





## Dados e Plataforma FlightStats



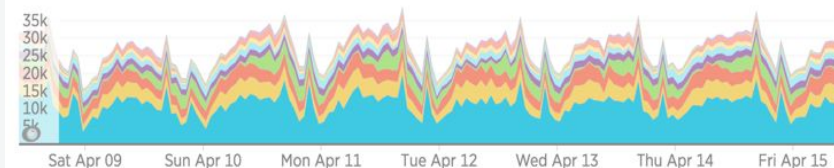
## Quem é FlightStats?

FlightStats é o fornecedor líder de dados globais de status de vôos

- Mais de 500 fontes de dados
- Ingestão diaria
  - ~15M de eventos de voo
  - ~260M pos. de aeronaves
  - ~1M PNRs
- Saída de dados diaria
  - ~2M requisicoes
  - ~1M requisicoes mobile
  - ~15M requisicoes Flex API
  - ~1.5M notificacoes de voo

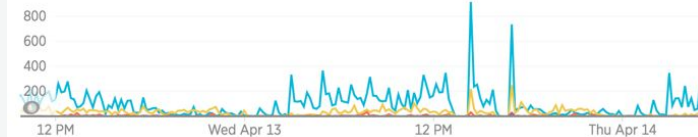
Direct Data Feed Volume By Hour

Since 1 week ago



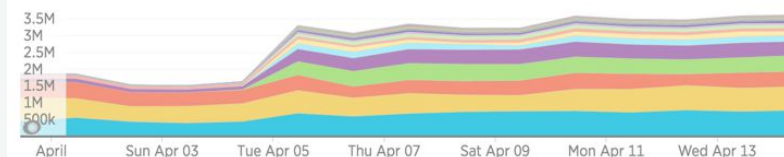
New Alerts Delivered (TAD)

Since 3 days ago

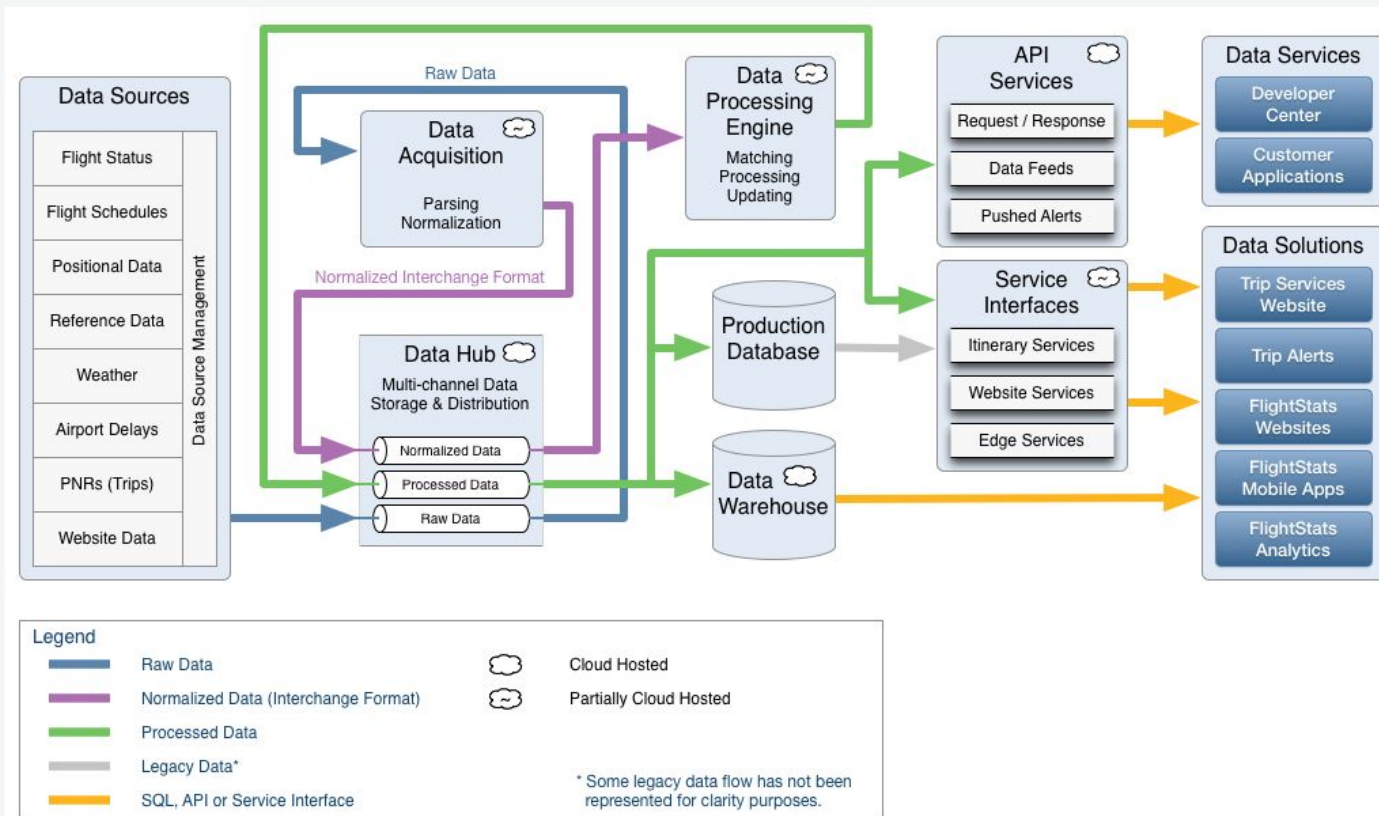


Flight Status API Requests

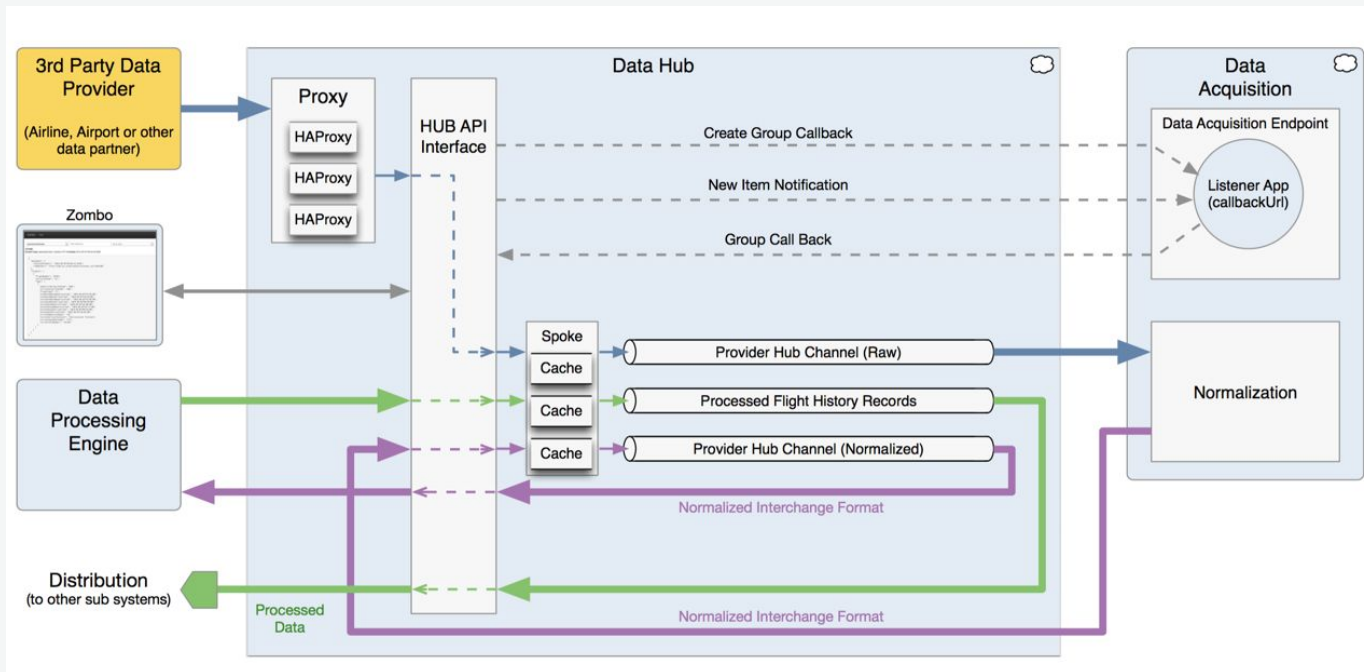
Since 15 days ago



# Pipeline de dados



Armazenagem baseada em objetos, escalavel, alta disponibilidade de queuing de dados e sistemas de eventos.



# Dados coletados e agregados (FLIFO)

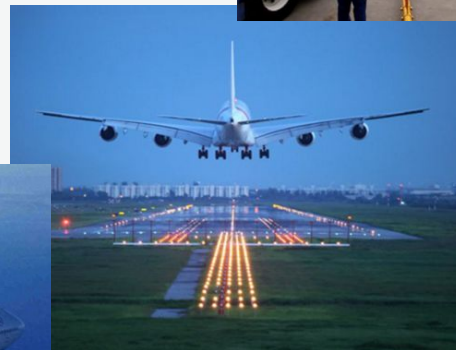


Portao desembarque

Portao de embarque



Pista de  
Decolagem



Rastreamento  
de Posicao  
em Voo



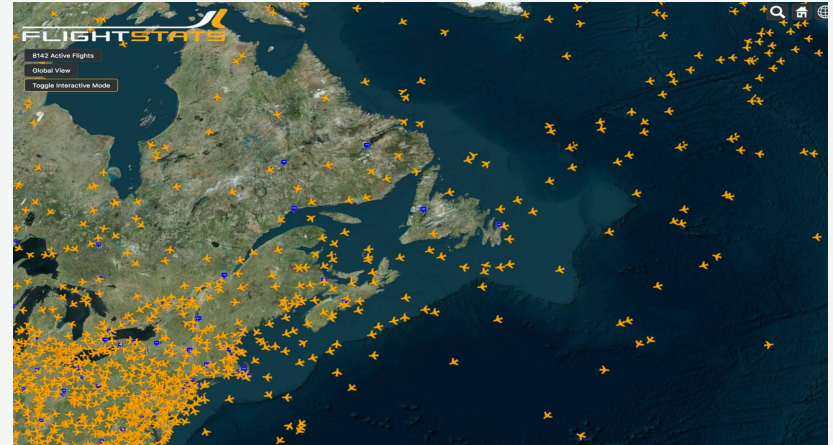
Pista de  
Aterrizagem



## Incidentes Especiais



## Posicoes Sinteticas



## Previsao de atrasos

FLIGHTSTATS								
Airport <b>SFO</b>		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	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

## Notificacoes de Voo





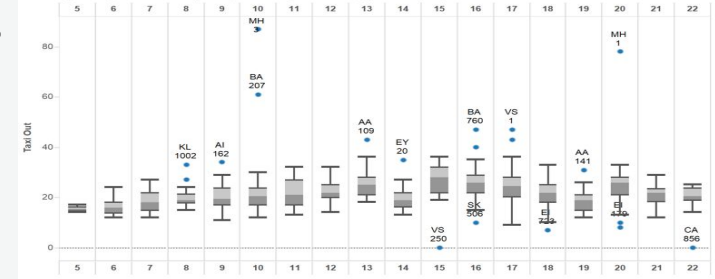
- Data warehouse com 6 anos de dados de voos historicos
- Produtos de Analytics
  - Analise competitiva de aeronaves
  - Analise de rotas de aeronaves
  - Analise de operacoes
  - Metricas de performance

Taxi Out Analysis - LHR

Airport Code: LHR Date Range Selector: Yesterday From: 28-Sep-2015 To: 28-Sep-2015

Taxi Out Time Box Plot: (LHR) London Heathrow Airport

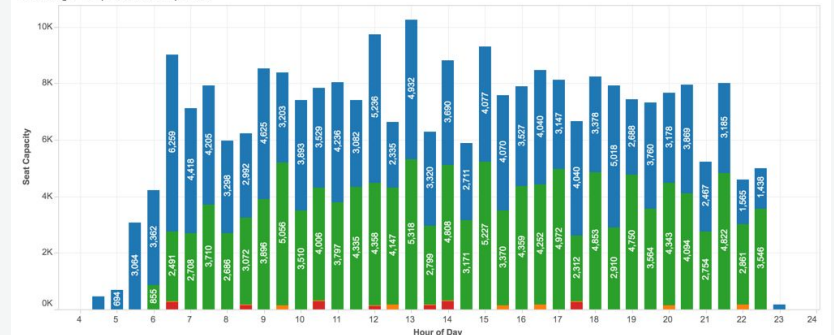
Date Range: 14-Apr-2016 to 14-Apr-2016, Marketing Airline: All (operated by All)



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

Hourly Passenger Flow Chart: (LHR) London, EN, GB

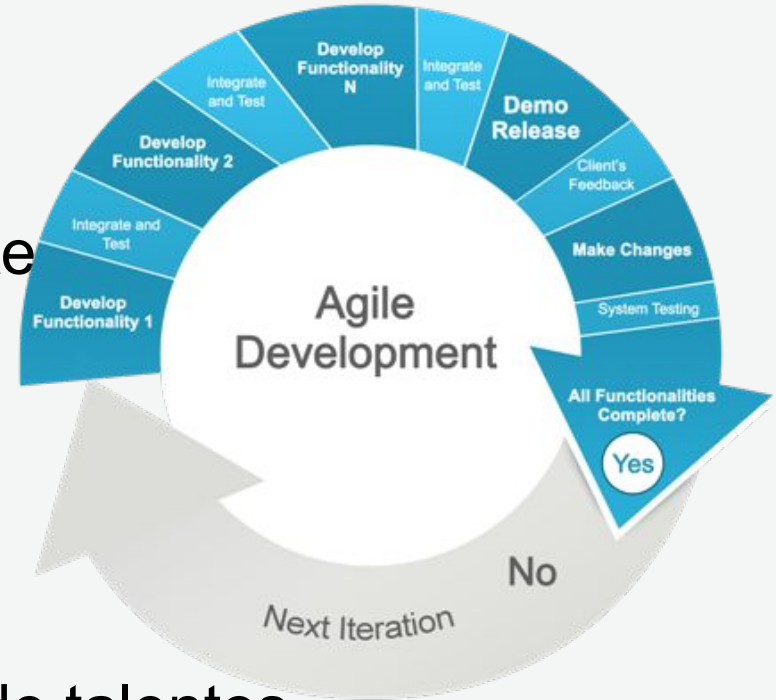
Date Range: 14-Apr-2016 to 14-Apr-2016



- Recursos armazenados em data centers privados com Amazon Web Services (AWS)
  - Processamento de dados centrais e camada de serviços ficam em data centers privados
  - Endpoints de API que requerem conexões de baixa latência residem no AWS
- Infra-estrutura privada virtualizada com VMWare



- Desenvolvimento agil
  - Times pequenos e rapidos
  - Centrados no produto
  - Com interacoes com cliente
  - Semi-autonomo
- Tudo automatizado
- Tudo e medido
- Total awareness
- Boas praticas e ferramentas
- Recrutamento e contratacao de talentos



- Backend - Java 8
- Node.js para micro-servicos
- Bancos de dados: PostgreSQL, MongoDB
- Web - HTML5, React, Redux, Elasticsearch
- Mobile - iOS/Android



PostgreSQL

