



Architecture diagrams for hospitality

Personalization Using AI/ML for Lodging



Personalization Using AI/ML for Lodging: Architecture diagrams for hospitality

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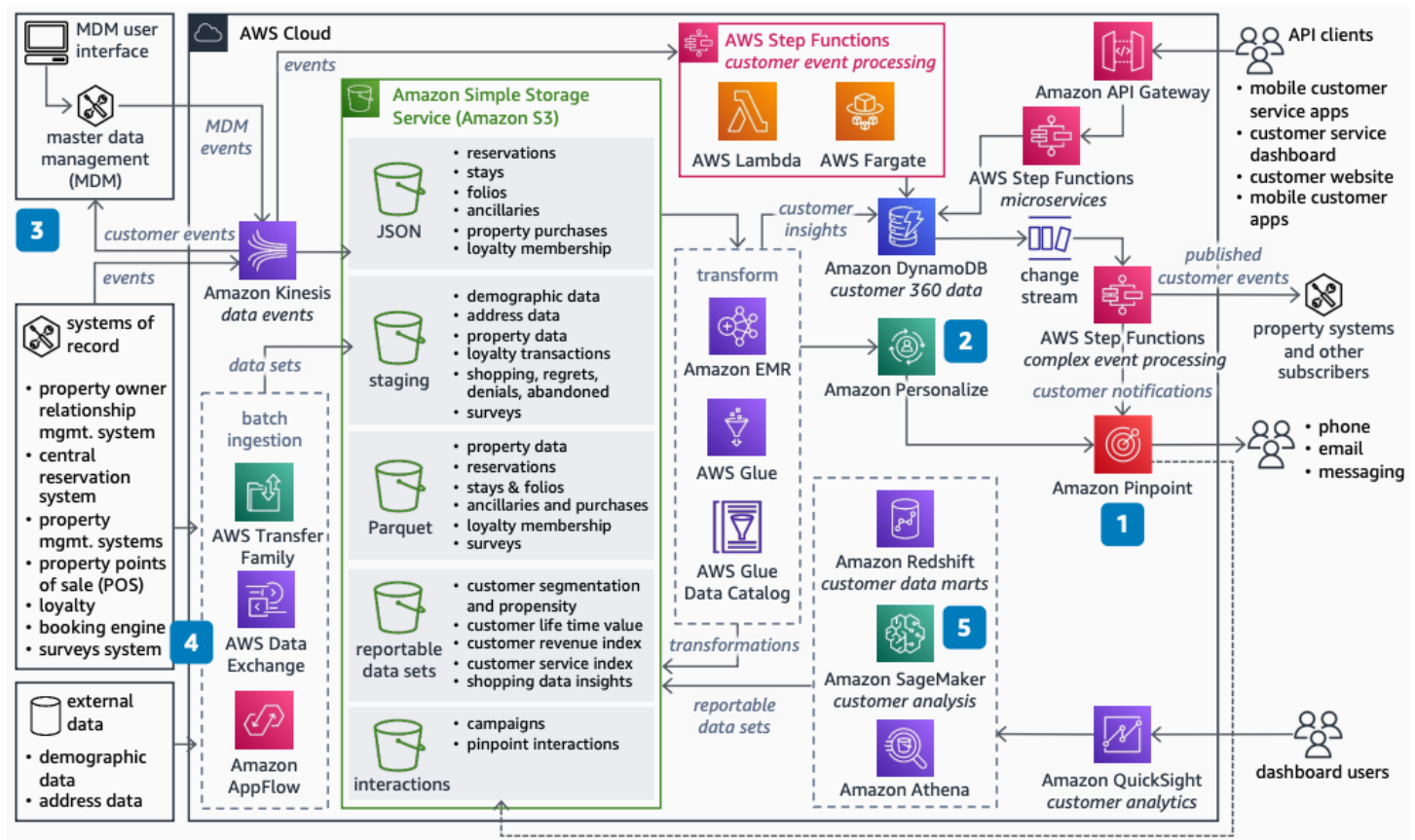
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Personalization Using AI/ML for Lodging

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With this architecture, you can personalize and improve the customer experience for lodging companies. Proactively recognize service changes and failures, recover from them, and interact with guests on their preferred channel. The solution uses [Amazon Personalize](#) for targeted offers, [Amazon Pinpoint](#) for multi-channel delivery, and [Amazon SageMaker AI](#) for custom artificial intelligence and machine learning (AI/ML) models.

Personalization AI/ML diagram



The following steps describe the architecture:

1. Build on top of the operational data platform. Use [Amazon Simple Storage Service](#) as the data lake foundation. Ingest data from systems of record through [AWS Transfer Family](#) and AWS Data Exchange. Process data by using [AWS Glue](#) and [Amazon EMR](#).

2. Use Amazon Pinpoint to deliver operational communications over channels such as email, SMS, push, voice, or in-app messaging. Amazon Pinpoint stores all interactions with delivery status for tracking. Take into account customer channel preferences.
3. Use Amazon Personalize to create segmentations, target lists, and personalized offers from data lake content. Use Amazon Pinpoint to deliver these offers based on customer preferences. Record all offers and customer interactions to refine future recommendations.
4. Improve personalization effectiveness by using Master Data Management (MDM) integration. Unify guest profiles across systems of record.
5. Create new AI/ML models for customer lifetime value, segmentation, and specialized offers. Use SageMaker AI and the raw and curated data in the data lakes. (Optional) Extend the capability by adding domains such as point of sale (POS) and survey systems.

Further reading

For additional information, see the following resources:

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

Diagram history

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