

# Leveraging Kubernetes to Build a Flexible Self-Service Product Demo Environment

By Frank Reno, Sr. Technical PM | 12/4/2018

# Who is Sumo Logic?

3 Continents  
5 AWS Regions

2000+ Customers  
50,000+ Users

100+ PetaBytes of  
Machine Data  
Analyzed Daily

20+ Million Searches  
Daily

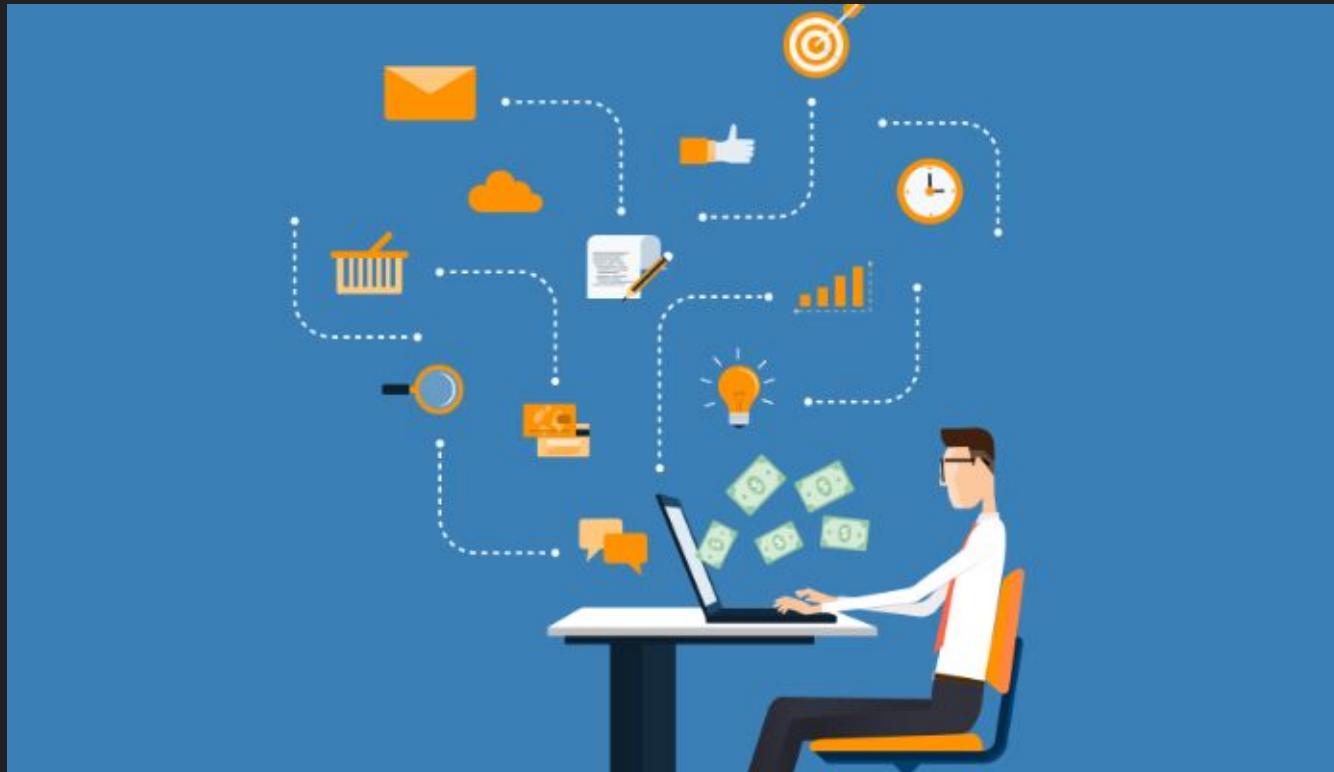
Multi-Tenant,  
Microservices-Based  
Architecture

500+ Trillion Records  
Analyzed Daily

# Demos Are Critical to the Customer Journey

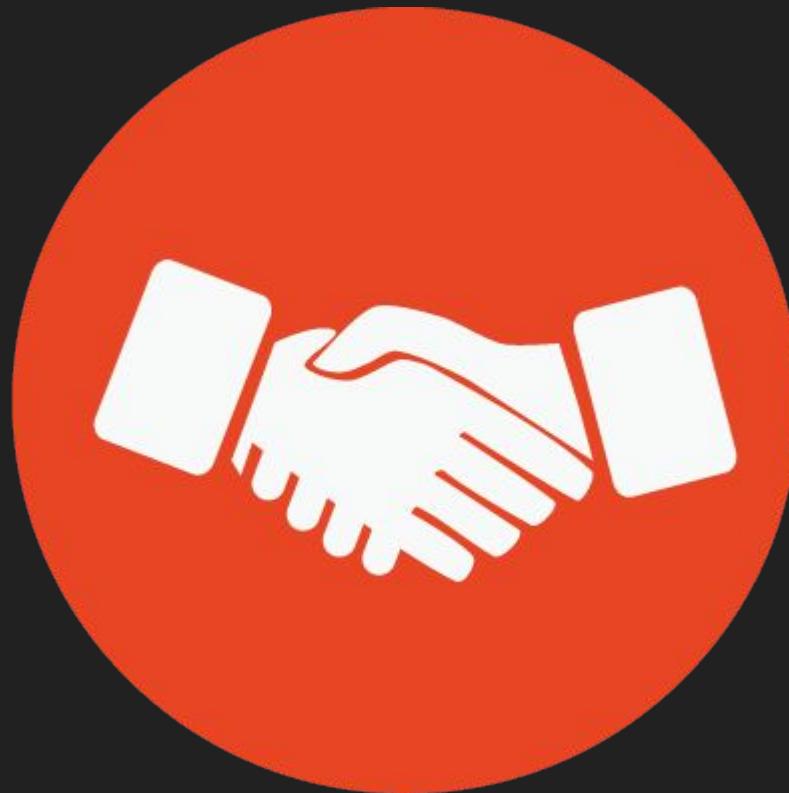


# Sales Engineers are the Drivers

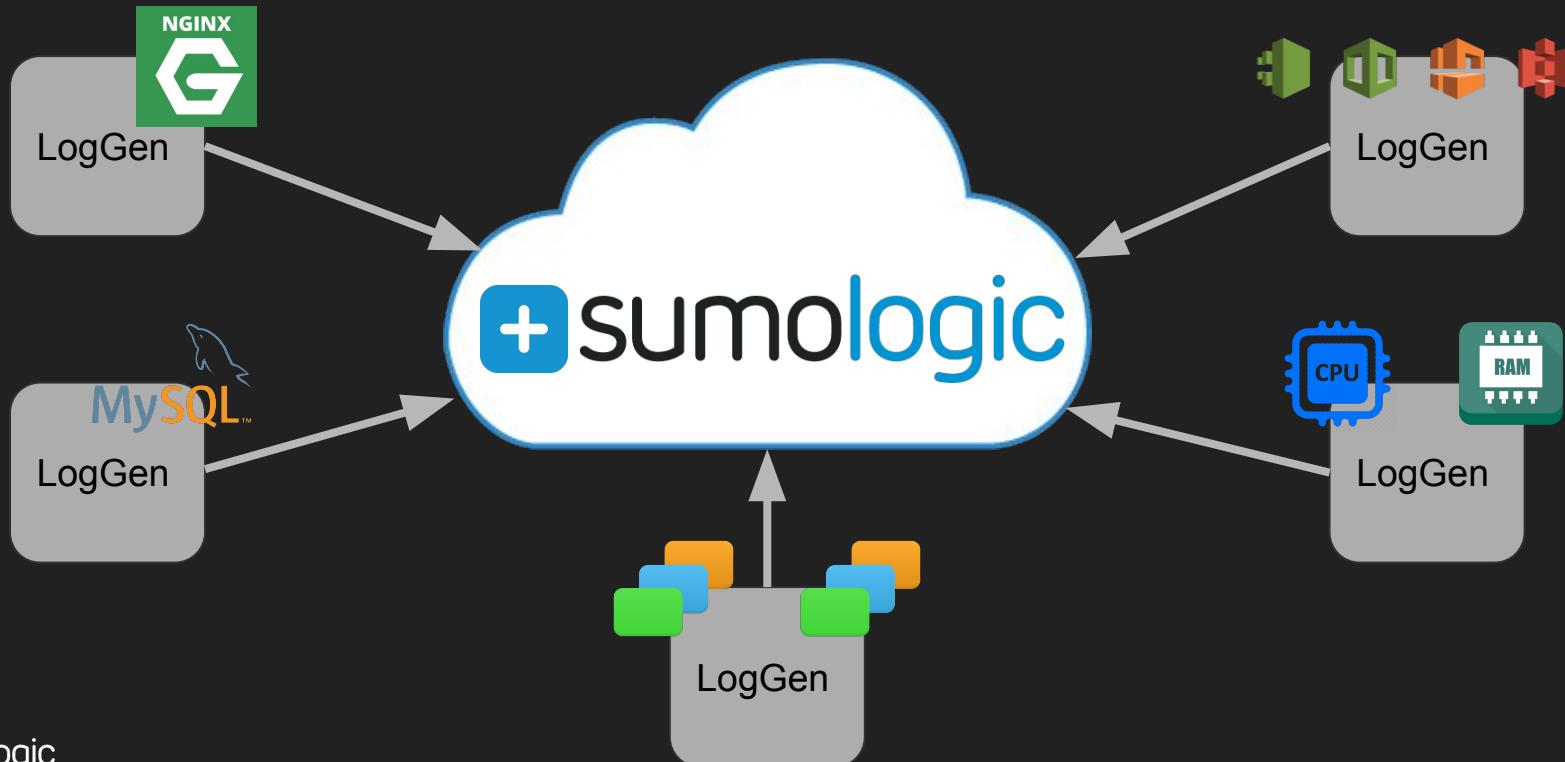


# Demo Must Be...

- Reliable
- Comprehensive
- Relatable
- Flexible



# The Old Way



# Powerful...but Could be Better



What we had...



What we wanted...

# What was Missing?

- Zero Isolation
- Not Customizable
- Not Real

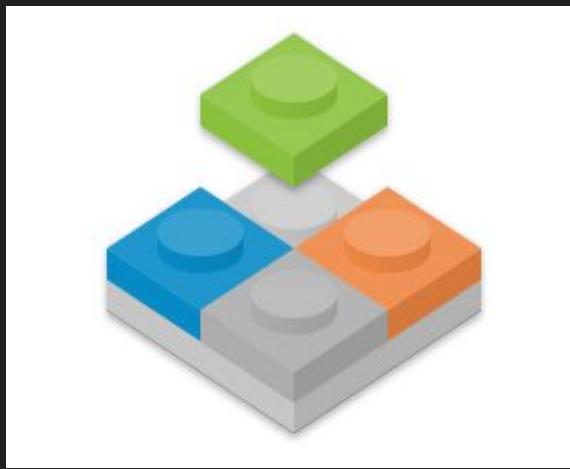


# New Demo Must Be...

Tangible



Customizable



Reliable

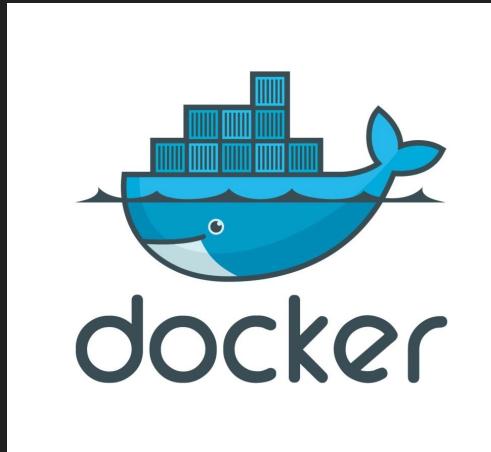


# How Do We Get There?

Microservices



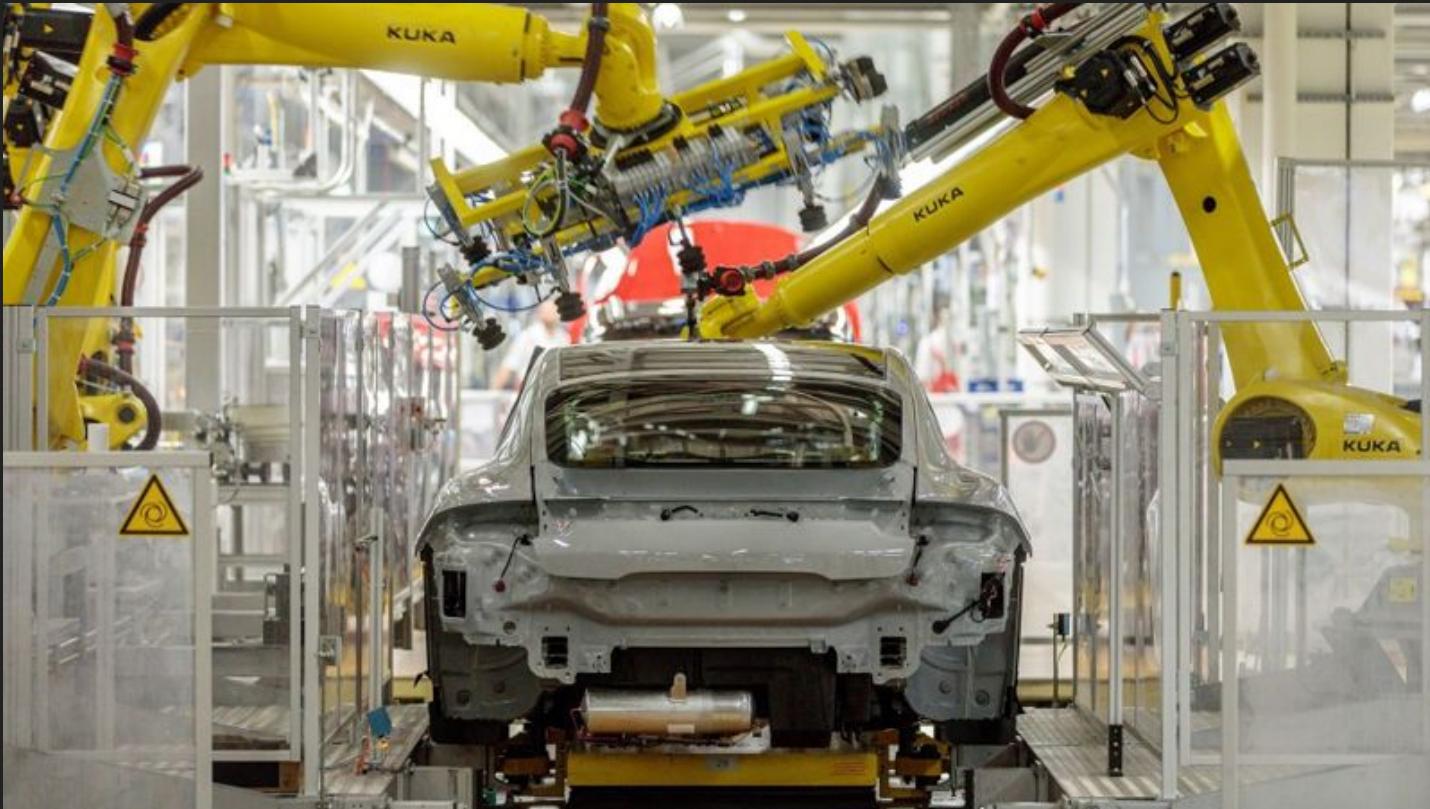
Containers



Overhead



# Need Orchestration



# What is Kubernetes?



“Kubernetes is a portable, extensible open-source platform for managing containerized workloads and services, that facilitates both declarative configuration and automation. It has a large, rapidly growing ecosystem. Kubernetes services, support and tools are widely available.”

# Why Kubernetes?

Automation



Easy  
Scheduling



Scalability

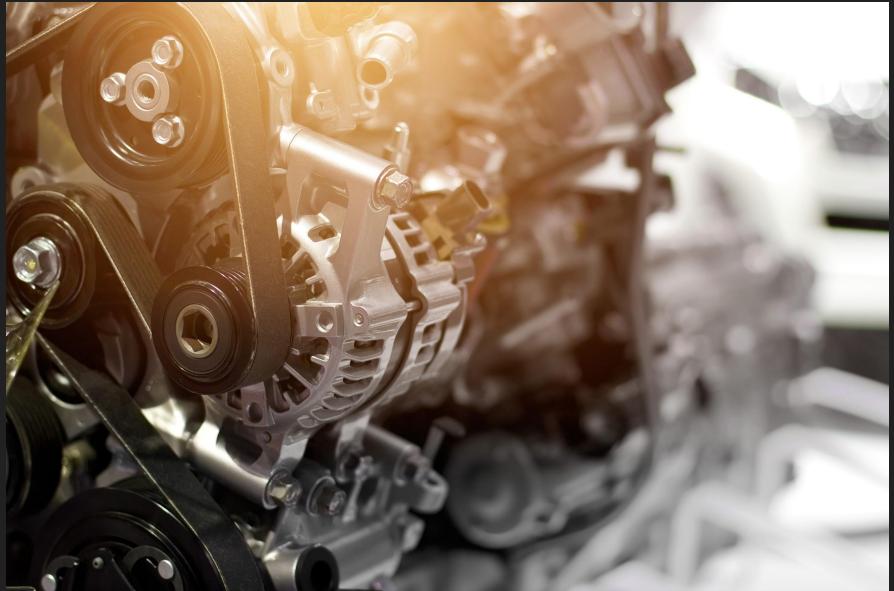


Dogfooding



# Kubernetes Control Plane

- API Server
- Scheduler
- Controller Manager
- Etcd



# Compute

- Nodes
- Kubelet
- Kube Proxy
- Container Runtime



# Building Blocks for Your Applications

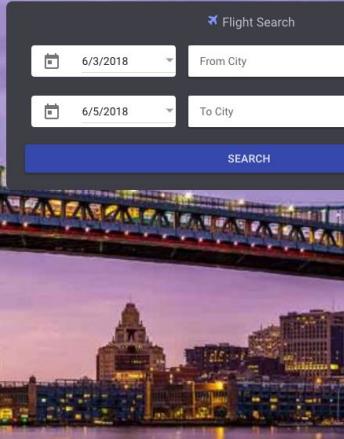
- Pods
- Deployments
- Daemonsets
- Services
- Namespaces



# Final Product

TravelLogic

FLIGHTS HOTEL CAR HIRE 0 ITEMS



TravelLogic

FLIGHTS HOTEL CAR HIRE 2 ITEMS

## Flight Booking

Denver International (DEN) ▶ Sydney Kingsford S

### Outbound

|                   |                |                    |                |          |                        |
|-------------------|----------------|--------------------|----------------|----------|------------------------|
| CATHAY PACIFIC    | 10:00AM<br>DEN | 13.3 Hrs<br>Direct | 11:18PM<br>SYD | \$603.00 | <a href="#">SELECT</a> |
| QANTAS            | 08:00PM<br>DEN | 13.3 Hrs<br>Direct | 09:18AM<br>SYD | \$617.00 | <a href="#">SELECT</a> |
| American Airlines | 12:00PM<br>DEN | 13.3 Hrs<br>Direct | 01:18AM<br>SYD | \$719.00 | <a href="#">SELECT</a> |

\$0.00

[PURCHASE](#) [RESET](#)

TravelLogic

FLIGHTS HOTEL CAR HIRE 2 ITEMS

## Cart

| Item                                 | Total             |
|--------------------------------------|-------------------|
| American Airlines AA330 (DEN to SYD) | \$572.00          |
| Delta Air Lines DL178 (SYD to DEN)   | \$542.00          |
| Tax (10%)                            | \$111.40          |
| <b>Total</b>                         | <b>\$1,225.40</b> |

## Checkout

### Payment method



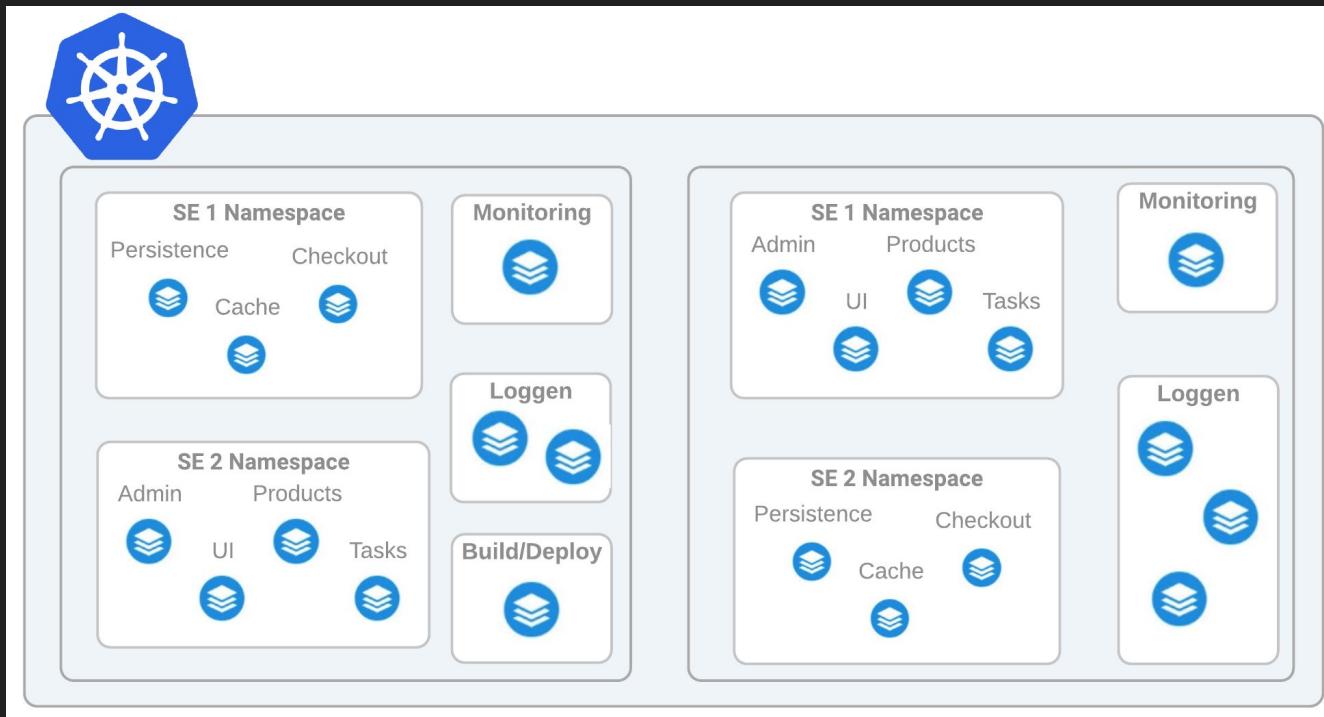
Name \*

Email \*

Credit Card Number \*

Month ▾ Year ▾

# High-Level Architecture



# TravelLogic Layer



Flask



Products



Settings



Tasks



docker



Persistence & Cache



UI and Administration



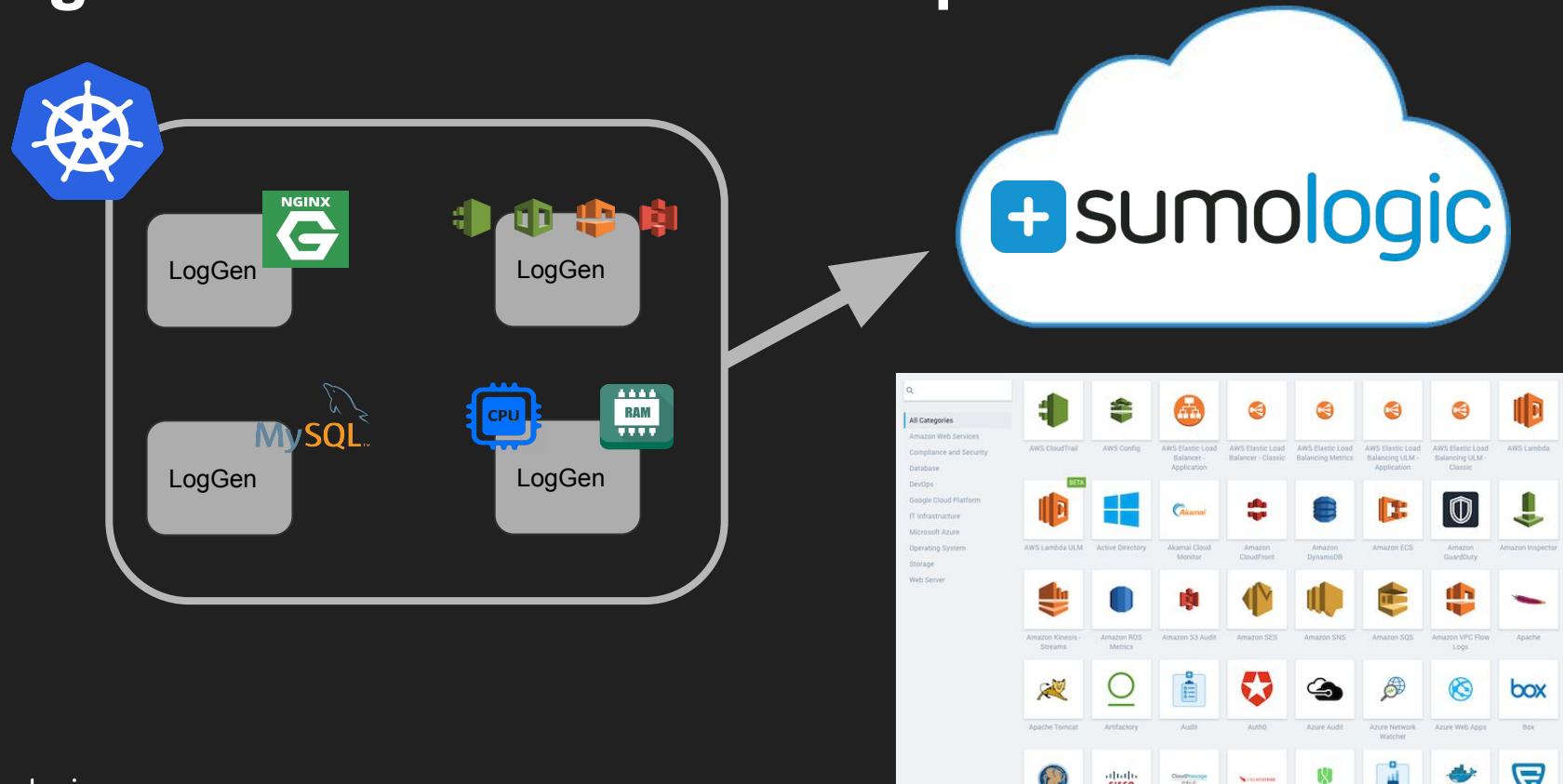
# Common Components



# Infrastructure



# LogGen is Still a Critical Component

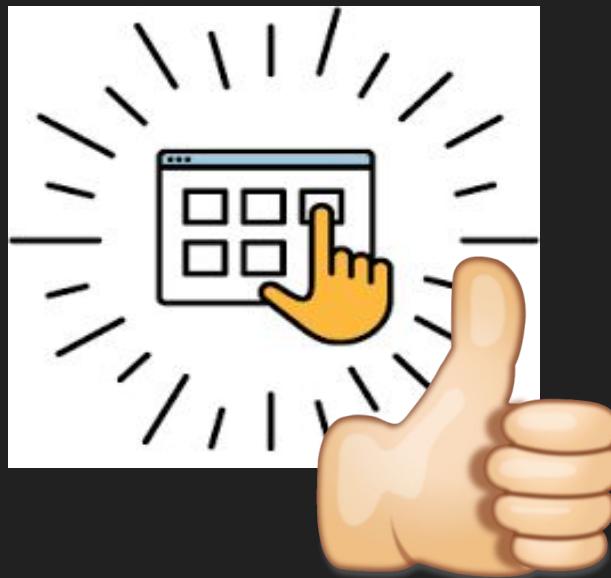


# Let's See TravelLogic in Action!

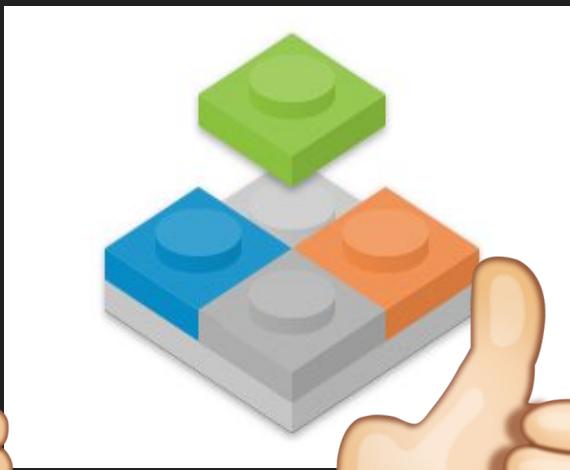


# Did We Meet Our Goals?

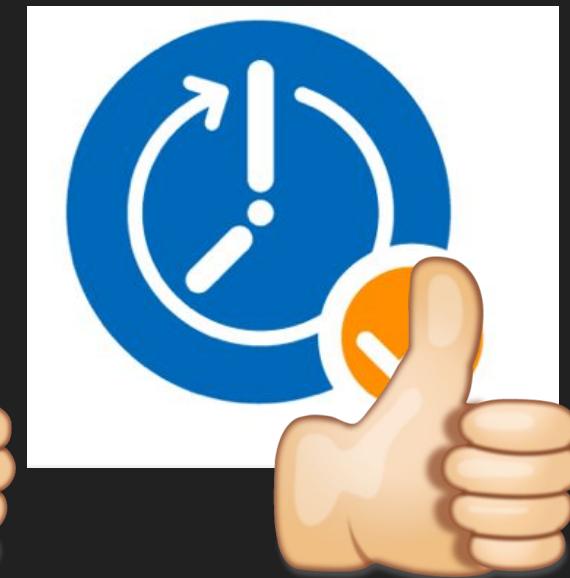
Tangible



Customizable



Reliable



# Kubernetes for Customer Success

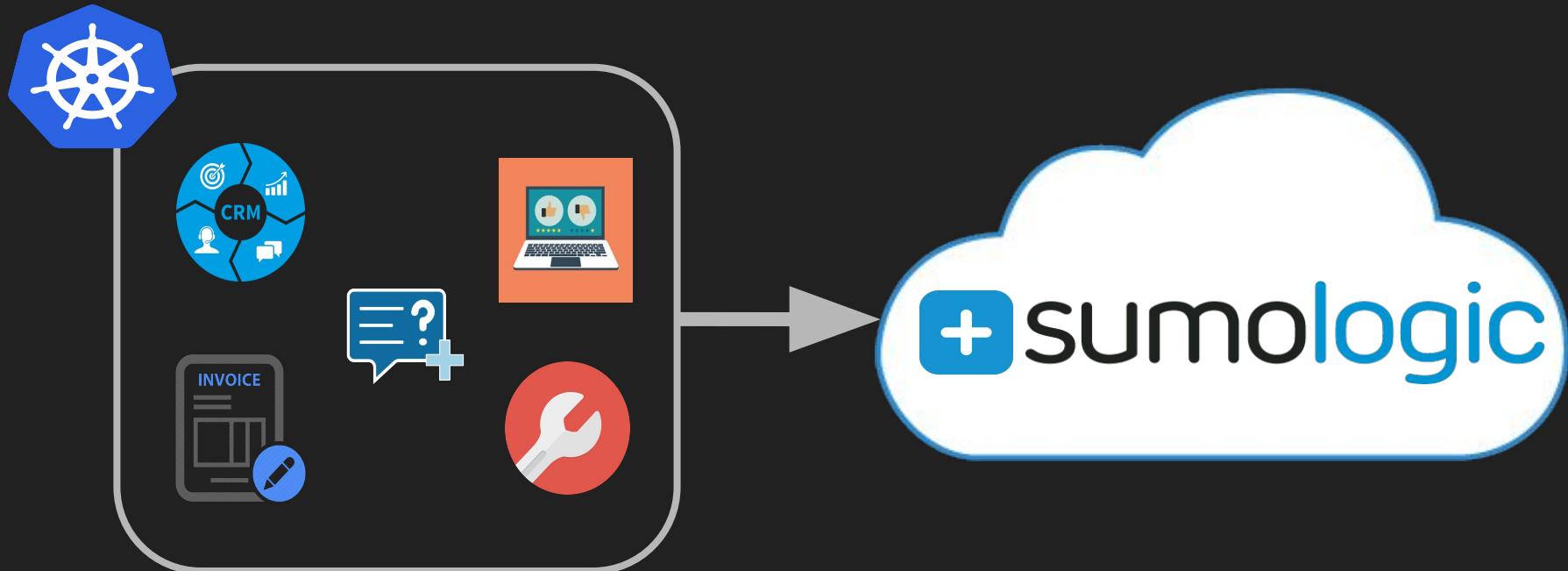


1:N

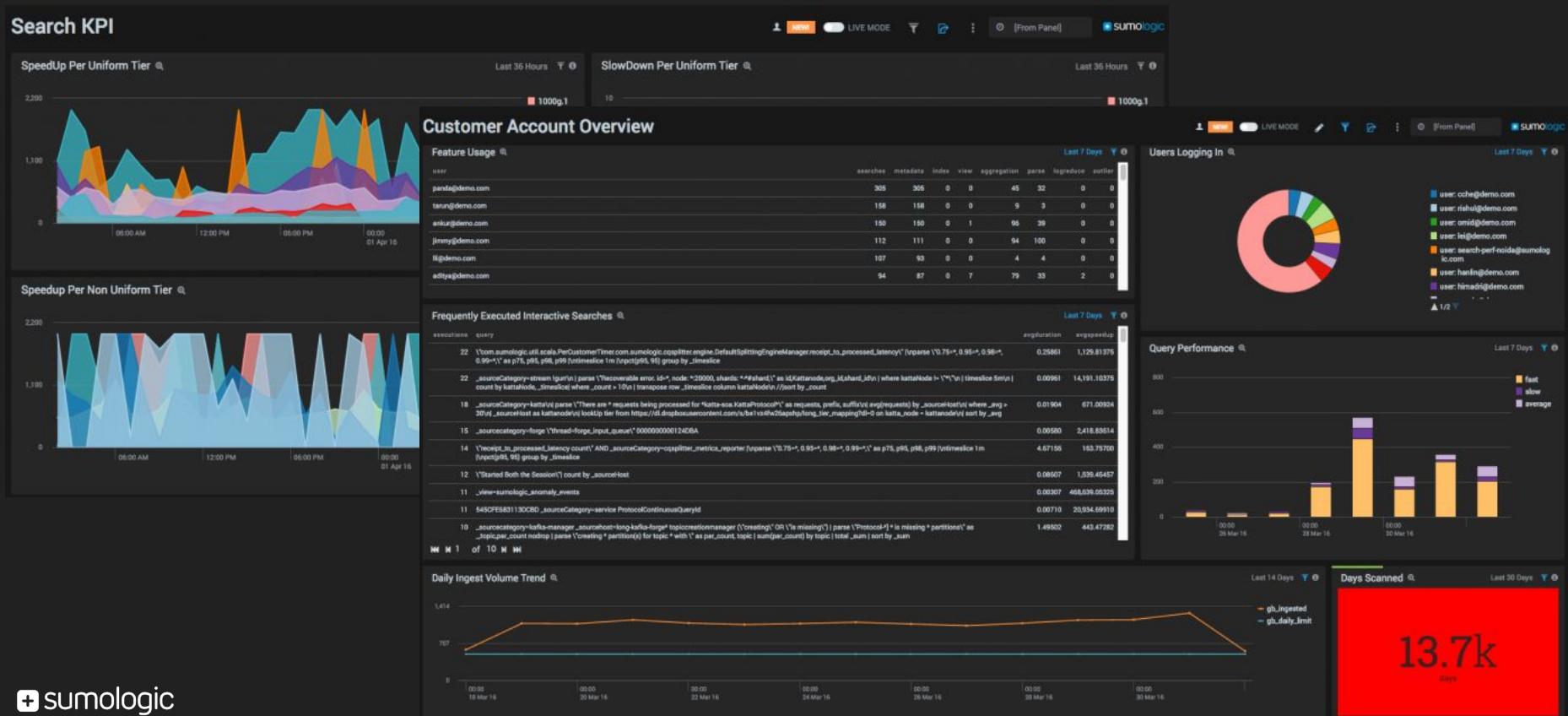
# Decentralized Data And Tooling



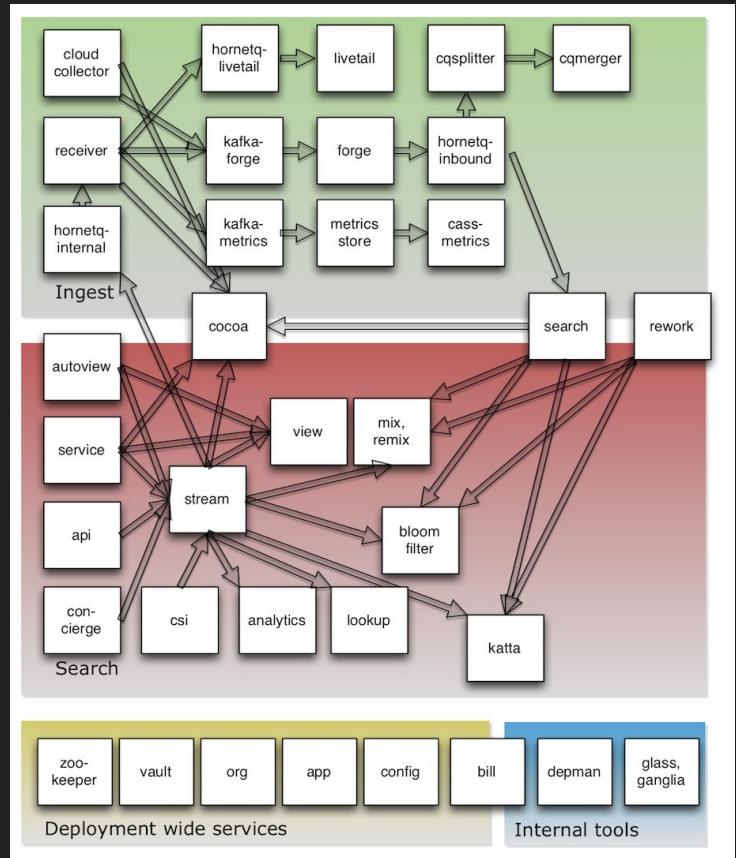
# Bringing It All Together



# Single Pane View



# Kubernetes in Engineering



# Kubernetes is Versatile



# Thank you

# Frank Reno

# Sr. Technical Product Manager

Email: freno@sumologic.com

sumo logic

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# Empowering the people who power modern business

m o

# Travel Logic Demo Flow

Flight Search

 6/8/2018 

Denver International

 6/10/2018 

Sydney Kingsford Smith International

**SEARCH**

# Travel Logic Demo Flow

Denver International (DEN) ▶ Sydney Kingsford Smith International (SYD)

**Outbound**

|  |                       |                    |                       |          |               |
|--|-----------------------|--------------------|-----------------------|----------|---------------|
|  <b>CATHAY PACIFIC</b>    | <b>06:00PM</b><br>DEN | 13.3 Hrs<br>Direct | <b>07:18AM</b><br>SYD | \$641.00 | <b>SELECT</b> |
|  <b>DELTA</b>             | <b>07:00PM</b><br>DEN | 13.3 Hrs<br>Direct | <b>08:18AM</b><br>SYD | \$581.00 | <b>SELECT</b> |
|  <b>American Airlines</b> | <b>01:00AM</b><br>DEN | 13.3 Hrs<br>Direct | <b>02:18PM</b><br>SYD | \$634.00 | <b>SELECT</b> |

**Return**

|   |                       |                    |                       |          |               |
|---|-----------------------|--------------------|-----------------------|----------|---------------|
|  <b>American Airlines</b> | <b>06:00PM</b><br>SYD | 13.3 Hrs<br>Direct | <b>07:18AM</b><br>DEN | \$757.00 | <b>SELECT</b> |
|  <b>DELTA</b>             | <b>02:00PM</b><br>SYD | 13.3 Hrs<br>Direct | <b>03:18AM</b><br>DEN | \$543.00 | <b>SELECT</b> |
|  <b>QANTAS</b>            | <b>01:00PM</b><br>SYD | 13.3 Hrs<br>Direct | <b>02:18AM</b><br>DEN | \$735.00 | <b>SELECT</b> |

\$0.00

**PURCHASE**   **RESET**

# Travel Logic Demo Flow

## Cart

| Item                              | Total             |
|-----------------------------------|-------------------|
| Cathay Pacific CX97 (DEN to SYD)  | \$641.00          |
| Qantas Airways QF215 (SYD to DEN) | \$735.00          |
| Tax (10%)                         | \$137.60          |
| <b>Total</b>                      | <b>\$1,513.60</b> |

## Checkout

Payment method

**Payment**

Payment was processed successfully paymentID 484fdf32-2fb2-4ab7-aca8-23a8ede49f25

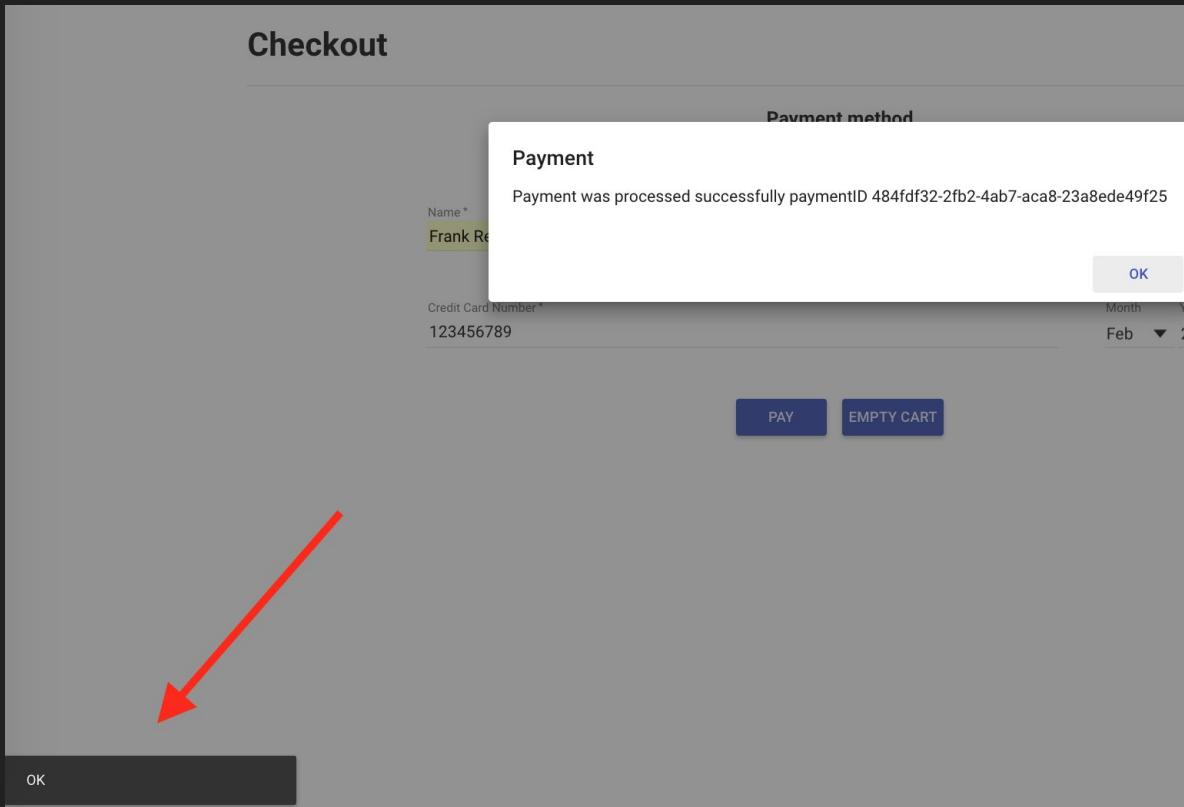
OK

Credit Card Number \*  
123456789

Month Year  
Feb ▾ 2018 ▾

PAY EMPTY CART

# Travel Logic Demo Flow



# Travel Logic Demo Flow

TravelLogic - Business Overview

LIVE MODE

Flights

- Payment Service Status ⚠



Hotels

- Application Status ℹ



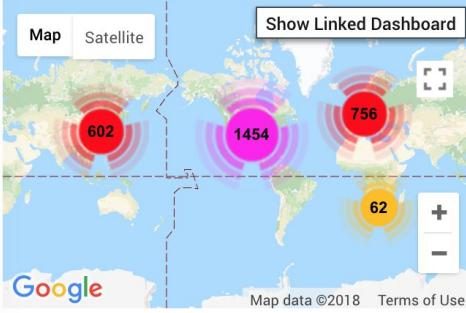
Cars

- Website Status ℹ



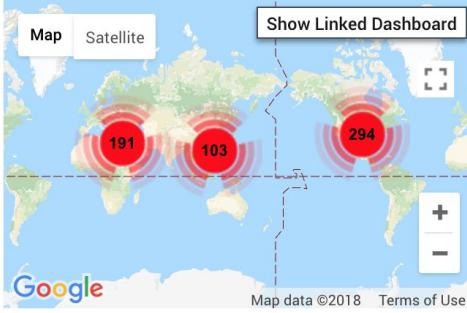
Flight Booking Locations

- 602
- 1454
- 756
- 62



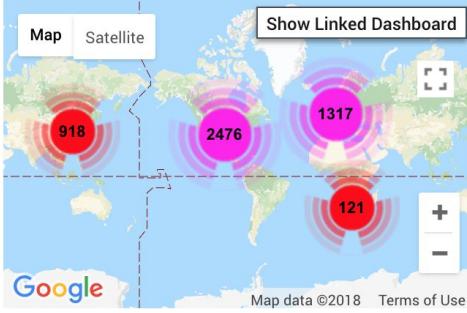
Hotel Booking Locations

- 191
- 103
- 294

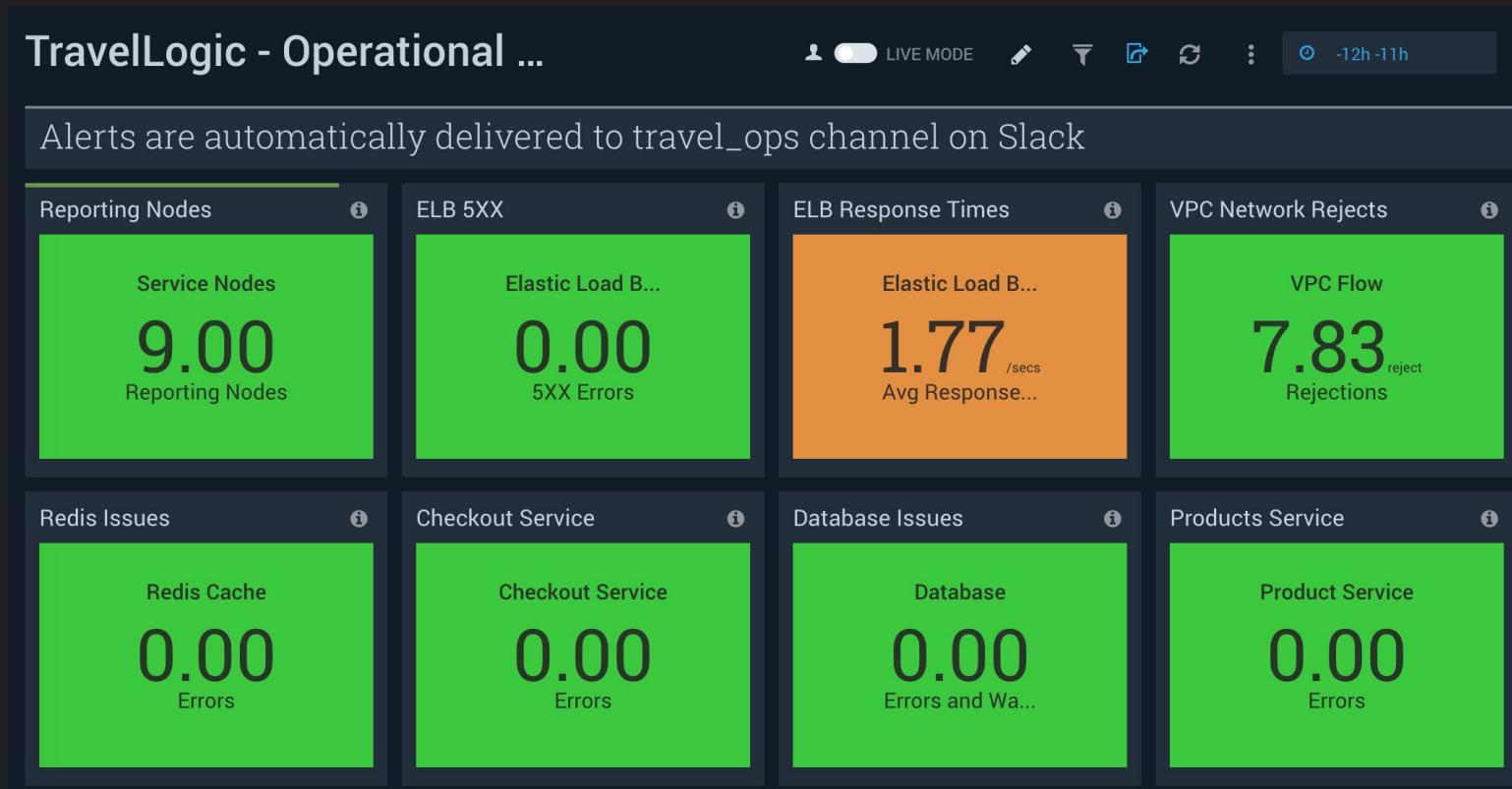


Car Hire Locations

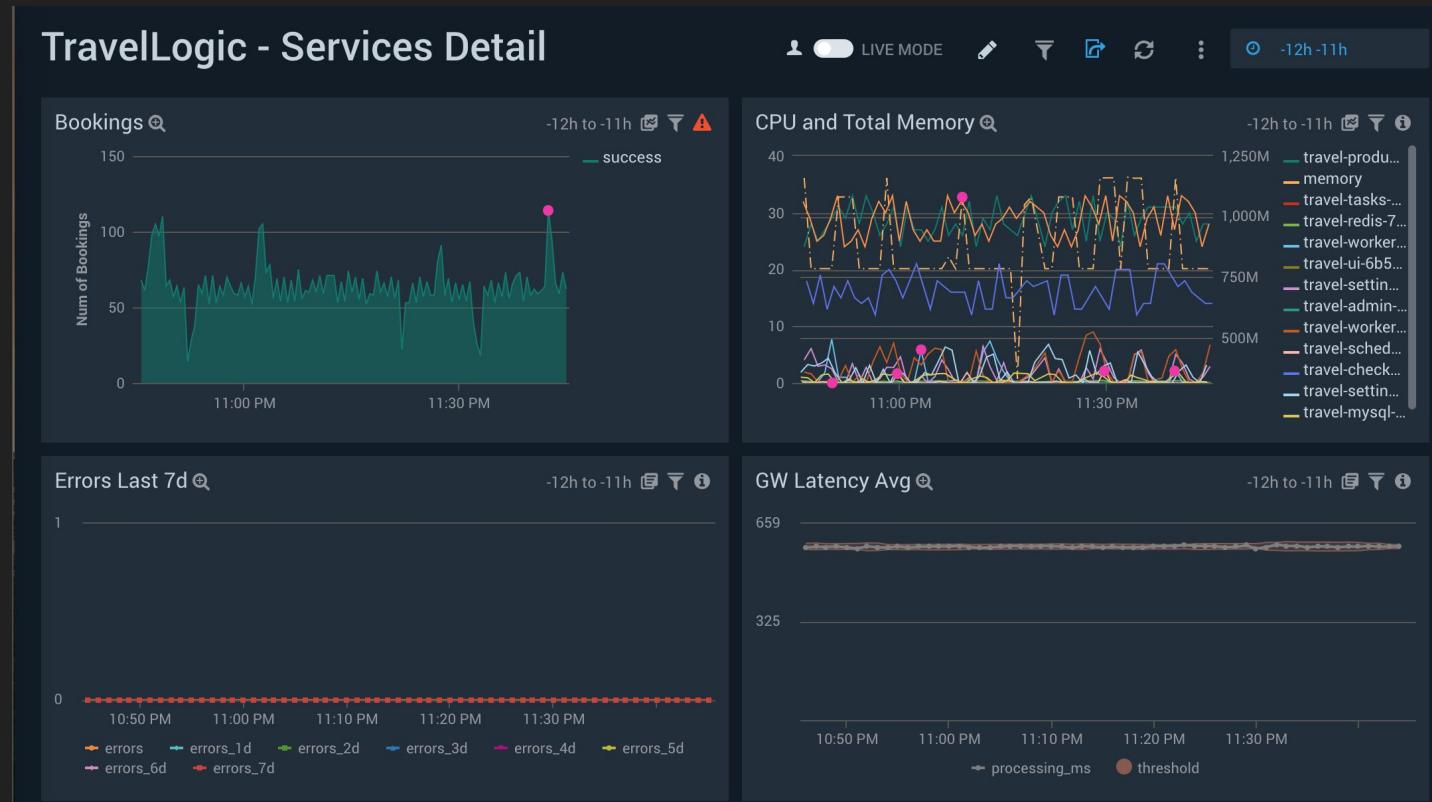
- 918
- 2476
- 1317
- 121



# Travel Logic Demo Flow



# Travel Logic Demo Flow



# Travel Logic Demo Flow

## TravelLogic - Business Overview

LIVE MODE

Flights

Payment Service Status

Hotels

Application Status

Cars

Website Status

Flight Booking Locations

Hotel Booking Locations

Car Hire Locations

Sumo Logic

# Travel Logic Demo Flow

## TravelLogic - Operational Overview

LIVE MODE

Alerts are automatically delivered to travel\_ops channel on Slack

R...

Last 2 Hours

Service Nodes  
**15.0**  
Reporting Nodes

ELB 5XX  
**644**  
5XX Errors

ELB Response Times  
**4.36**  
Avg Response...

VPC Network Rejects  
**10.0**  
Rejections

Redis Issues  
**0.00**  
Redis Cache Errors

Checkout Service  
**2.70k**  
Errors

Database Issues  
**0.00**  
Errors and Wa...

Products Service  
**0.00**  
Errors

# Travel Logic Demo Flow

**Payment method**

**Payment**

Error processing payment 2b43681e-7733-4d60-9b5b-99a93379d64e 500 INTERNAL SERVER ERROR

Credit Card Number\*  
123456789

Month Year  
Feb ▼ 2018 ▼

**PAY** **EMPTY CART**

# Travel Logic Demo Flow

