



Architecture diagrams for retail

Personalization and Predictive Consumer Engagement for CPG



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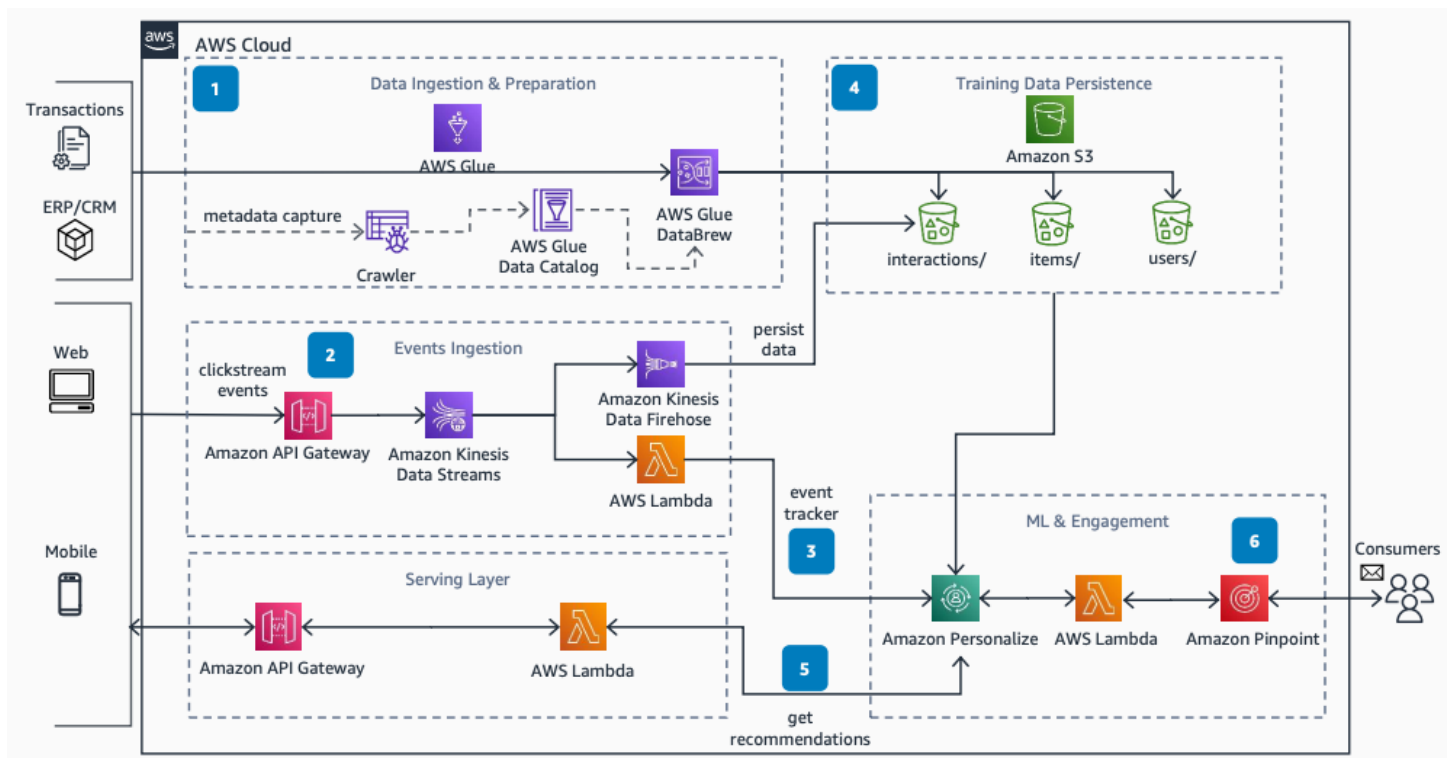
Personalization and Predictive Consumer Engagement for CPG

Overview

Consumer expectations evolve and behaviors change rapidly. Consumer packaged goods (CPG) companies have many channels to communicate with consumers. However, sending the right message at the right time on the right channel remains difficult.

Consumers lose patience with brands that cannot support seamless transitions between mobile, web, email, SMS, and in-person engagements. This architecture delivers personalized experiences that surprise and delight your consumers.

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Download: [Architecture diagram \(PDF\)](#)

Architecture

The following steps describe the architecture:

1. You ingest data into AWS by using batch processing. [AWS GlueDataBrew](#) cleans and normalizes data. This prepares data for analytics and machine learning (ML) applications.
2. [Amazon Kinesis](#) captures real-time event data. Amazon Data Firehose loads event data into an [Amazon Simple Storage Service \(Amazon S3\)](#) bucket for potential retraining and future use.
3. The [Amazon Personalize](#) event tracker captures real-time event data. This data is added to the Interactions dataset within Amazon Personalize. It updates the model with data from consumers' most recent activity.
4. Three types of input data are stored: interactions (user activity stream data), items (descriptions such as category and availability), and users (attributes such as age and loyalty membership).
5. Product recommendations are retrieved from Amazon Personalize through a serving layer. The recommendations are displayed on the web or mobile.
6. Personalized notifications are sent to consumers through [Amazon Pinpoint](#). This uses the predictive recommendations from Amazon Personalize for targeted campaigns.

Diagram history

To receive updates about this reference architecture diagram, subscribe to the RSS feed.

Change	Description	Date
Initial publication	Reference architecture diagram first published.	July 8, 2021

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