

The logo features the word ".conf2015" in white, sans-serif font inside a red speech bubble shape. The year "2015" is positioned at the top right of the bubble.

2015



The background of the slide features a complex network graph visualization. Nodes represent years from 2011 to 2015, with 2015 being the central node. Edges represent data or log entries, shown as blue lines connecting the nodes. The graph is highly interconnected, with many lines crossing each other, symbolizing the volume and complexity of data over time.

Splunk>Cloud at Gatwick Airport

Joe Hardstaff

Business Systems Architect,
Gatwick Airport Ltd

The Splunk logo consists of the word "splunk" in a lowercase, bold, sans-serif font. A small registered trademark symbol (®) is located at the top right of the letter "k".

Disclaimer

During the course of this presentation, we may make forward looking statements regarding future events or the expected performance of the company. We caution you that such statements reflect our current expectations and estimates based on factors currently known to us and that actual events or results could differ materially. For important factors that may cause actual results to differ from those contained in our forward-looking statements, please review our filings with the SEC. The forward-looking statements made in this presentation are being made as of the time and date of its live presentation. If reviewed after its live presentation, this presentation may not contain current or accurate information. We do not assume any obligation to update any forward looking statements we may make.

In addition, any information about our roadmap outlines our general product direction and is subject to change at any time without notice. It is for informational purposes only and shall not, be incorporated into any contract or other commitment. Splunk undertakes no obligation either to develop the features or functionality described or to include any such feature or functionality in a future release.

Agenda

- Gatwick Airport – About Us
- Our Introduction to Splunk
- The Business Challenge
- Achievements to date
- Predict Tomorrow
- Conclusion
- Questions



.conf2015

Gatwick Airport – About Us

splunk®

Gatwick Airport – About Us

Busiest Single Runway Airport in the World

- 925 Flights per day in August 2015
- 40 Million Passengers by 2016
- 10 years ahead of UK Government predictions on passenger numbers
- 52 Airlines flying to
 - 200 locations
 - in 90 countries
- We fly to more destinations than any other UK airport



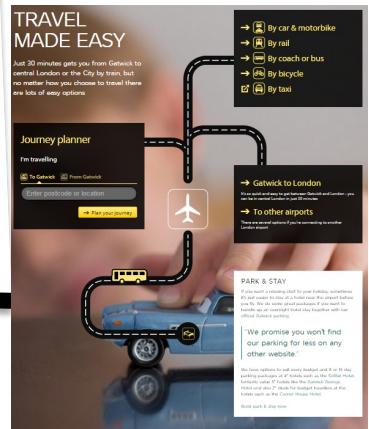
Passenger Experience



Gatwick - London's Airport of Choice



- Parking
- Check-In
- Passenger Security
- Departure Lounge
- Departure Gate
- Arrival Gate
- Immigration
- Baggage Reclaim
- Customs
- Onward Travel



On-Time Efficiency

Gatwick - London's Airport of Choice

- Take-off from outstation
- Zoned
- Finals
- Landing
- Taxi to Stand
- Turn
- Taxi to Runway
- Takeoff



Who Do We Compete With?



Copyright Herb Ling/aerialarchives.com

Heathrow Airport (Busiest airport in the UK)

- 1,290 Flights per day
- 73.4 Million Passengers



San Diego (2nd Busiest single runway airport)

- 465 Flights per day
- 19 Million Passengers

Frankfurt Airport (Busiest airport in Germany)

- 65 Million Passengers

Amsterdam Airport Schiphol (Netherlands Hub Airport)

- 53 Million Passengers



.conf2015

Our Introduction to Splunk

splunk®

Proof of Value

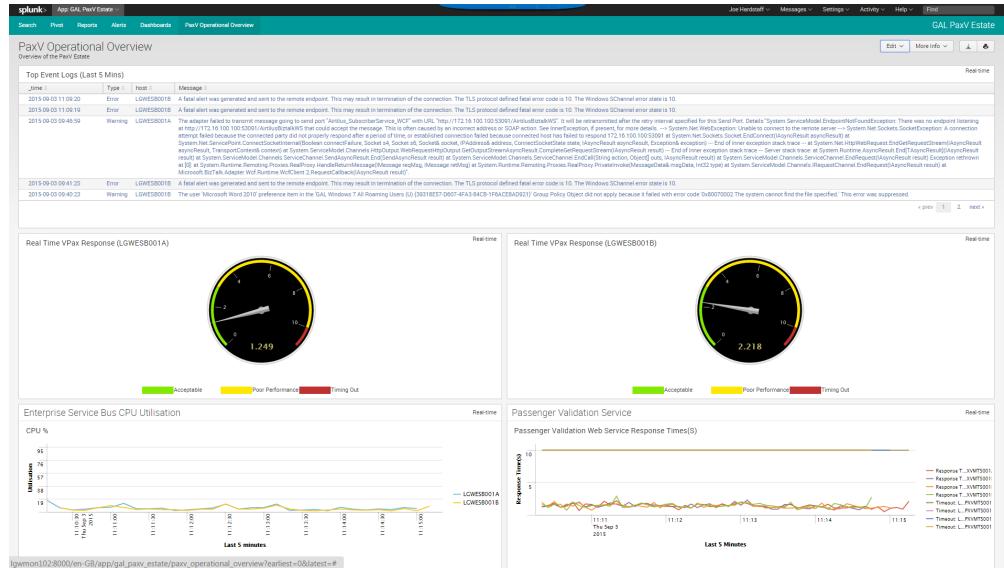
Performance & Availability

Used to scan boarding passes to ensure:

- Right airport, terminal, day, time
- Flight not cancelled or delayed

Splunk provided:

- Insight on performance gains
- Reduction in incidents
- At a glance root cause analysis



Early Exploration

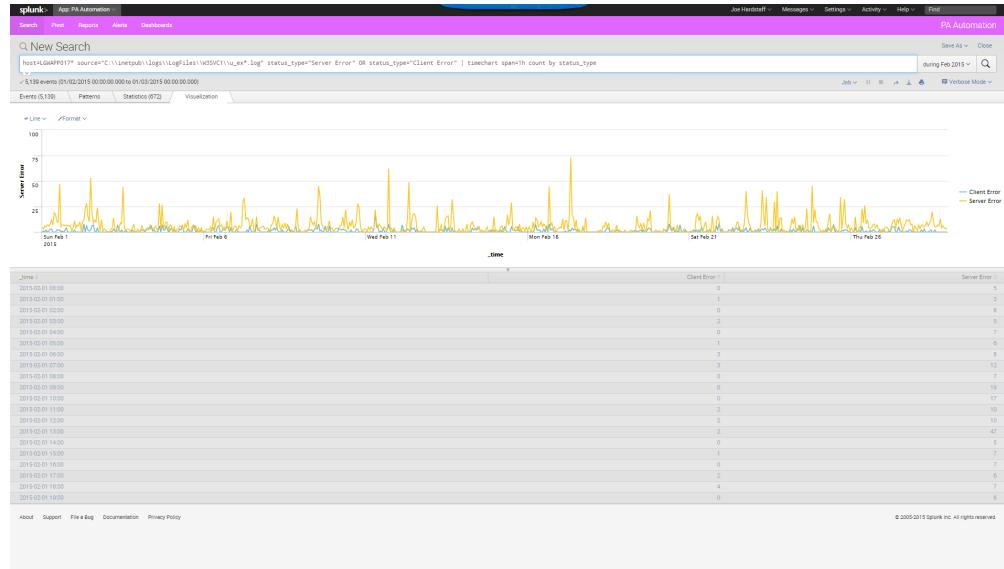
Root Cause Analysis

Used to provide automated public announcements:

- Stock pre-recorded messages
- Ad-Hoc text to voice messages

Splunk provided:

- Insight into configuration issues
- Reduction in incidents
- Application bugs

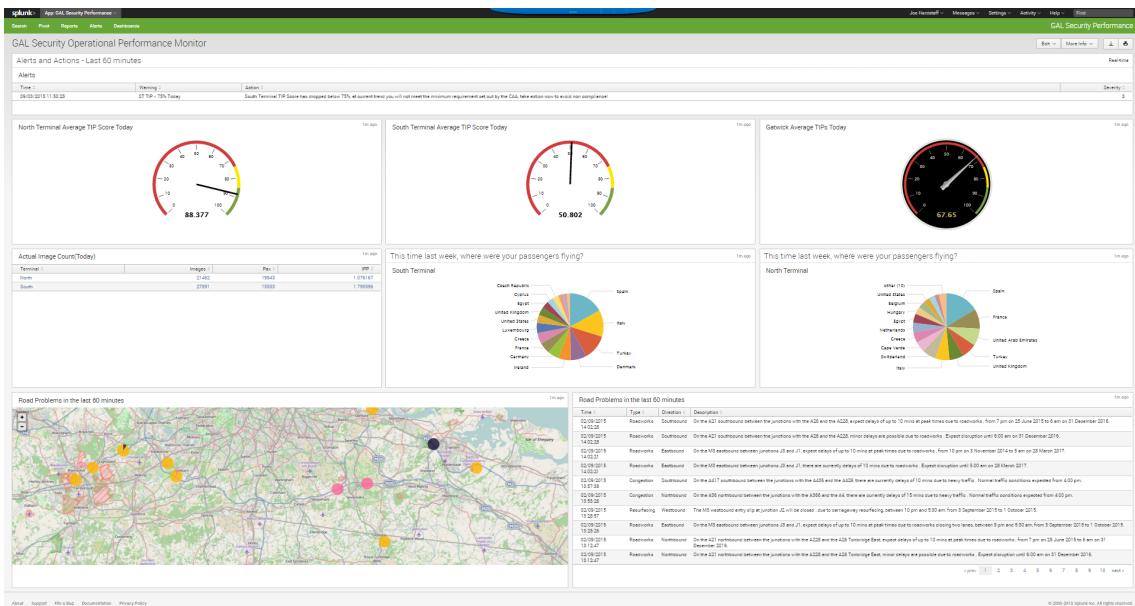


The Dawn of Realization

Compliance with SQR

First attempt with business data:

- How are we doing with TIP?
- Where are passengers going?
- Are there problems with travel?



Splunk provided:

- Insight into security compliance
- Prepare security to look for specific items
- Understand road and rail incidents & their effect
- A combination of historical fact with current event



.conf2015

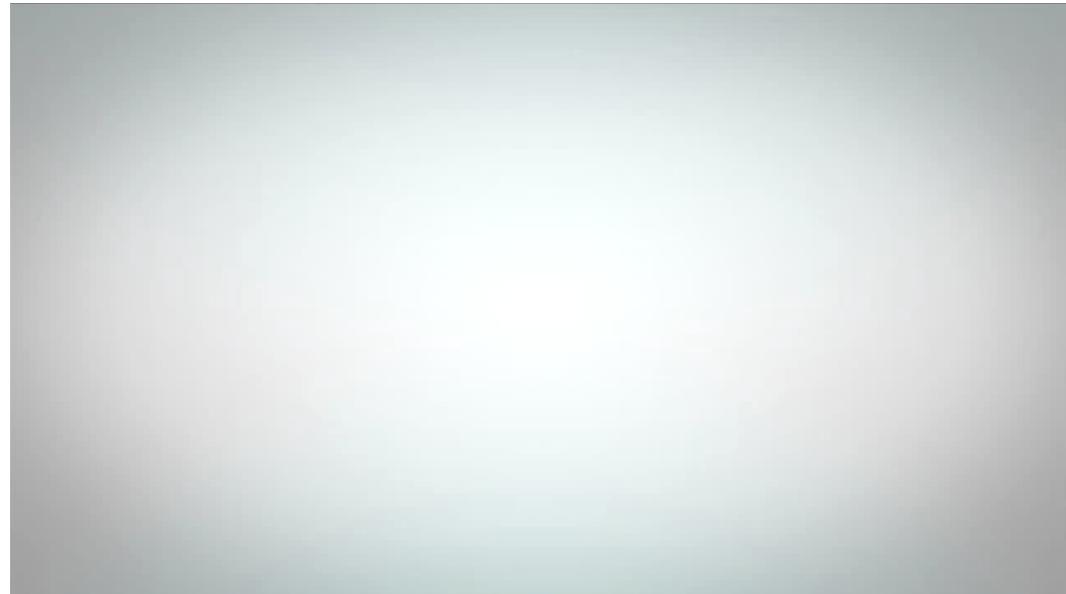
The Business Challenge

splunk®

What's the Challenge?

We needed to monitor

- Radar - Zoned, Finals, Landed
- Flight Information Displays
- Resource on Stand
- Stand Entry Guidance System
- Fixed Electrical Ground Power
- Steps & Air-bridge Attached
- Service Vehicles Geo Tag & Fence
- Baggage Reconciliation System
- People Counting System
- Electronic Flight Progress Strips
- Airport Operational Database – Flight Status

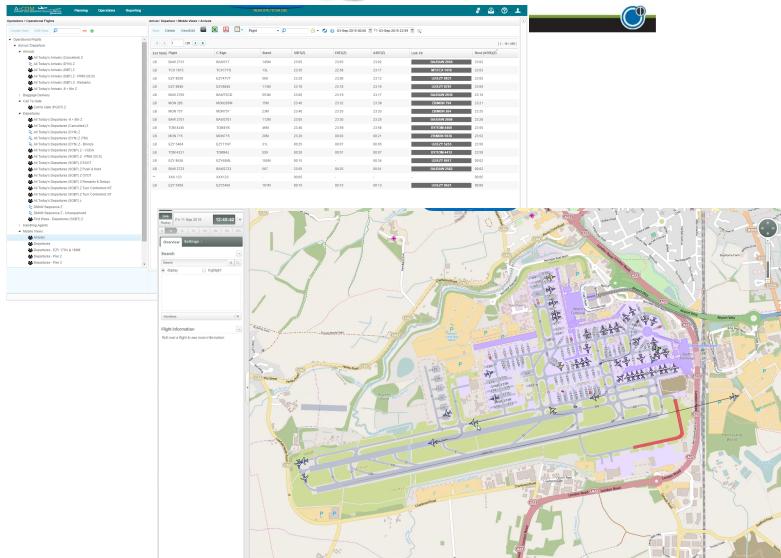


Capacity and Flexibility

Gatwick Strategy is to utilize Cloud Services

- Already subscribe to Cloud Services
 - OKTA – SSO & Mobility Management
 - Casper – Situational Awareness & Noise Tracking
 - Amadeus – A-CDM Portal
 - Microsoft Azure – Messaging Services
- We would need ~60 dedicated Splunk servers
- Associated support and maintenance costs
- Build for heaviest demand
- Unable to flex up or down as required
- Unable to beat the price point internally
- Unable to beat 100% availability internally

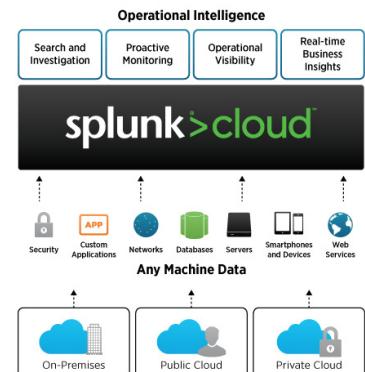
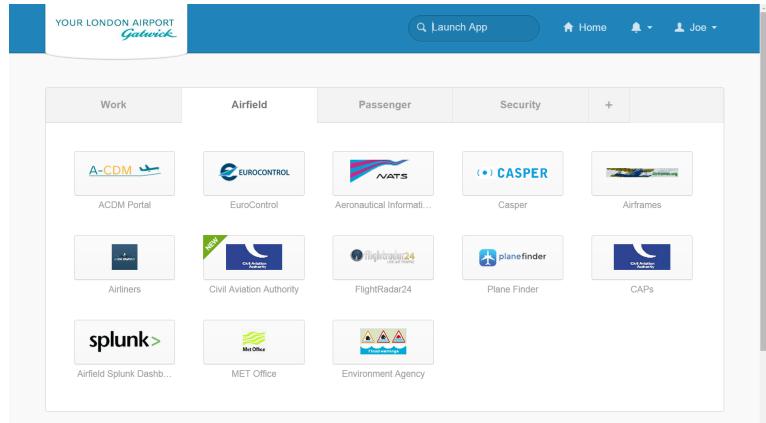
Connecting People to Apps: Anywhere, Anytime, Any Device



Faster Delivery to Business

We Needed to move Quickly

- Splunk>Cloud was required ASAP
- Two weeks to get data out
- First live dashboard four weeks after that
- SAML2 / OKTA presented
- Airfield status on CEO Apple Watch from Aug
- Full control of data consumed
- Deliver Visualization in days not weeks
- Combine Historical Fact with Current Event
- Predict impact and implication





.conf2015

How Did We Do?

splunk®

Airfield Performance

Monitor the moving parts

- Radar
- Stand Entry Guidance System
- People Counting System
- Electronic Flight Progress Strips
- Airport Operational Database
- Enterprise Service Bus

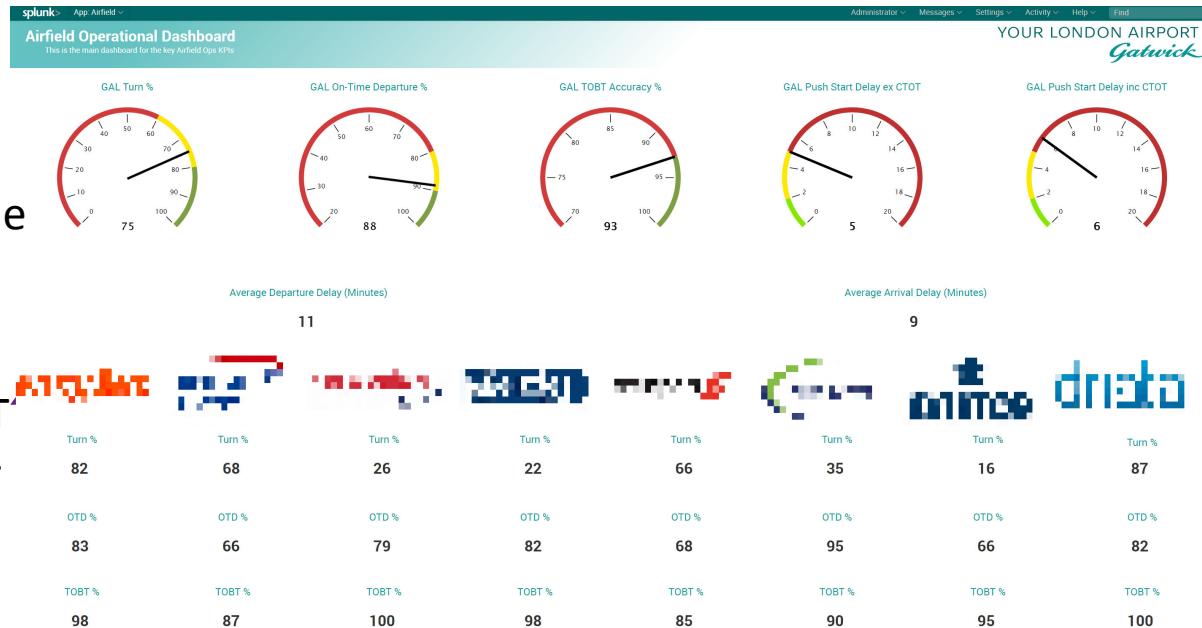


Airfield Dashboard

At-A-Glance Performance

Provides:

- Achievement of target turn time
- On Time Departure
- Target Off Block Time accuracy
- Delays incurred excluding CTOT
- Delays incurred including CTOT





.conf2015

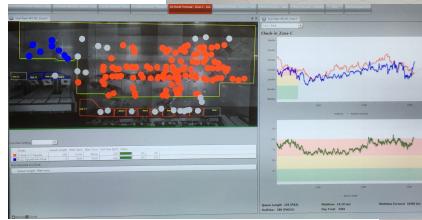
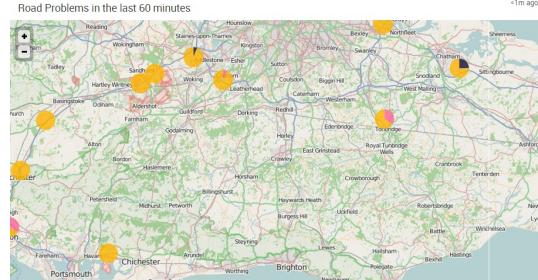
Prediction

splunk®

Terminal Performance

Monitor the moving parts

- Road, Rail & Bus services
- Building Management System
- Passenger Information Displays
- Electronic way-finding
- Manned Check-In desks in use
- Common Use – Self Service kiosks
- Self Service / Automated Bag Drop
- Area occupancy & queue measurement
- Security Gates
- X-Ray throughput
- Gate announcements / Call to Gate



Historical Fact / Current Event

Disruption Cause & Effect – Where could Splunk>Cloud take us?

- Travel Disruption:
 - Capture Road, Rail, Bus disruption & expected duration
 - Reduction in the expected passenger numbers
 - Check-In, Security, Airlines, Ground Handlers informed
- Passenger Flow:
 - Capture Passenger Flow from curb to gate & back
 - Reduce queues, congestion & pinch points
 - Improve on the passenger experience
- Social Media:
 - Capture feedback from Twitter, Facebook, Yammer
 - Provides real time information about Gatwick
 - When it's not perfect, we can make it great again



James Morris @MorrisJFM · 20h
@Gatwick_Airport any reason you have failed to provide adequate parking for vehicles over 1.8m high this evening? #poorservice #pooreffort

Gatwick Airport LGW @Gatwick_Airport · 18 hrs
@MorrisJFM Sorry to hear you had trouble parking, James. Did you try the North Terminal long stay parking or before short stay in the South?

12:35 p.m. - 3 Sep 2015 · Details

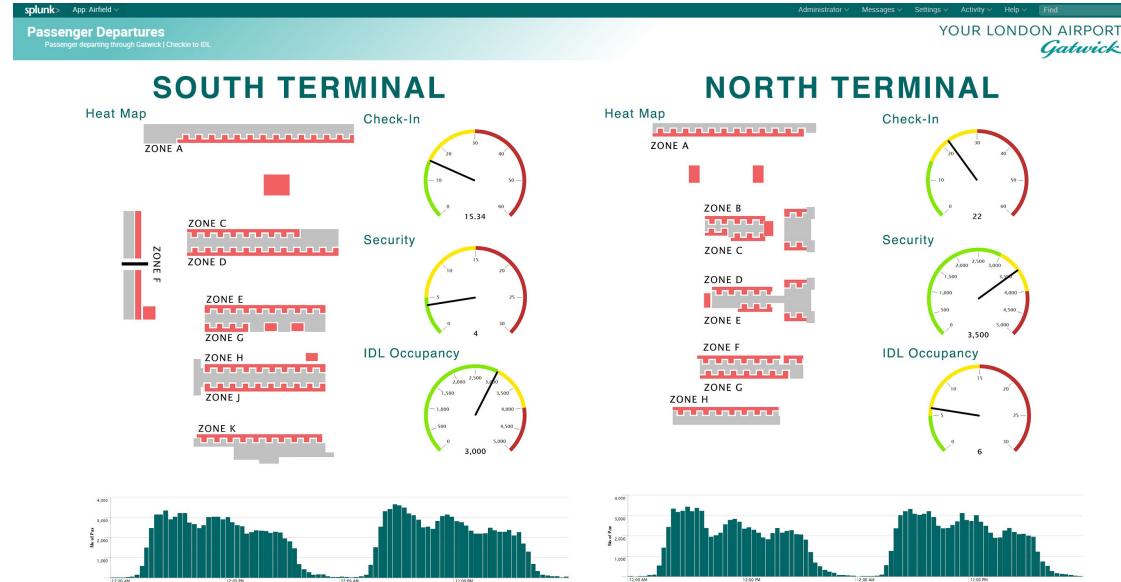
[Hide conversation](#)

Terminal Dashboard

At-A-Glance Performance

Provides:

- Passenger flow monitoring
- Early view of opportunities
- Flag where we can do better
- Highlight potential issues
- Impact Analysis
- Allows timely intervention





.conf2015

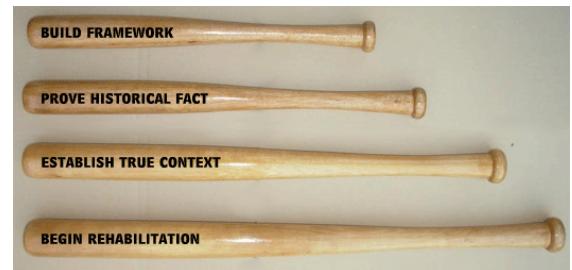
Conclusion

splunk®

What Now?

A Shift Change in Thinking

- Combining Ops data in Splunk>Cloud gives agility & scalability, provides insight into airport performance
- How did we do? -> How are we doing? -> How will we do?
- Simple method to combine Historical Fact with Current Event
- Prediction stops a minor incident becoming a major problem





.conf2015

2015



THANK YOU

splunk®