





FlightStats Data and Platform



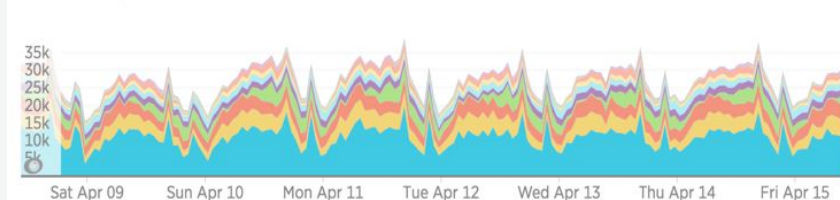
Who is FlightStats?

FlightStats is the leading provider of global real-time flight status data.

- Over 500 sources of data
- Daily ingress
 - ~15M flight events
 - ~260M aircraft positions
 - ~1M PNRs
- Daily egress
 - ~2M FlightStats.com requests
 - ~1M mobile app requests
 - ~15M Flex API requests
 - ~1.5M flight/trip notifications

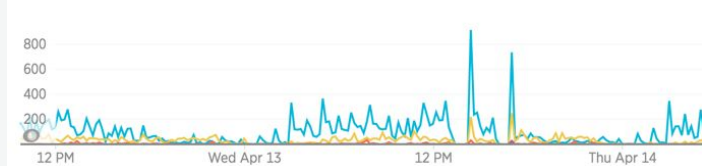
Direct Data Feed Volume By Hour

Since 1 week ago



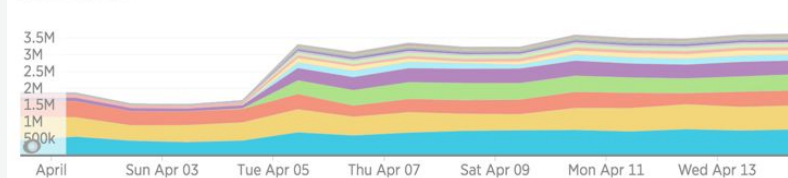
New Alerts Delivered (TAD)

Since 3 days ago

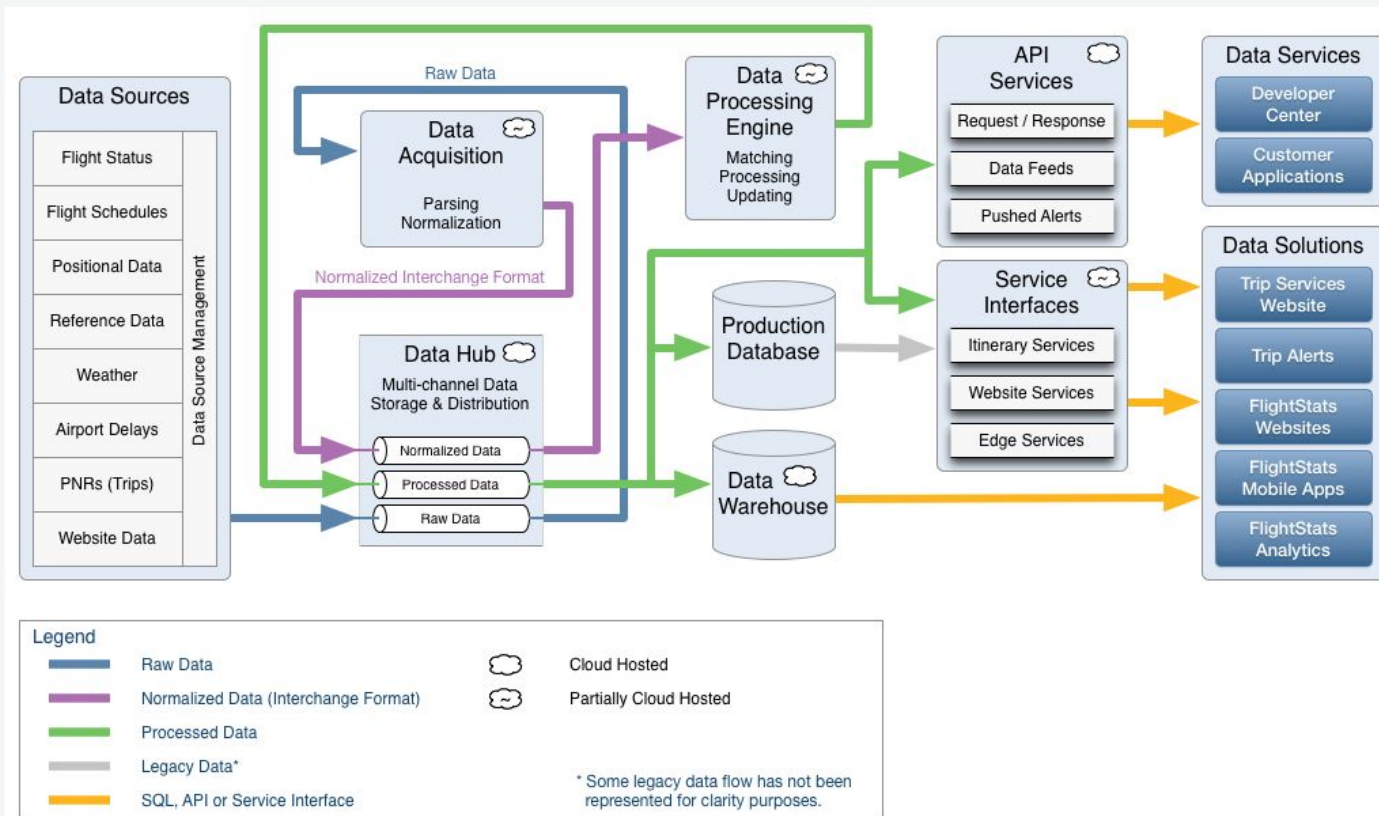


Flight Status API Requests

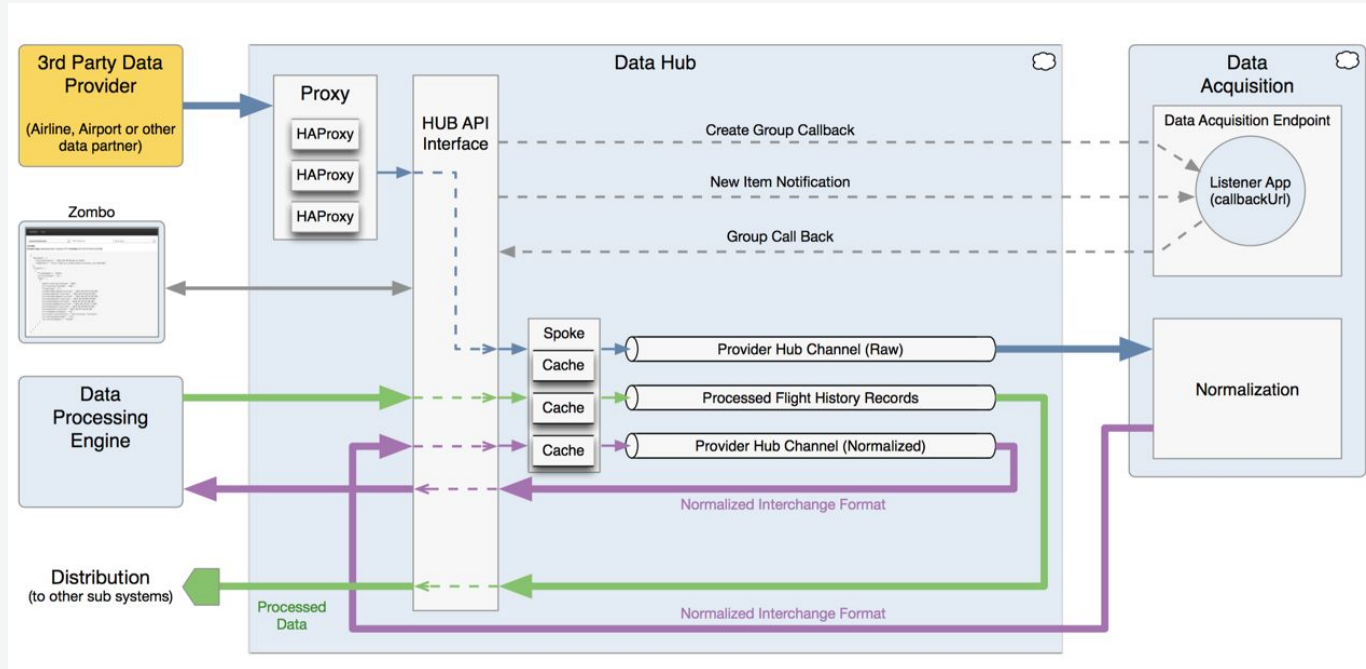
Since 15 days ago



Data Pipeline



Object storage based, scalable, highly available, multi-channel data queuing and eventing system.



Open Source: <https://github.com/flightstats/hub>

Collected and Aggregated Data (FLIFO)



Gate Departure



Gate Arrival



Runway
Departure



Runway Arrival

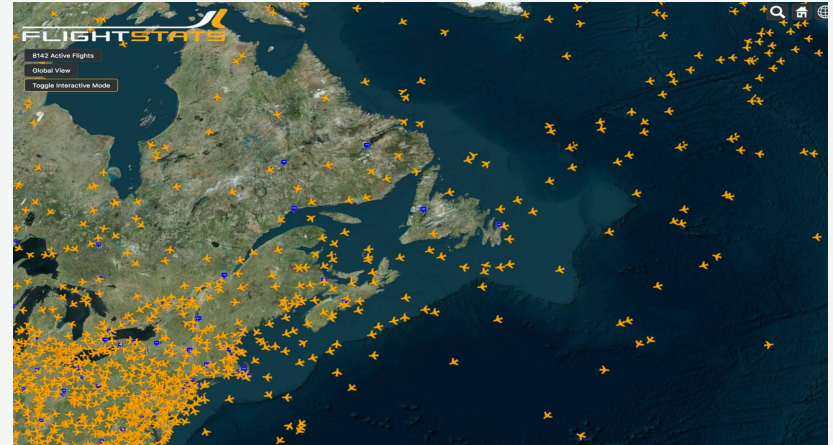


In-flight
Positional
Tracking

Special Incidents



Synthetic Positions



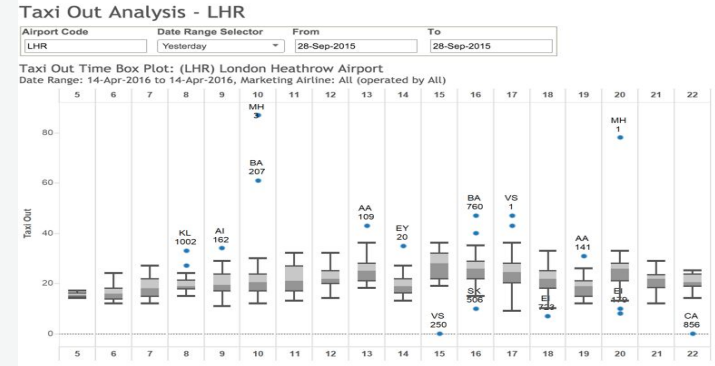
Delay Prediction

| FLIGHTSTATS | | | | | | | | |
|--------------------|------------|--------------------------------|---------|---------|---------|-----------|-----------|---------------------|
| Airport SFO | | Date 2016-04-15 < Hour > 00:00 | | | | | | |
| Flight | Route | P24 | P12 | P8 | P4 | P2 | PCurrent | Current Status |
| OO 5449 | SFO -> BOI | | On time | On time | On time | On time | On time | Arrived-On time |
| UA 768 | SFO -> BOS | | On time | On time | On time | On time | Delayed | Departed-Delayed |
| OO 5920 | SFO -> BUR | | On time | On time | On time | On time | On time | Arrived-On time |
| UA 1679 | SFO -> CUN | | | | On time | On time | On time | Departed-On time |
| VX 1 | SFO -> DCA | | | On time | On time | On time | On time | Departed-On time |
| UA 2028 | SFO -> DEN | On time | On time | On time | On time | On time | On time | Arrived-On time |
| VX 860 | SFO -> DEN | On time | On time | On time | On time | On time | On time | Arrived-On time |
| OO 5567 | SFO -> DFW | On time | On time | On time | On time | On time | On time | Departed-On time |
| AA 36 | SFO -> DFW | On time | On time | On time | On time | On time | On time | Departed-On time |
| OO 5632 | SFO -> EUG | | On time | On time | On time | On time | On time | Arrived-On time |
| VX 174 | SFO -> EWR | | On time | On time | On time | On time | On time | Departed-Delayed |
| UA 233 | SFO -> EWR | | On time | On time | On time | On time | On time | Departed-Delayed |
| VX 340 | SFO -> FLL | | | On time | On time | On time | On time | Departed-Delayed |
| VX 51 | SFO -> HNL | | On time | On time | On time | On time | On time | Departed-On time |
| HA 11 | SFO -> HNL | | | | | | | Departed-On time |
| UA 2146 | SFO -> IAH | | | | | | | Departed-On time |
| DL 444 | SFO -> JFK | | On time | On time | On time | On time | On time | Departed-On time |
| AA 164 | SFO -> JFK | | On time | On time | On time | Disrupted | Disrupted | Scheduled-Disrupted |

Flight Notifications



- Data warehouse with 6 Years of historical flight data
- Analytics Products
 - Airline competitive analysis
 - Airline route analysis
 - Airport operations analysis
 - On time performance metrics



| Route Grouping | Route Sub Grouping | Market | Route | 2016 | | | |
|----------------|--------------------|------------|------------|---------|----------|-------|--------|
| | | | | January | February | March | April |
| Europe | North America | AMS -> PHL | AMS -> PHL | 83.33 | 80.00 | 88.46 | 61.54 |
| | | BCN -> NYC | BCN -> JFK | 87.50 | 80.95 | 75.86 | 66.67 |
| | | BCN -> PHL | BCN -> PHL | | | 0.00 | 45.45 |
| | | BCN -> QMI | BCN -> MIA | 45.45 | 38.10 | 65.52 | 57.14 |
| | | BRU -> PHL | BRU -> PHL | 72.73 | 71.43 | 94.12 | |
| | | BSL -> NYC | ZRH -> JFK | 66.67 | 68.75 | 74.07 | 69.23 |
| | | DUB -> NYC | DUB -> JFK | | | 50.00 | 33.33 |
| | | DUB -> PHL | DUB -> PHL | 81.82 | 83.33 | 90.32 | 78.57 |
| | | FRA -> CLT | FRA -> CLT | 100.00 | 85.71 | 96.77 | 100.00 |
| | | FRA -> PHL | FRA -> PHL | 70.00 | 90.48 | 96.00 | 92.31 |

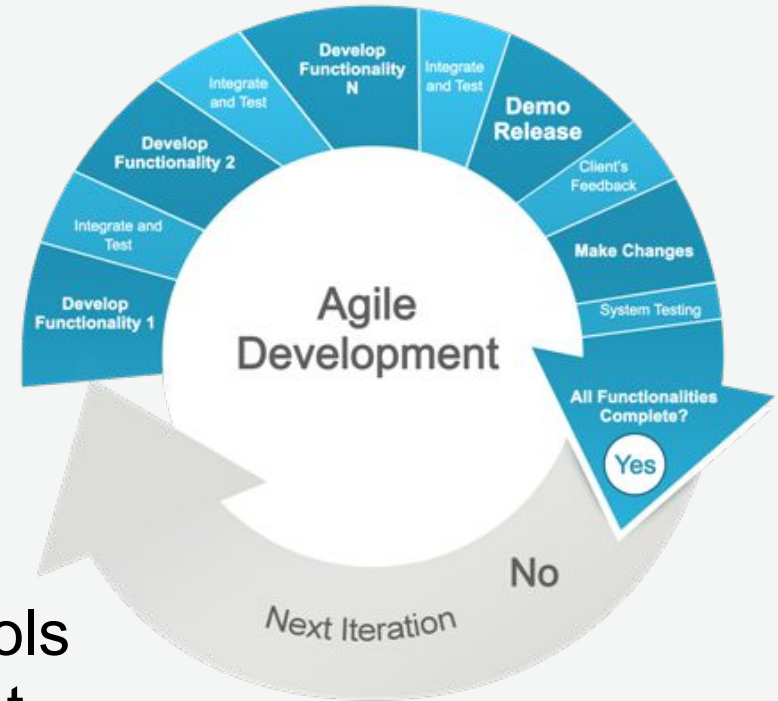




- Resources hosted in our private data center and with Amazon Web Services (AWS)
 - Core data processing and service layer resides in the private data center
 - API endpoints that require low latency connections live in AWS
- Private infrastructure virtualized with VMWare



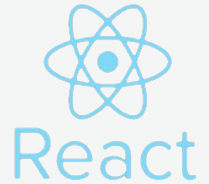
- Agile development
 - Small, fast teams
 - Product centric
 - Customer interactive
 - Semi-autonomous
- Automate everything
- Measure everything
- Total system awareness
- Industry best practices and tools
- Recruit and hire the best talent



- Java 8 backend
- Node.js micro-service edge layer
- PostgreSQL, MongoDB databases
- Web - HTML5, React, Redux, Elasticsearch
- Mobile - iOS/Android



PostgreSQL





- <http://flightstats.com>
- Data for your apps: <http://developer.flightstats.com>
- The Hub: <https://github.com/flightstats/hub>
- email: chad@flightstats.com