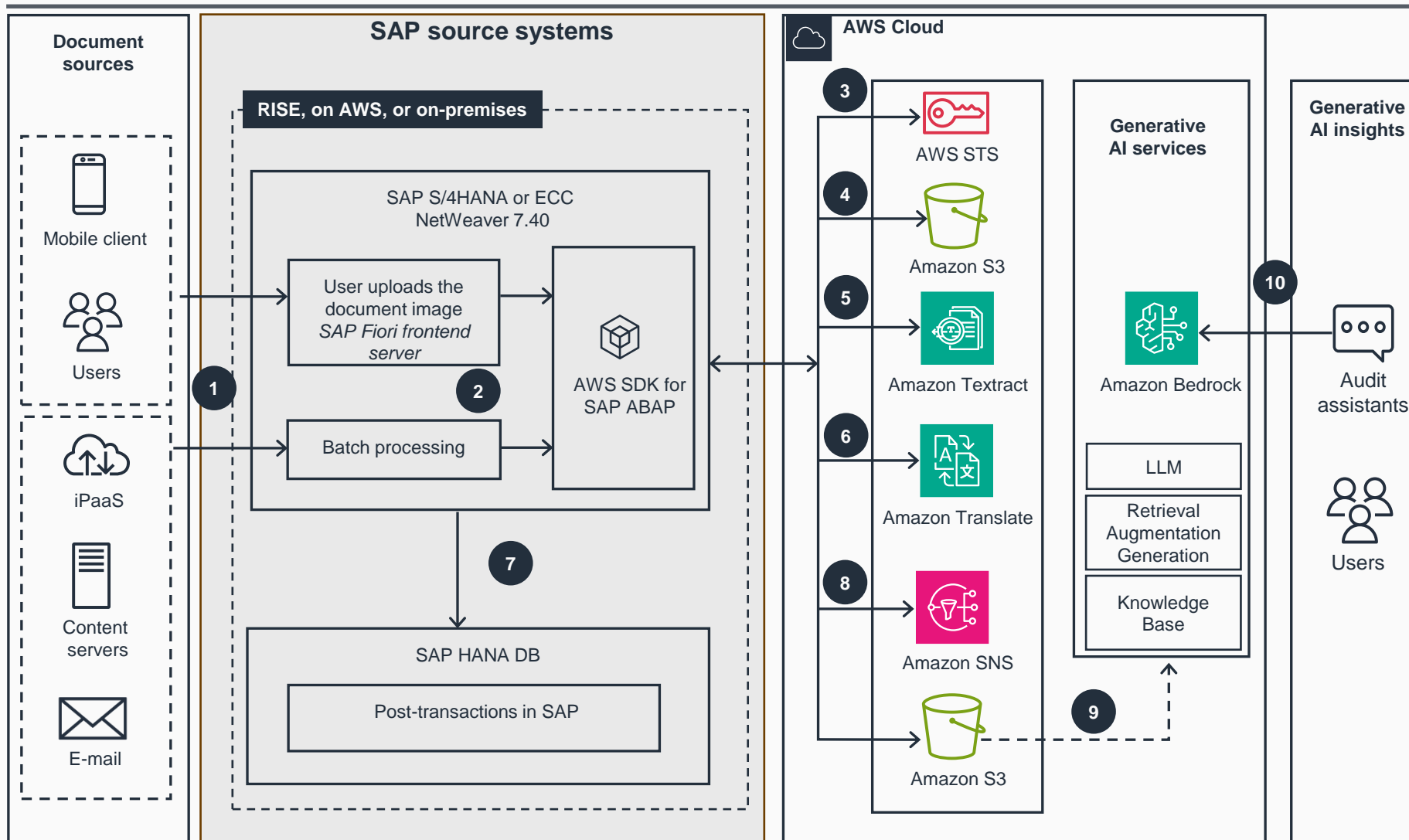


Guidance for SAP Intelligent Document Processing and Insights using Generative AI on AWS

SAP in-stack extensions

This architecture diagram shows how to build SAP in-stack extensions and intelligently process your documents to streamline your SAP business process using AI/ML and generative AI services.



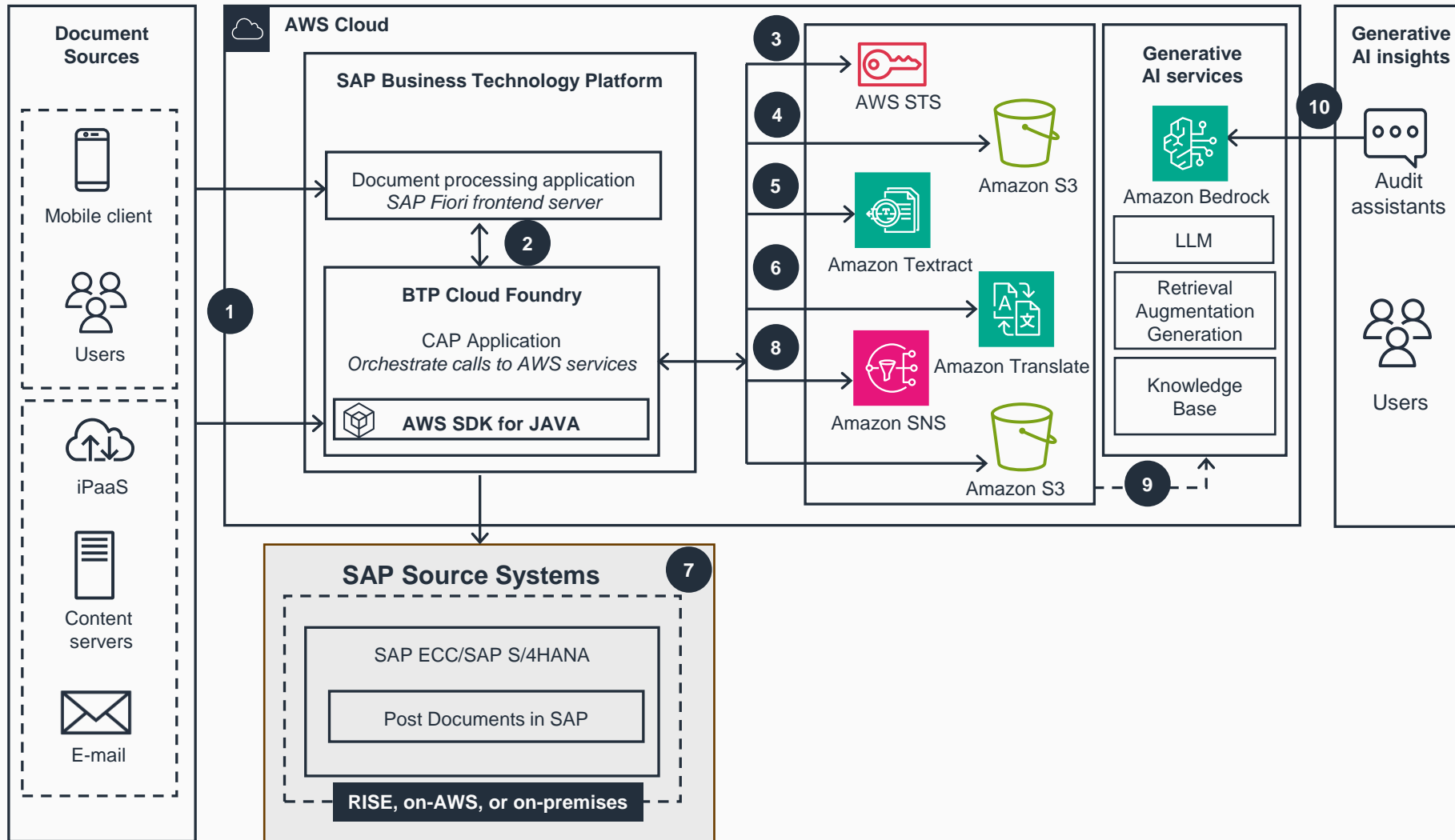
- 1 Documents can be sourced from various channels. Users can upload through mobile clients to the frontend application, an Integration Platform as a Service (iPaaS), or content servers that can directly integrate through a batch process.
- 2 Users manage document processing through the Fiori front-end server.
- 3 The Fiori application calls the AWS SDK for SAP ABAP, orchestrating the calls to AWS services natively for processing. **AWS Security Token Service** (AWS STS) is used to generate temporary security credentials, helping ensure secure access and interactions between the application, users, and AWS services.
- 4 **Amazon Simple Storage Service** (Amazon S3) is used for storing the documents being processed and managed within the workflow.
- 5 **Amazon Textract** extracts information from documents using pre-trained AI/ML models.
- 6 **Amazon Translate** is used to enable translations.
- 7 The processed documents are stored in the SAP HANA database using SAP APIs.
- 8 **Amazon Simple Notification Service** (Amazon SNS) is used to send notifications and updates related to the document processing activities.
- 9 **Amazon Bedrock** provides a secure and scalable environment to build auditing knowledge bases based on data in **Amazon S3**, using the large language model (LLM), a foundation model (FM), and retrieval-augmented generation features.
- 10 The audit assistant uses the knowledge base built on **Amazon Bedrock** to perform intelligent auditing of the processed documents and associated activities.



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SAP side-by-side extensions

This architecture diagram shows how to build external SAP extensions to intelligently process your documents.



- Documents can be sourced from various channels. Users can upload through mobile clients to the frontend application, or iPaaS can directly integrate using the SAP Cloud Application Programming (CAP) model application for batch processing.
- Users manage document processing through the Fiori front-end server.
- The CAP extension application is built on the SAP Business Technology Platform (BTP). It serves OData API which receives documents from sources and orchestrates the calls to AWS services natively using AWS SDK for JAVA for processing. **AWS STS** is used to generate temporary security credentials for secure access and interactions between the application, users, and AWS services.
- Amazon S3** is used for storing the documents being processed and managed within the workflow.
- Amazon Textract** extracts information from documents using pre-trained AI/ML models.
- Amazon Translate** is used to enable translations.
- The processed documents are posted from the CAP application to SAP ECC/S/4HANA through SAP APIs.
- Amazon SNS** is used to send notifications and updates related to the document processing activities.
- Amazon Bedrock** provides a secure and scalable environment to build auditing knowledge bases based on data in **Amazon S3**, using the large language model (LLM) and retrieval-augmented generation (RAG) features.
- The audit assistant uses the knowledge base built on **Amazon Bedrock** to perform intelligent auditing of the processed documents and associated activities.

