Flight Information Management System (FIMS)

Manage and operate services required for unmanned aerial systems on AWS.

Operators access the FIMS services through a web-based portal for flight planning and additional services.

Flight plans are sent to appropriate microservices and Amazon ECS is leveraged for processing approvals.

Persistent relational data such as registration and flight plan are stored in Amazon Aurora.

Real-time data (such as telemetry, position, track, and velocity) is stored in DynamoDB.

Cached data is stored through Amazon ElastiCache for quick retrieval.

Processed data is encrypted and stored in data lake, and managed by AWS Lake Formation, in accordance with regulatory compliance.

Virtualization tools to view real-time positioning, flight paths, potential conflicts, etc. can be deployed using QuickSight and Amazon Managed Grafana.

Flight plan approvals automatically provided to UAS operators by FIMS.

UAS operators request/receive manual approval from FIMS Admins for flight plans when conflicts arise.

UAS provider data stored in Amazon Aurora and real-time data stored in DynamoDB databases.

Data lake built on Amazon S3 is leveraged for secure data archival, analytics, and visualization.

Supplemental data from weather services is ingested into FIMS for smart decisioning.