CF + ELK
LOGGING IN THE CLOUDS

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As a CF operator
I can extend my Cloud Foundry platform with log analysis
Using Logsearch for Cloudfoundry
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David Laing
Product Owner,
Logsearch

Jack Wu (吳疆)
Cloud Ops, Pivotal

MICROSERVICES - MUST BE THIS TALL

- Operating distributed systems is hard
  - Cloud Foundry platform
  - Microservices running on Cloud Foundry
- Centralised log and metric analysis lets you see what is going on
- Should be part of the platform

LOGSEARCH - ADDING ELK TO CF PLATFORM

- ELK stack deployed by BOSH
    - Running in production for 2 years
    - Log processing pipeline –> Log search engine –> Visualization tool
    - Linear scalability
- Logsearch for Cloud Foundry adds tight integration into CF ecosystem
    - Ingests all the logs (and metrics)
    - Extracts and enriches
   - Zero configuration authentication and multitenant access control

LOG SOURCES

1. Platform component logs from syslog forwarders
2. Platform metrics from CF Collector
3. Deployment data from BOSH NATs
4. App logs from Loggregator firehose

LISTEN THE VOICE -- ELK FOR CLOUDFOUNDRY

- Log sources
  - Syslog of CloudFoundry components
  - AWS ELB access log
  - AWS RDS Log
- High Avaiability
  - Multi-AZ deployment
- Scalability
  - storage – extend storage when necessary
 - computing – adding parser nodes when necessary

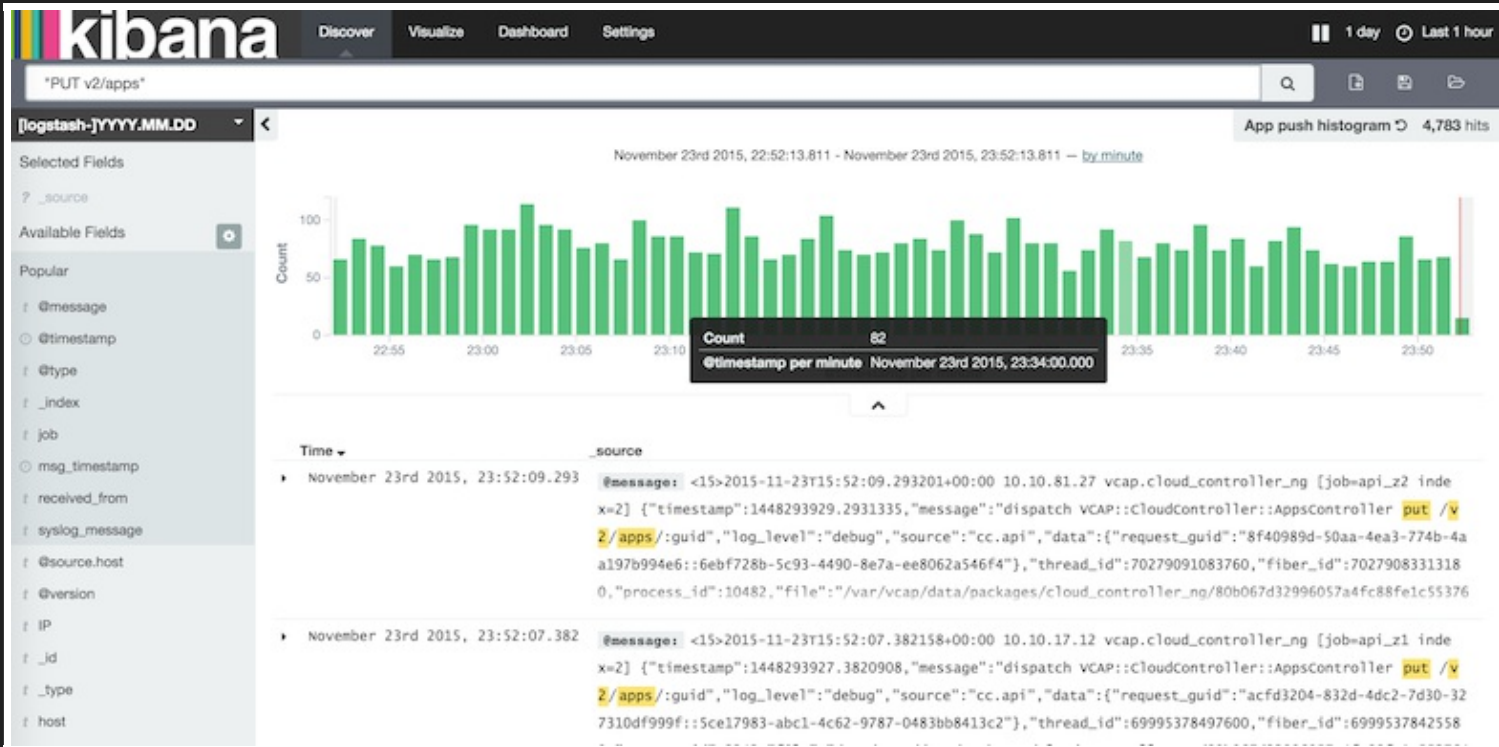# MULTI-AZ ELK ARCHITECTURE
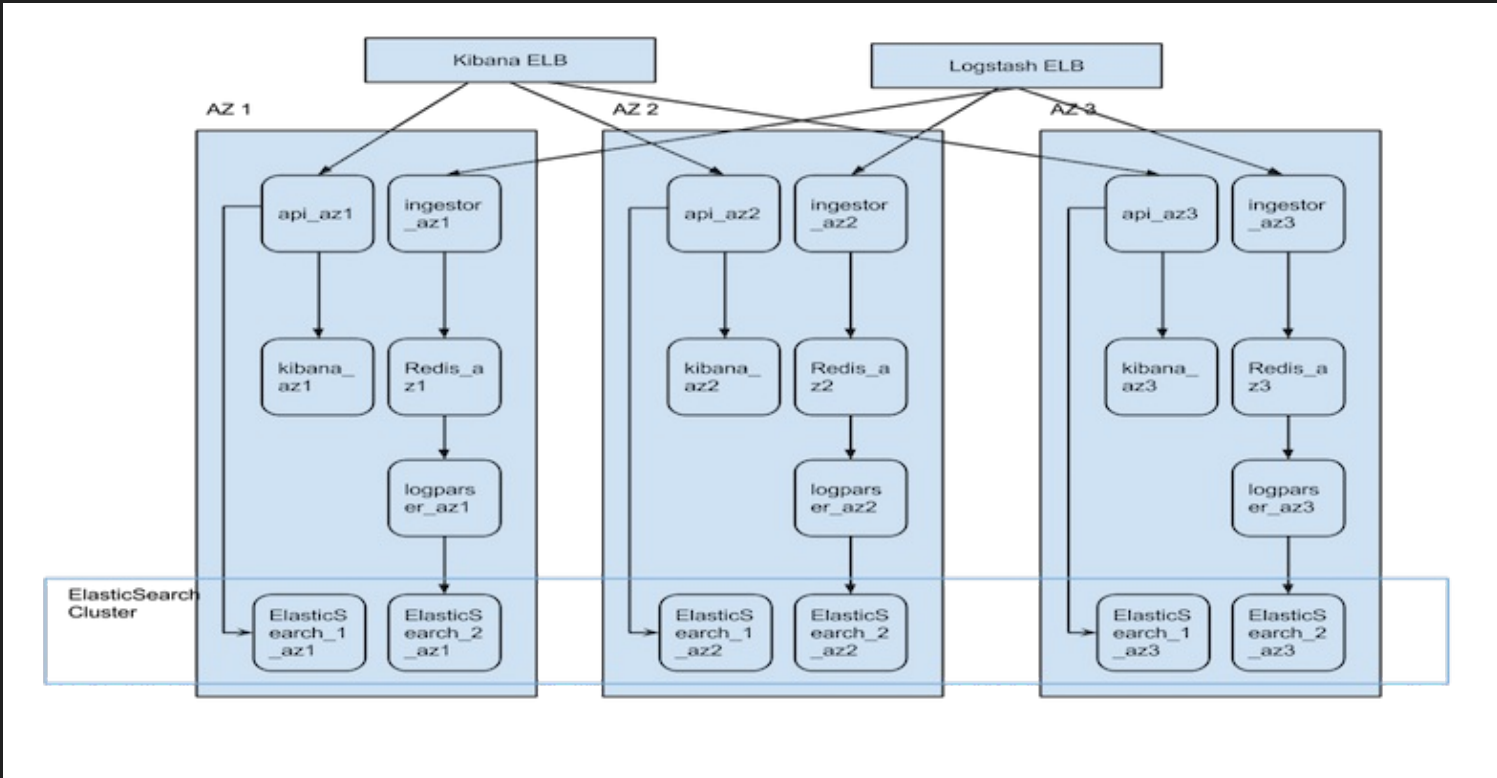
MULTI-AZ ELK IN PIVOTAL WEBSERVICE (PWS)

- Deployment size
  - Totally 37 nodes among 3 Available Zones (AZ)
  - Totally 9 parser nodes (c3.large VM)
  - Totally 15 Elastic Search Nodes (r3.xlarge nodes)
  - Totally storage size – 18T
- Data size
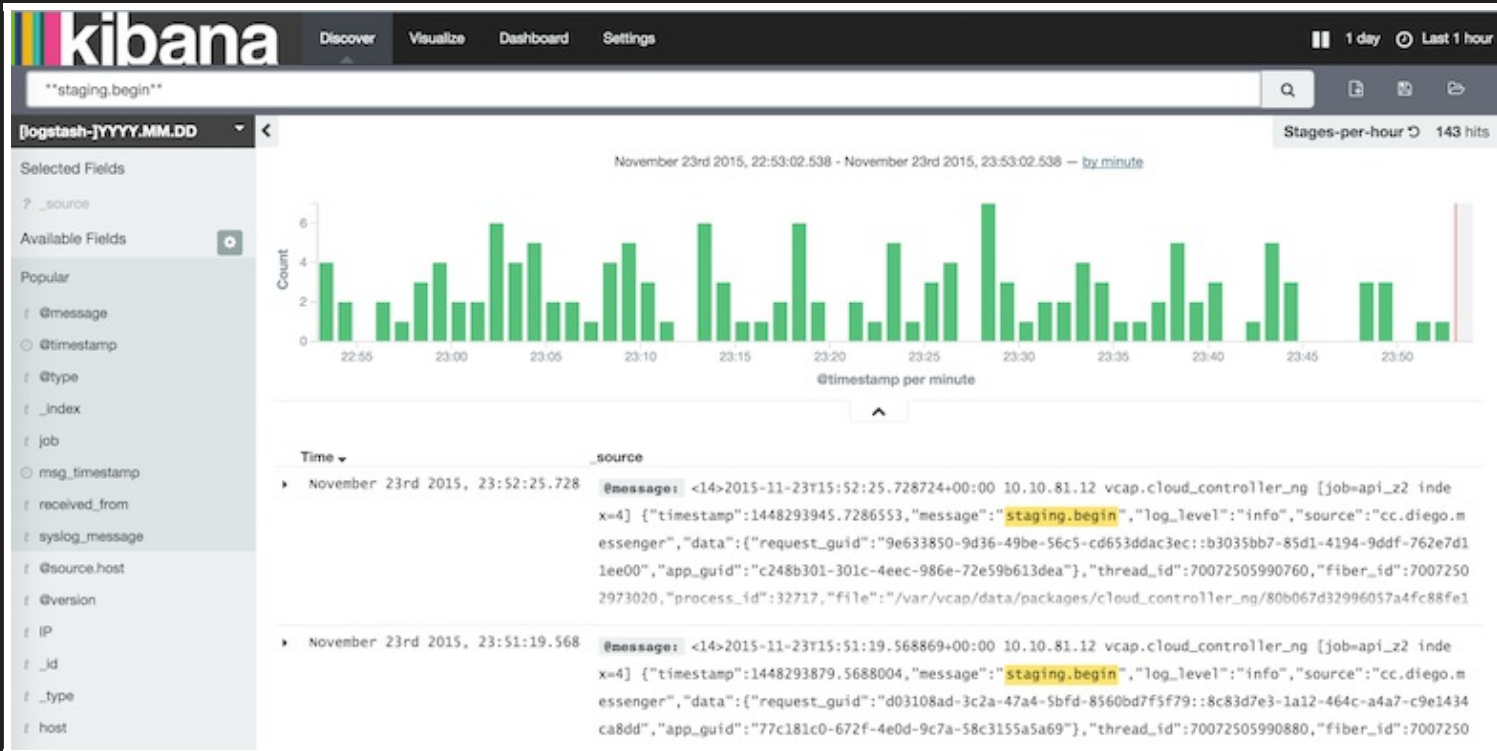 - 18 million lines log per hour
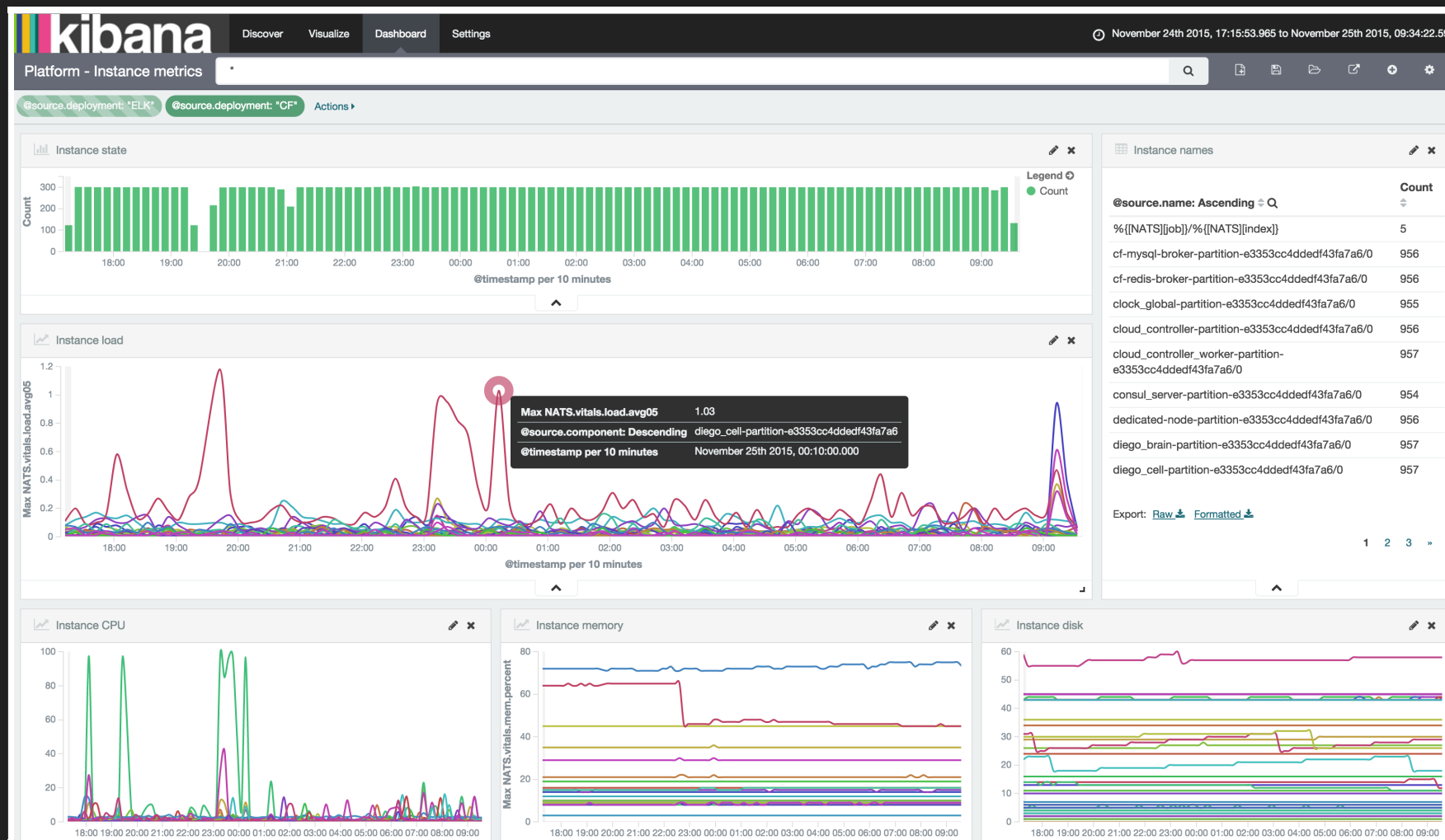 - 27G indexed data per hour

LISTENING PWS WITH ELK - 1
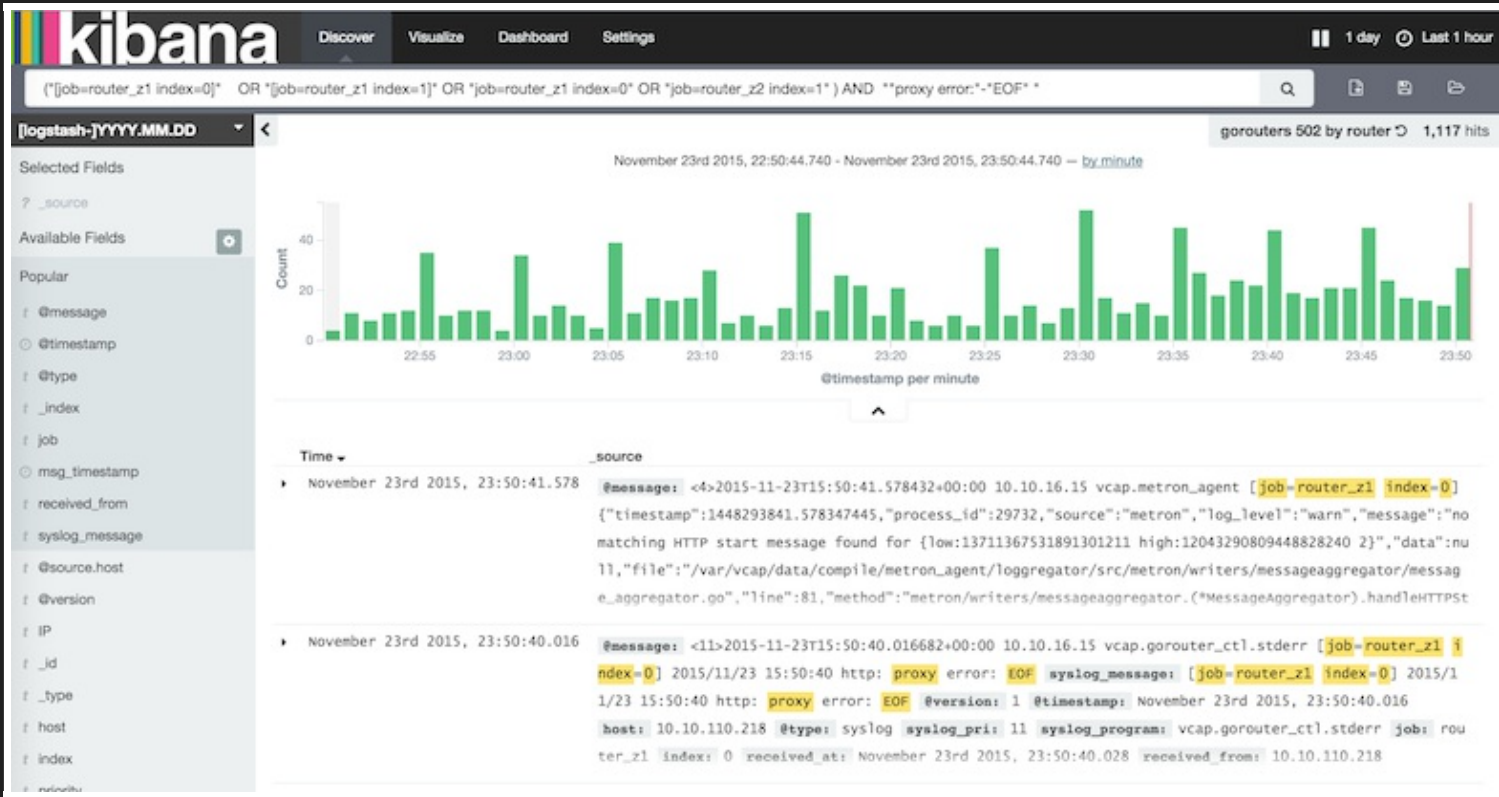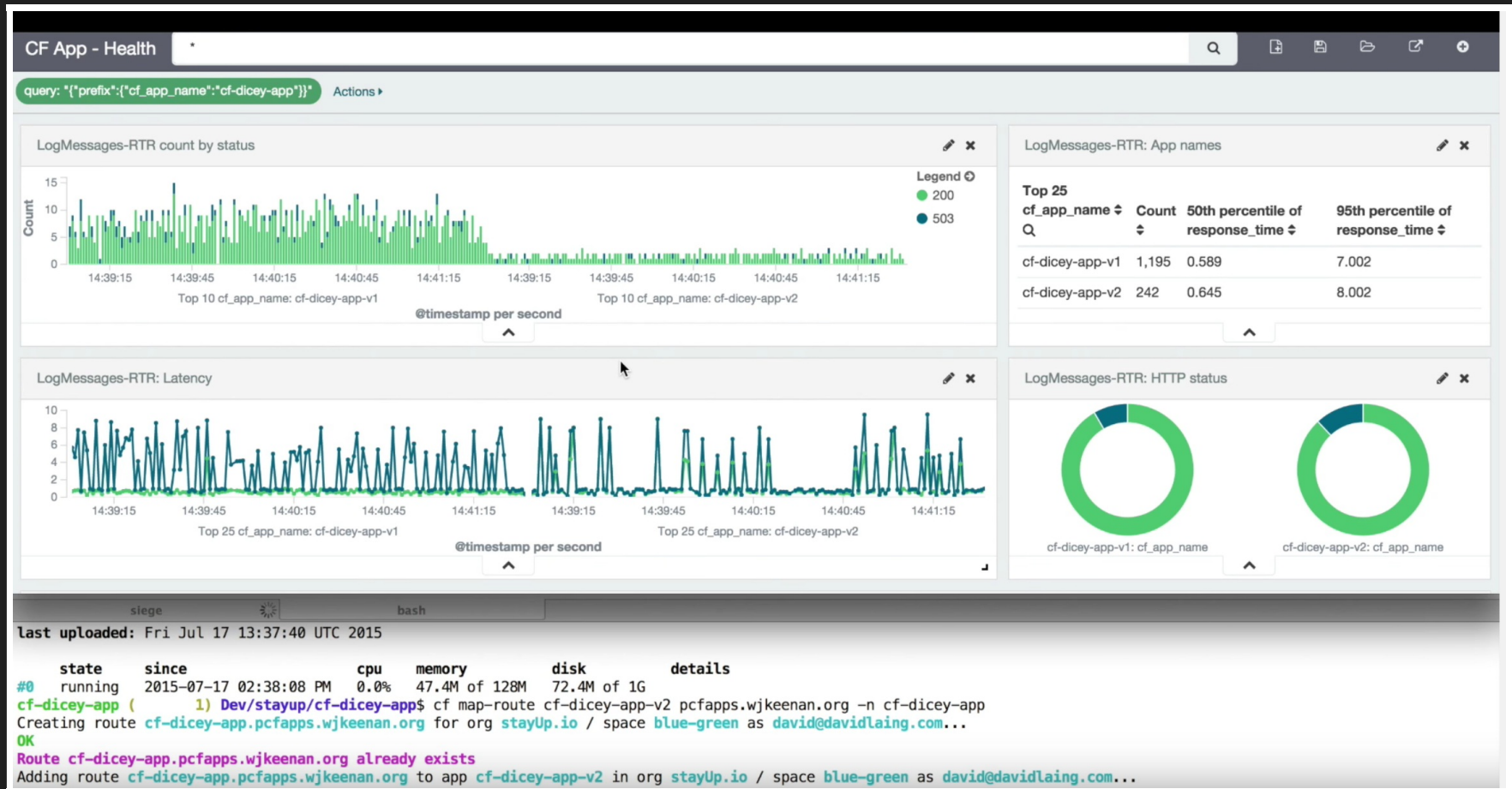
LISTENING PWS WITH ELK - 2

LISTENING PWS WITH ELK - 3

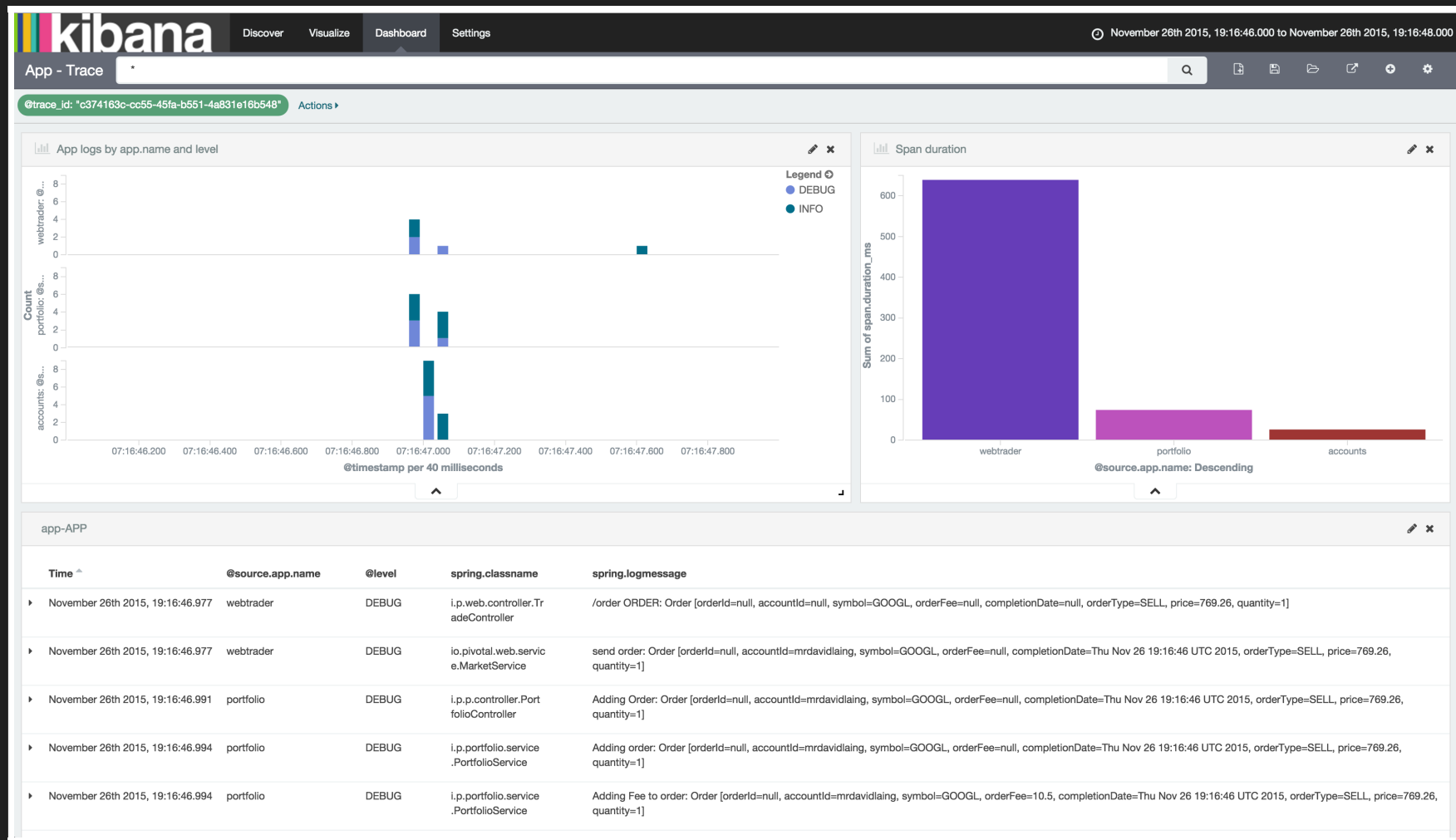# DEMO: BOSH HEALTH MONITOR METRICS

DEMO: ENHANCED BLUE / GREEN DEPLOYMENT

ELK FOR PCF TILE

- Tile for Pivotal's Cloud Foundry distribution
- Adds
  - Support for Spring Cloud Microservices
  - Focus on security and audit logs
  - Commercial support

DEMO: CROSS MICROSERVICE TRANSACTION TRACING

WRAP-UP

- Log analysis enables operating distributed systems
- Logsearch for Cloud Foundry
    -> logs analysis for CF platform
- ELK for PCF tile
    -> commercial support with focus on Spring Cloud