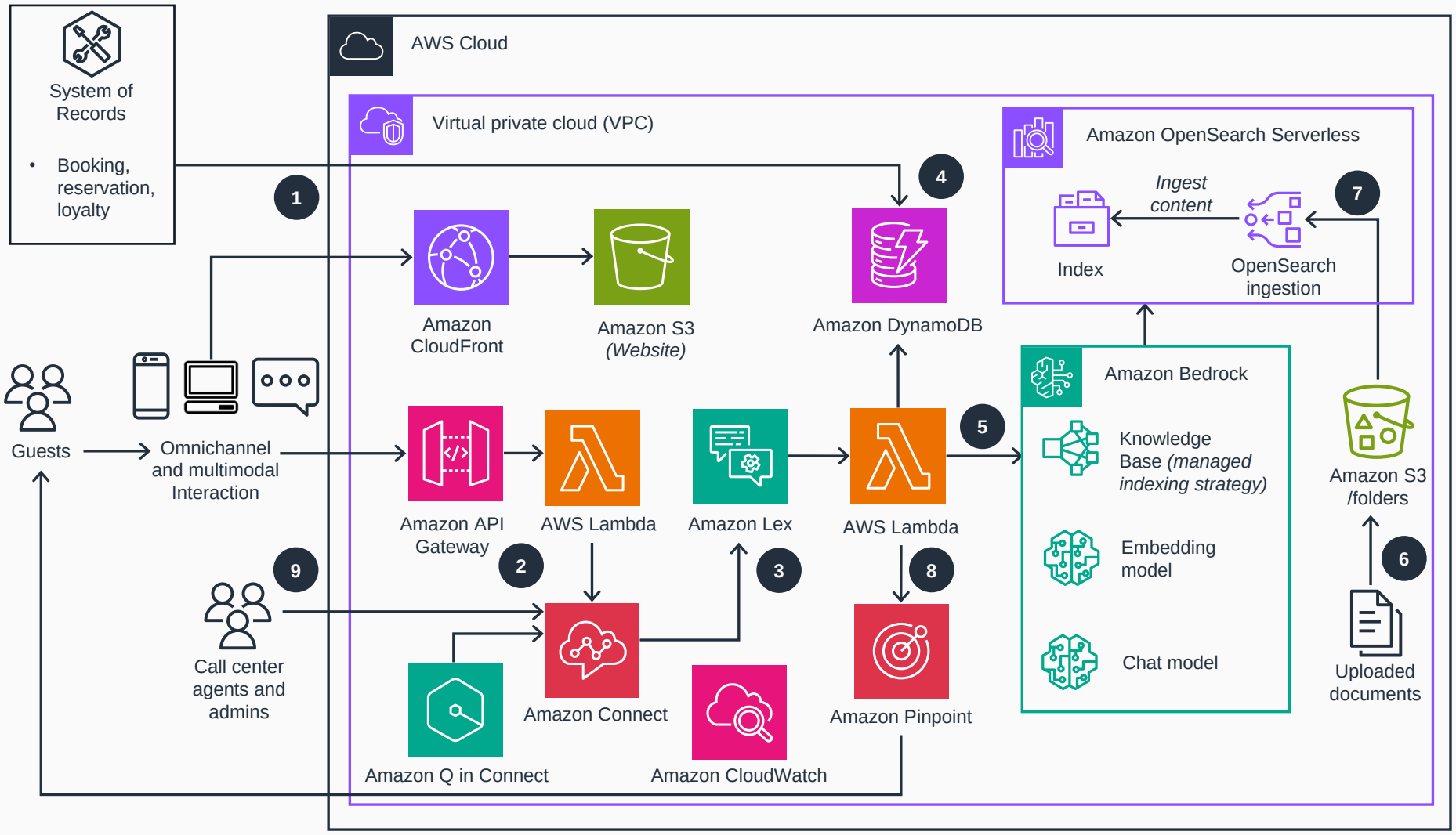
Guidance for Digital Concierges for Hospitality on AWS

This architecture diagram shows how hospitality companies can leverage generative AI to upsell opportunities and reduce total cost of ownership of current customer experience technologies.



1. Guests interact with an omnichannel and multimodal conversational engine that is hosted on **Amazon Simple Storage Service (Amazon S3)** and delivered through **Amazon CloudFront**.
2. The conversational engine interacts with an API deployed on **Amazon API Gateway** that invokes an **AWS Lambda** function. This function initiates the **Amazon Connect** StartChatContact API, which will start the **Amazon Connect** flow.
3. The **Amazon Connect** flow is configured to call an **Amazon Lex** bot, which invokes a **Lambda** function to provide a response to the guest requests.
4. The **Lambda** function stores customer profiles from source systems such as booking, reservations, and loyalty in an **Amazon DynamoDB** table.
5. Based on the guest profile and intent from the request, **Lambda** invokes **Amazon Bedrock** to call a foundation model (FM) that helps to provide a human-like response.
6. Internal documents are uploaded to an **S3** bucket to set up sematic search-enabled Knowledge Bases for **Amazon Bedrock**. This knowledge base can give the FM contextual information from private data sources.
7. **Amazon OpenSearch Serverless** is used as a vector database to store the content as embeddings.
8. **Amazon Pinpoint** sends email or mobile notifications to the guest for near real-time communications.
9. **Amazon Connect** facilitates interactions between guests and agents in the call center. **Amazon Q in Connect** provides suggested responses to agents.

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AWS Reference Architecture