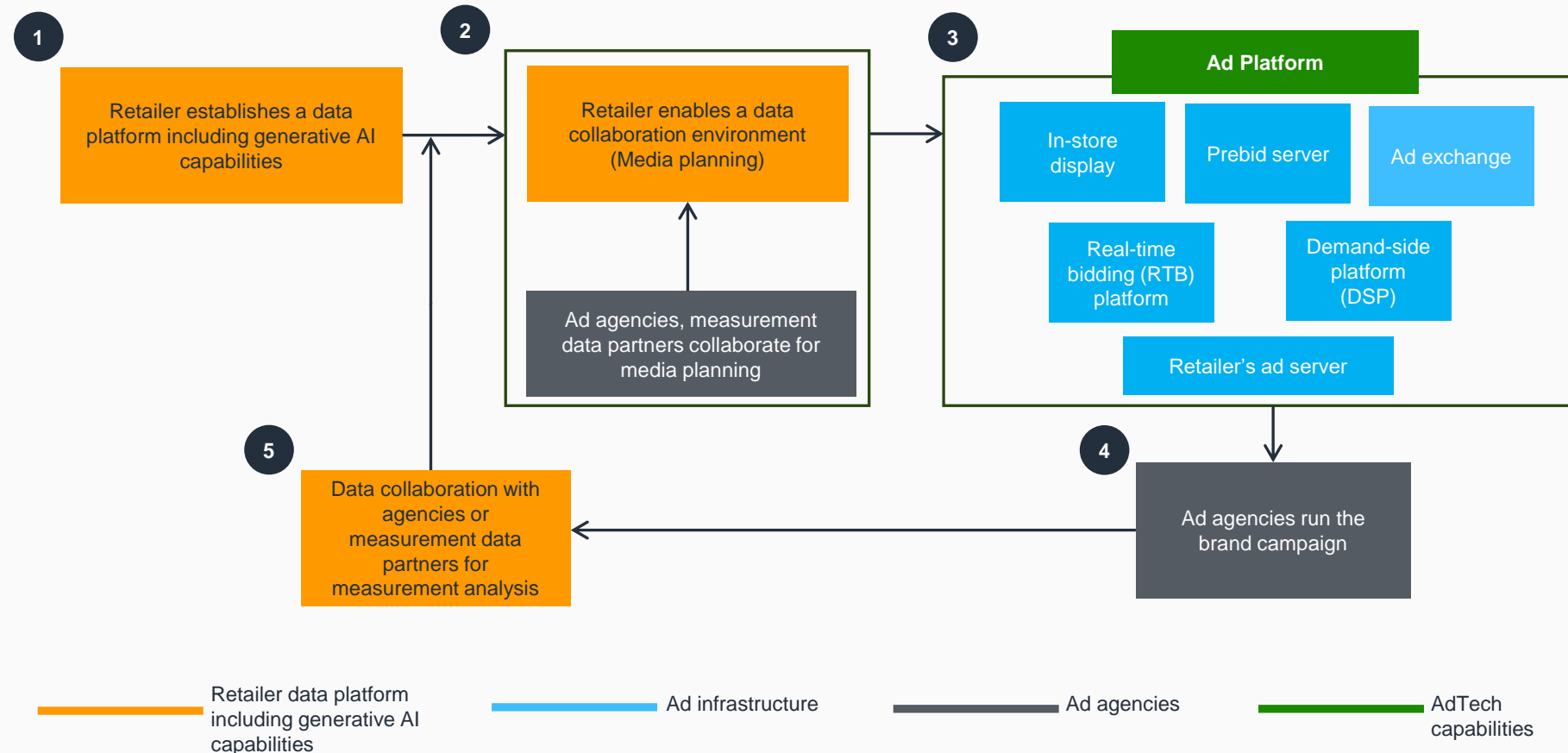


Guidance for Retail and Commerce Media Monetization on AWS

Overview

This architecture diagram provides an overview of how retailers, acting as publishers, can better monetize their online audience with a Retail Media Insights platform.



1 The retailer builds a Retail Media Insights platform on AWS that unifies their first-party data and enables advanced analytics capabilities, including artificial intelligence and machine learning (AI/ML), as well as generative AI. This platform allows the retailer to perform audience queries and measurement analysis using natural language interfaces.

2 The retailer enables a data collaboration environment using data clean room technology. This allows advertising agencies and brands to collaborate in a privacy-enhanced manner, gathering insights about audiences and evaluating return on investment prior to campaign initiation (media planning). The advertising agencies support this data collaboration during the media planning phase and in executing campaigns for the brands.

3 In the Ad Platform workflow, the retailer sends ad or bid requests enriched with their first-party data to a server-side platform (SSP) and/or demand-side platform (DSP). The DSPs then bid on behalf of their advertising brand and agency customers.

4 The retailer receives the bid requests and conducts an auction, either through their own ad tech stack using a pre-bid server or through a partner SSP. The winning bid request is then further processed by the SSP/DSP, and the advertisement is ultimately served through the ad servers.

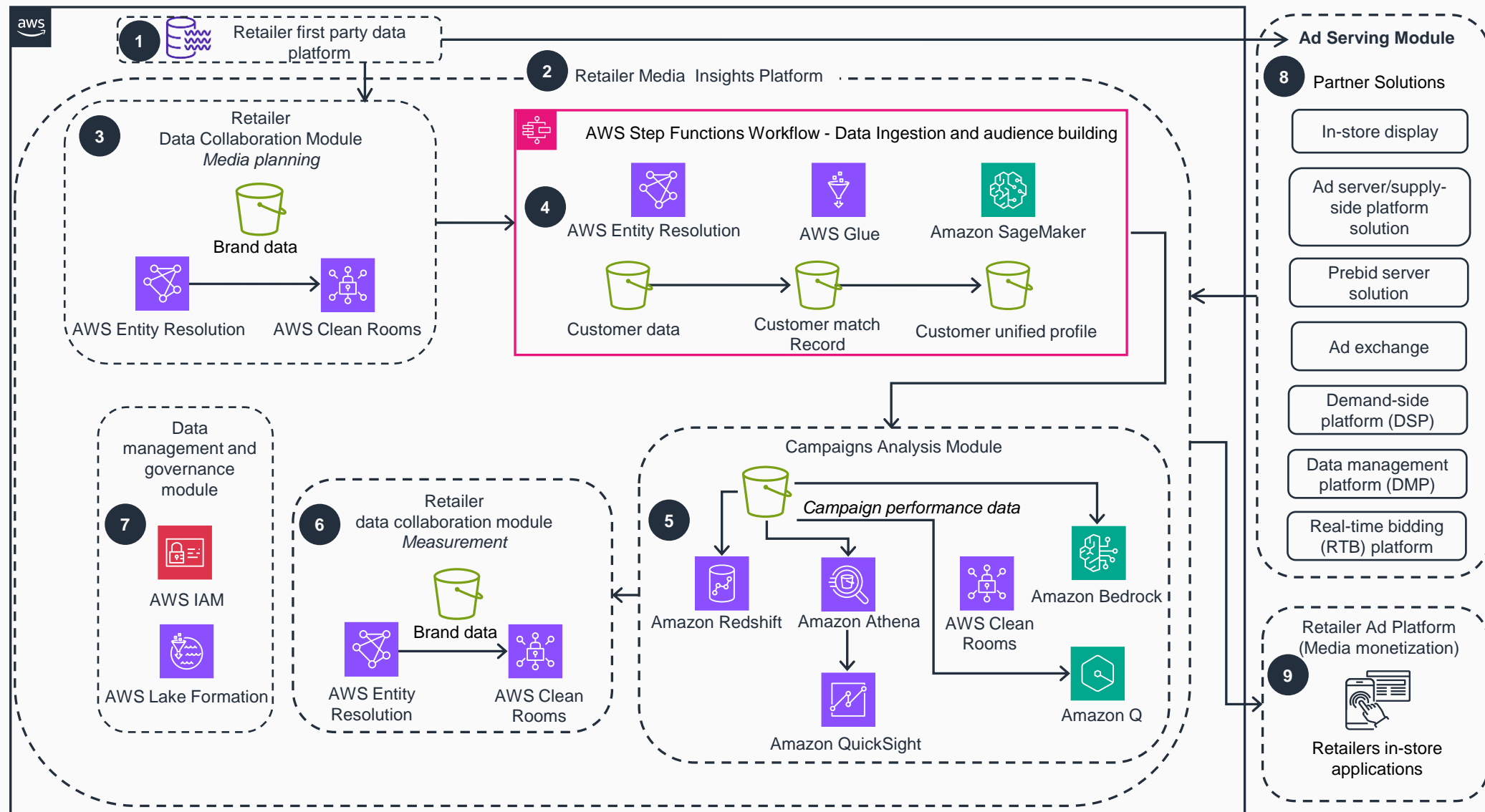
5 The retailer and advertising agencies or brands engage in data collaboration using data clean room technology for post-campaign measurement. This is done in a privacy-enhanced manner, without the parties sharing any underlying sensitive data with one another.



Guidance for Retail and Commerce Media Monetization on AWS

Key components and workflows

This architecture diagram outlines the key components and workflows involved in enabling retailers to monetize their online audience through the Retail Media Insights platform. This diagram consists of 9 steps with steps 1-4 shown here. Steps 5-9 are shown on the subsequent slides.

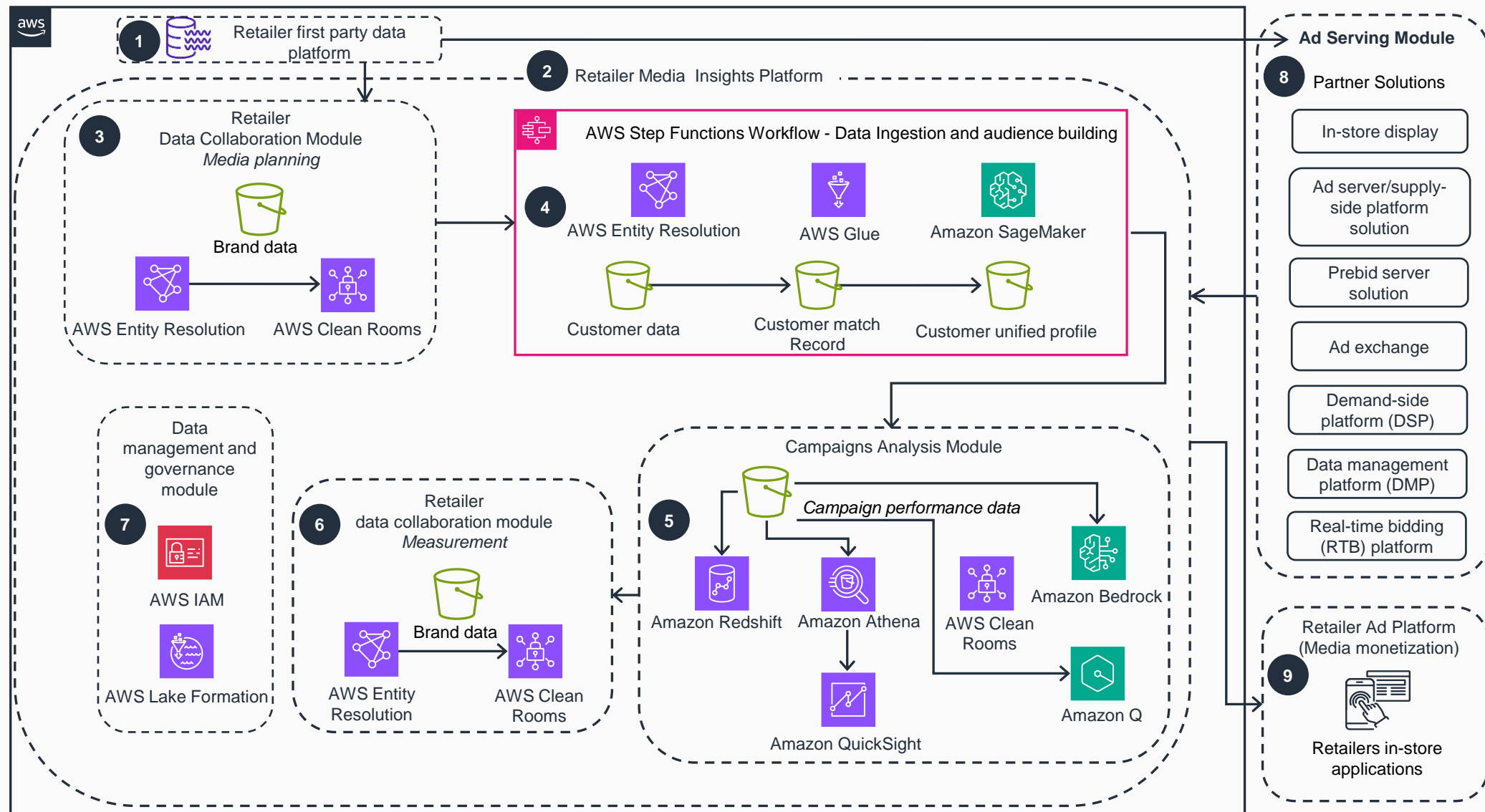


- 1 The retailer's first-party data platform contains customer profiles, interactions, and transactions, along with product inventory and media inventory.
- 2 The retailer's Retail Media Insights platform includes modules for data ingestion, audience building, campaign analysis, and data collaboration for media planning and measurement. The platform supports enabling a web-based user interface for agencies and internal users to manage and operate the system.
- 3 The retailer configures the data collaboration module for media planning. In this collaboration, the first-party data from the advertiser, stored in **Amazon Simple Storage Service** (Amazon S3), is linked with the retailer's data using **AWS Entity Resolution** and **AWS Clean Rooms**, and then onboarded into the Ad Serving Module.
- 4 The data ingestion and audience building process uses **AWS Glue** extract, transform, and load (ETL) jobs that consume the output from the **AWS Entity Resolution** workflow, generating unified consumer profile data tables for campaign audience building. The customer data processing between **AWS Entity Resolution** and **AWS Glue** is orchestrated by an **AWS Step Functions** workflow. Additionally, **Amazon SageMaker** ML models, trained and hosted on the platform, are employed in the audience building process.

Guidance for Retail and Commerce Media Monetization on AWS

Key components and workflows

Steps 5-6



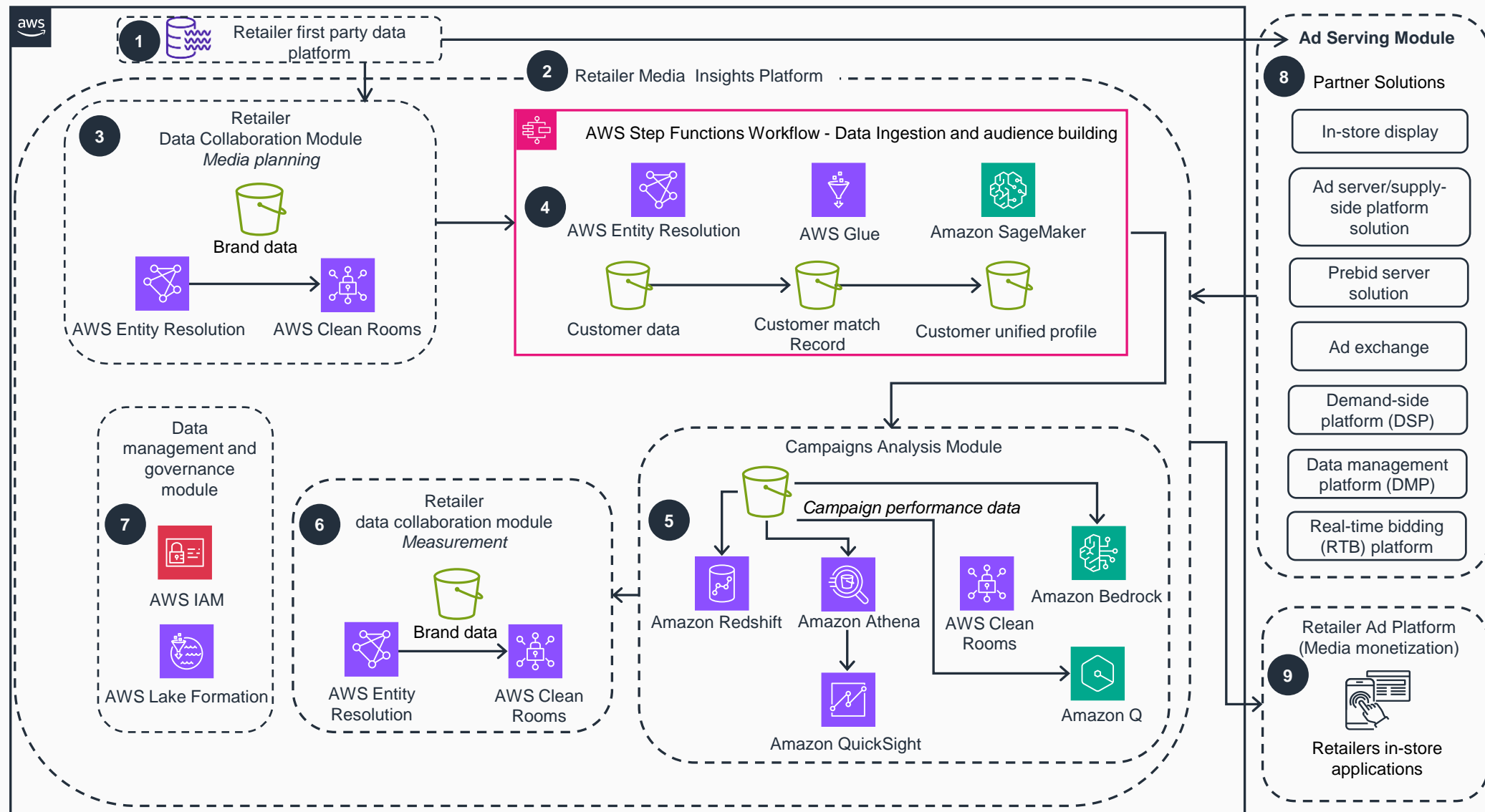
5 The Campaign Analysis Module supports functions such as campaign performance and optimization, creative performance and optimization, programmatic invoicing, and customer-facing reporting. Metrics like impressions and clicks are delivered to **Amazon S3** from the Ad Serving Module. This output is then consolidated and queried using **Amazon Athena** or loaded into **Amazon Redshift**, and visualized using **Amazon QuickSight**. Additionally, the platform uses generative AI models hosted on **Amazon Bedrock** to automate various activities, such as creative and campaign optimization. For example, multimodal large language models (LLMs) are used to extract rich metadata about each creative, which is then analyzed to identify the common attributes of effective creatives. This information is then used to create or transform new creatives for future campaigns. Furthermore, **Amazon Q** is used to summarize information and provide natural language querying capabilities on the campaign data.

6 The retailer configures the data collaboration module for measurement, linking the first-party data between the advertiser, stored in **Amazon S3**, and the retailer using **AWS Entity Resolution**. This linked data is then onboarded to the ad platforms using **AWS Clean Rooms**, enabling the retailer and the advertiser to easily and securely analyze and collaborate on their collective datasets without sharing or copying each other's underlying data.

Guidance for Retail and Commerce Media Monetization on AWS

Key components and workflows

Steps 7-9



- 7** **AWS Lake Formation** defines granular access controls on the **AWS Glue** Data Catalog tables within the data lake. Additionally, **AWS Identity and Access Management (IAM)** is used to securely manage identities and access to AWS services and resources.
- 8** The retailer's ad serving infrastructure enriches the ad request with contextual data obtained from the data platform. Using **Partner Solutions**, the ad request is then sent to the programmatic advertising supply chain through **SSP partners** or direct integrations with **DSPs**, facilitated by a pre-bid server.
- 9** The retailer's ad platform publishes advertisements within their digital display devices and applications, enabling media monetization.

