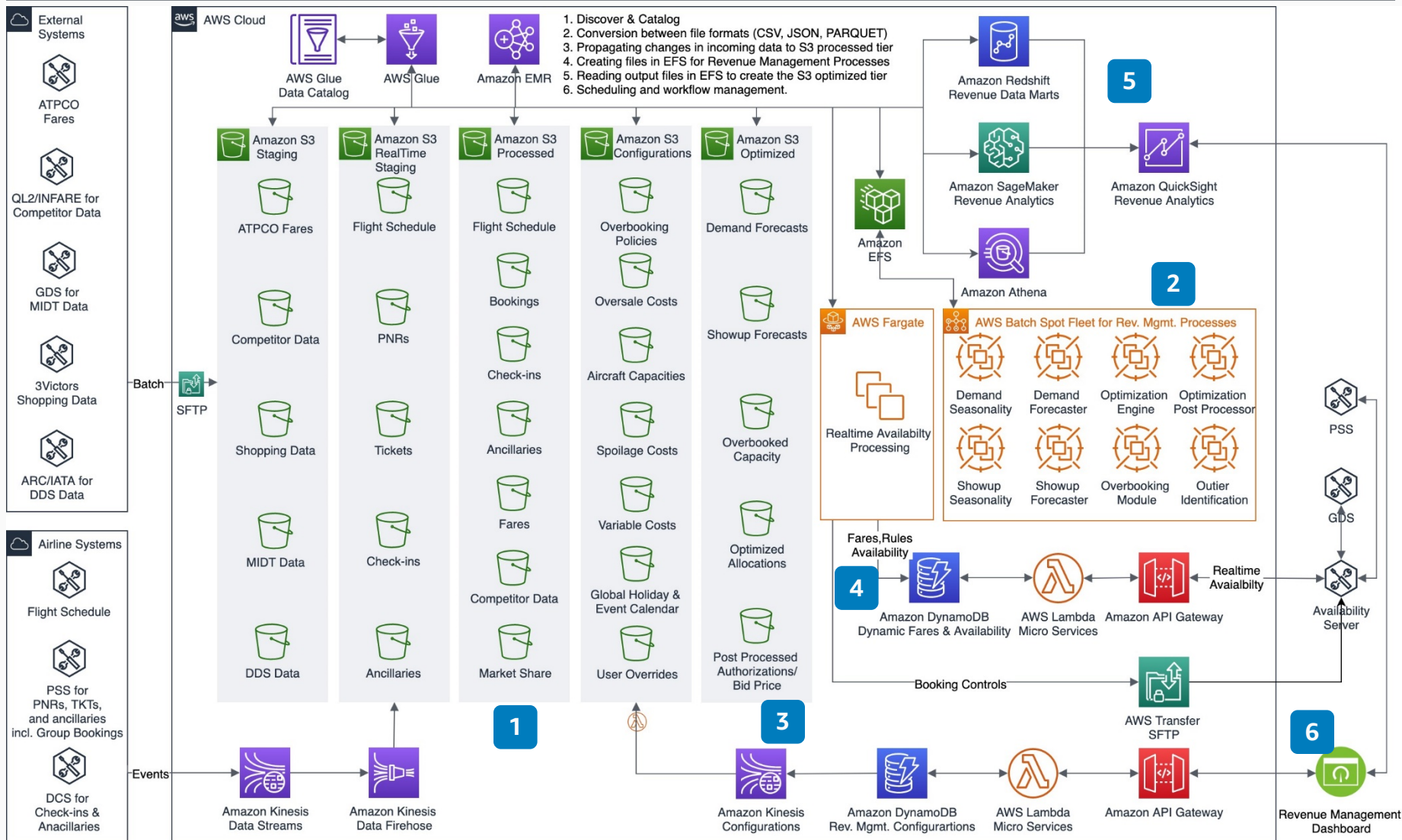


Revenue Management Architecture for Airlines

Migrate an on-premises revenue management system to Amazon Web Services (AWS) to add real-time capabilities, improve the flexibility and agility of reporting and analytics, and reduce the total cost of ownership (TCO) by using Spot Instances, and big data architecture.



Revenue management systems implemented on-premises cannot scale to meet the demands of the business to add real-time data feeds and dynamic adjustments to booking controls, and to meet the changing/on-demand reporting and analytics needs. On-premises infrastructure and data platforms cannot meet these requirements without significant increase in costs and resources. This migration architecture builds upon the foundation of [Data Platform for Airlines](#) provide real-time data ingestion and flexible/on-demand reporting and analytics, and uses Amazon EC2 Spot Fleet to reduce TCO.

- 1** Tiered data lake architecture using **Amazon S3** allows for ingestion and processing of data from a variety of batch and real-time data feeds. In addition, this architecture allows for adding new data feeds and propagating data changes easier.
- 2** Existing revenue management modules can be migrated to use **Amazon EC2 Spot Instances** to significantly reduce the cost of infrastructure without making any changes to the code. **Amazon EFS** replicates the file structure and files required by the modules.
- 3** Outputs from the revenue management modules are converted and stored in the data lake to facilitate the reporting and analytics of the optimized data.
- 4** Enable real-time booking controls with **Amazon EC2 On-Demand instances** to adjust booking controls and update the fares, rules, and availability in **Amazon DynamoDB** for providing availability services.
- 5** Flexible and on-demand reporting is provided by leveraging the data lake that has all the raw, processed, and optimized data, and using a combination of **Amazon Redshift** and **Amazon Athena**.
- 6** Build a revenue management dashboard to use reporting and analytics capabilities and allow for making adjustments to configurations and user overrides.

