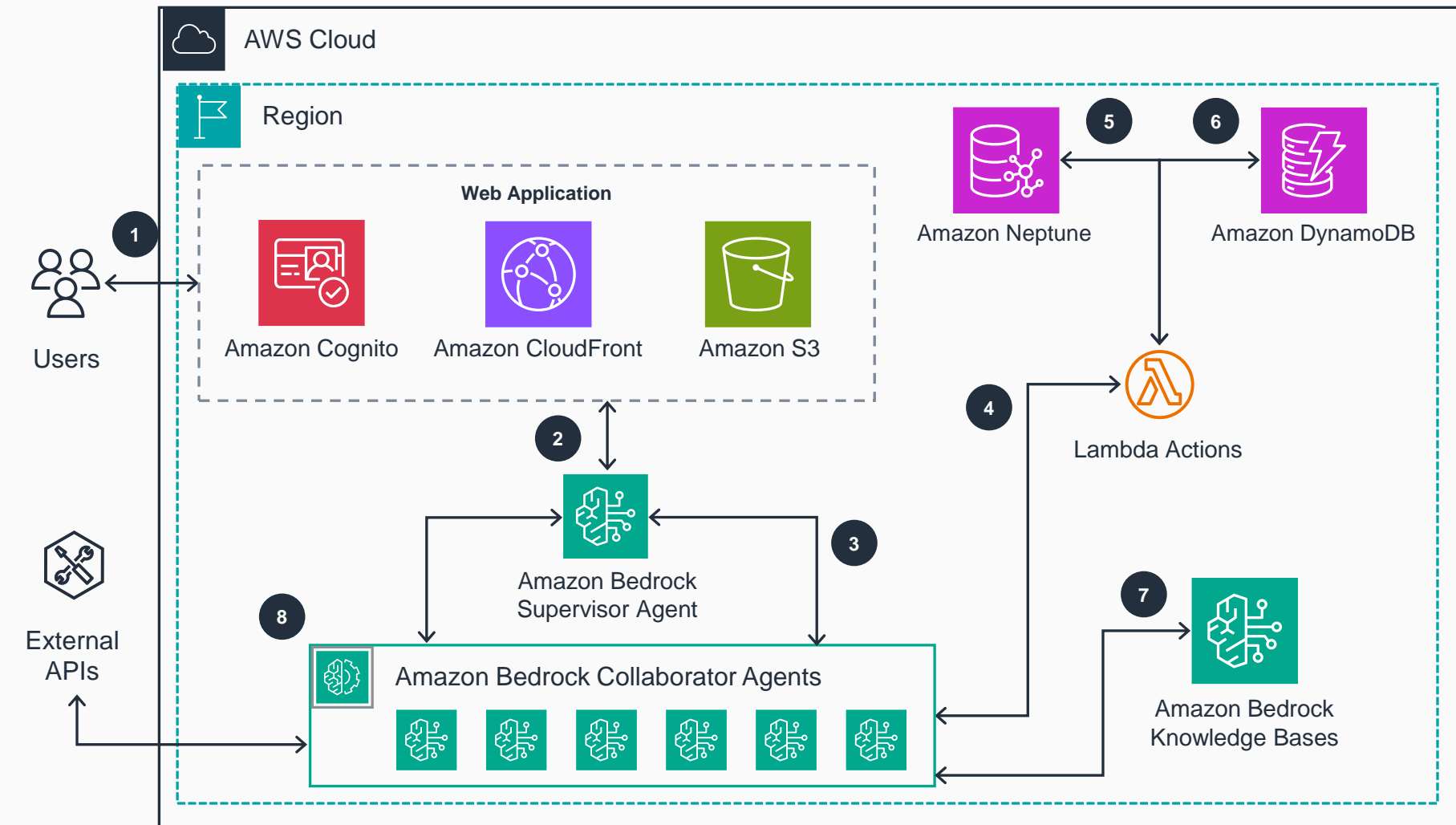
This architecture diagram illustrates how to effectively support agentic data exploration on AWS. It shows the key components of the data ingestion process for structured and unstructured data.



Guidance for Agentic Data Exploration on AWS

Data Exploration

This architecture diagram illustrates how to effectively support agentic data exploration on AWS. It shows the key components of the multi-agent application used to analyze, process, and search data.



- 1 Users access the front-end web application hosted on **Amazon Simple Storage Service (Amazon S3)**, served by **Amazon CloudFront**, and secured by **Amazon Cognito**.
- 2 Users interact with the **Amazon Bedrock Supervisor Agent** through a chat interface. Complex user tasks are divided into specific subtasks and completed by specialized collaborator agents.
- 3 A set of **Amazon Bedrock Collaborator Agents** is used to perform specific data exploration tasks including schema analysis and data transformation as assigned by the supervisor agent.
- 4 **AWS Lambda** functions are used by **Amazon Bedrock Collaborator agents** as tools analyze, load and query data.
- 5 Relational data is translated from CSV to openCypher format for bulk loading into the **Amazon Neptune** database using **AWS Lambda** functions.
- 6 Users can review data analysis results stored in **Amazon DynamoDB** tables through the front-end web application.
- 7 **Amazon Bedrock Knowledge Bases** are used to store data that supports Retrieval-Augmented Generation (RAG) by **Amazon Bedrock Collaborator Agents**.
- 8 **Amazon Bedrock Collaborator Agents** connect to external APIs for data retrieval.

