



Architecture diagrams for hospitality

Lodging Data Platform



Lodging Data Platform: Architecture diagrams for hospitality

Copyright © 2026 Amazon Web Services, Inc. and/or its affiliates. All rights reserved.

Amazon's trademarks and trade dress may not be used in connection with any product or service that is not Amazon's, in any manner that is likely to cause confusion among customers, or in any manner that disparages or discredits Amazon. All other trademarks not owned by Amazon are the property of their respective owners, who may or may not be affiliated with, connected to, or sponsored by Amazon.

Table of Contents

Lodging data platform **i**

Lodging data platform diagram 1

Further reading 2

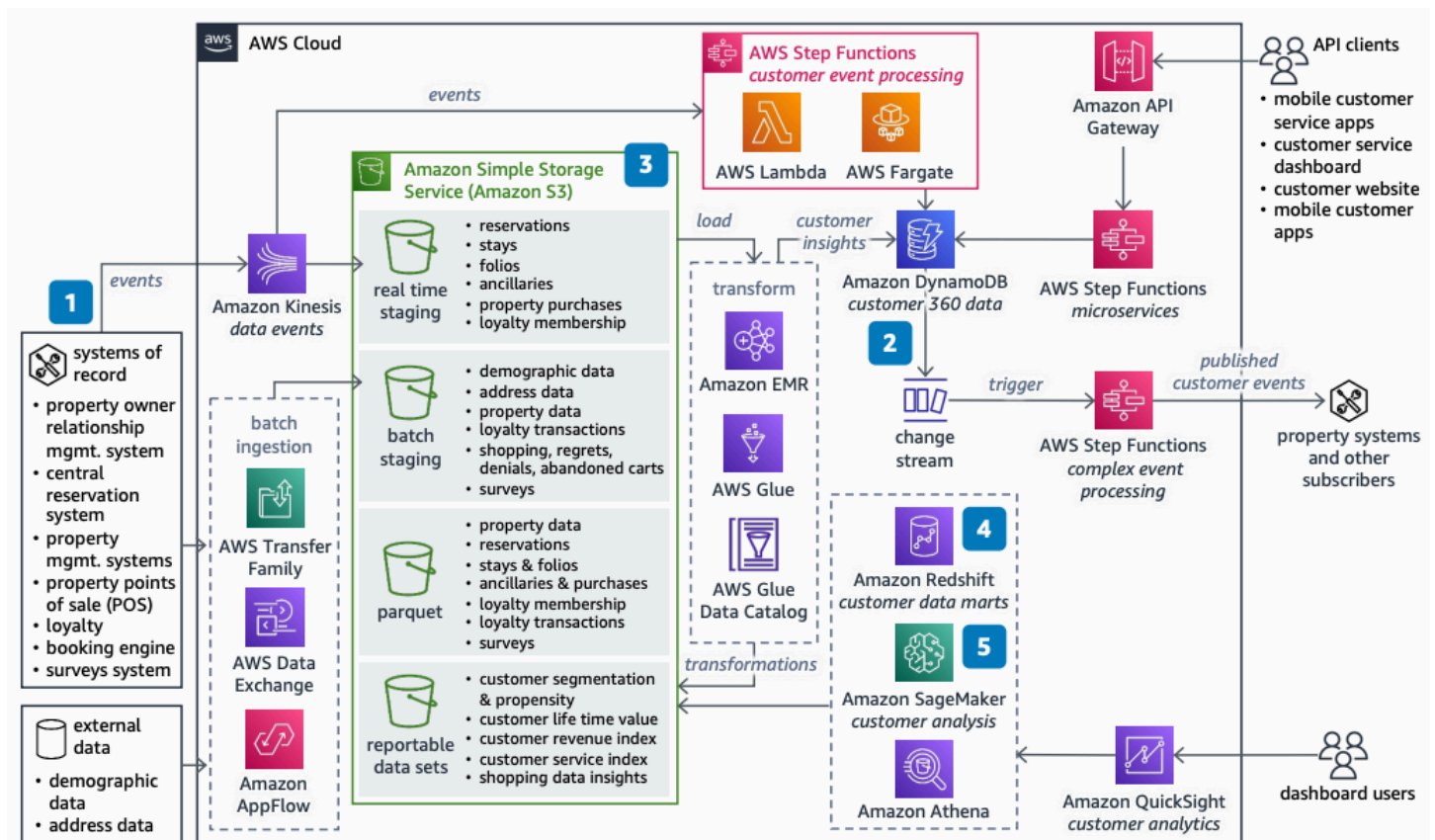
Diagram history 2

Lodging Data Platform

Publication date: **October 7, 2022** ([Diagram history](#))

With this architecture, you can build a data platform that serves both operational and analytics needs for lodging companies. Use open data standards and separate storage from compute. You use [Amazon Simple Storage Service](#) for the data lake, [Amazon DynamoDB](#) for operational data, and [Amazon SageMaker AI](#) for artificial intelligence (AI) and machine learning (ML) models.

Lodging data platform diagram



The following steps describe the architecture:

1. Build basic data as a service with the most important domains: properties, reservations, stays, and loyalty. Separate storage from compute as a key design tenet.
2. Use purpose-built databases and serverless architecture to deliver microservices and events for the operational data store. Use DynamoDB, [AWS Lambda](#), and [AWS Step Functions](#) to scale

based on adoption. Replace expensive on-premises operational databases and service-oriented architecture (SOA) infrastructure.

3. Use open standards to build the data lake with the same data as the operational platform. Use a read pattern schema to make raw and curated data available for all user roles. Process data by using [AWS Glue](#) and [Amazon EMR](#).
4. Build standard enterprise data warehouse schemas and data marts in [Amazon Redshift](#) for known usage patterns. For one-time requirements, publish the data catalog and use [Amazon Athena](#) for analysis directly from the data lake.
5. Use SageMaker AI to provide standard AI and ML models for customer segmentation and lifetime value. Build custom models on top of the data.

Further reading

For additional information, see the following resources:

- [AWS Architecture Icons](#)
- [AWS Architecture Center](#)
- [AWS Well-Architected](#)

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.	October 7, 2022

RSS subscription requirement

To subscribe to RSS updates, you must have an RSS plugin enabled for the browser you are using.