

# Cloud Foundry Logging and Metrics

CF Summit 2015

About Us

CloudCredo

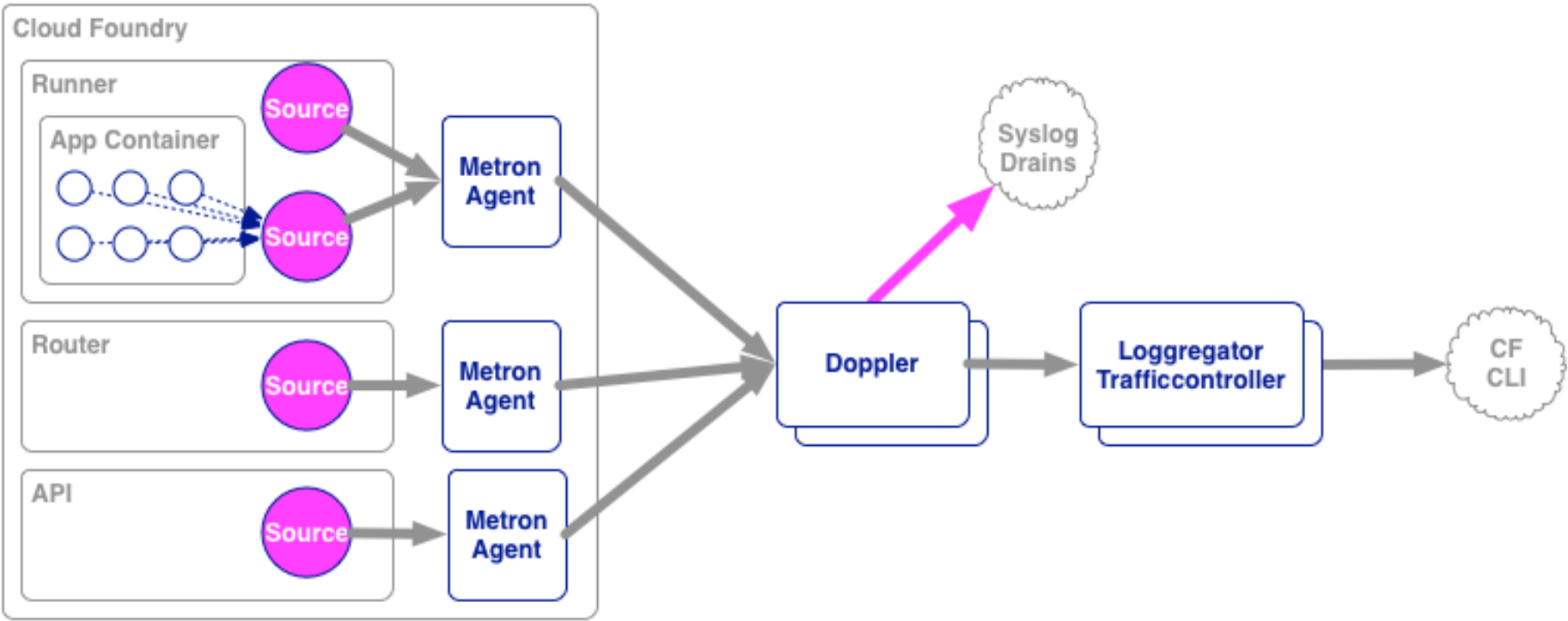
# The Problem

# Component Overview

Doppler and the Firehose

# Doppler

- Previously known as **loggregator**
- Provides `cf logs my-app` functionality
- Allows forwarding to 3rd party syslog drains
- Gathers logs and metrics from **metron**
- Stores data in temporary buffers
- NB: Does not provide long-term storage
- The **traffic controller** handles client requests



Source: <http://github.com/cloudfoundry/loggregator>

# The Firehose

- The **firehose** is a relatively new feature
- It's a stream of every app's logs, plus metrics data from Cloud Foundry's components
- The **traffic controllers** expose the **/firehose** websocket endpoint
- **nozzles** attach to the firehose, parse out relevant data and forward it to other 3rd parties (e.g. syslog and Graphite)

Logs?



# Integrating ELK with Cloud Foundry

logsearch

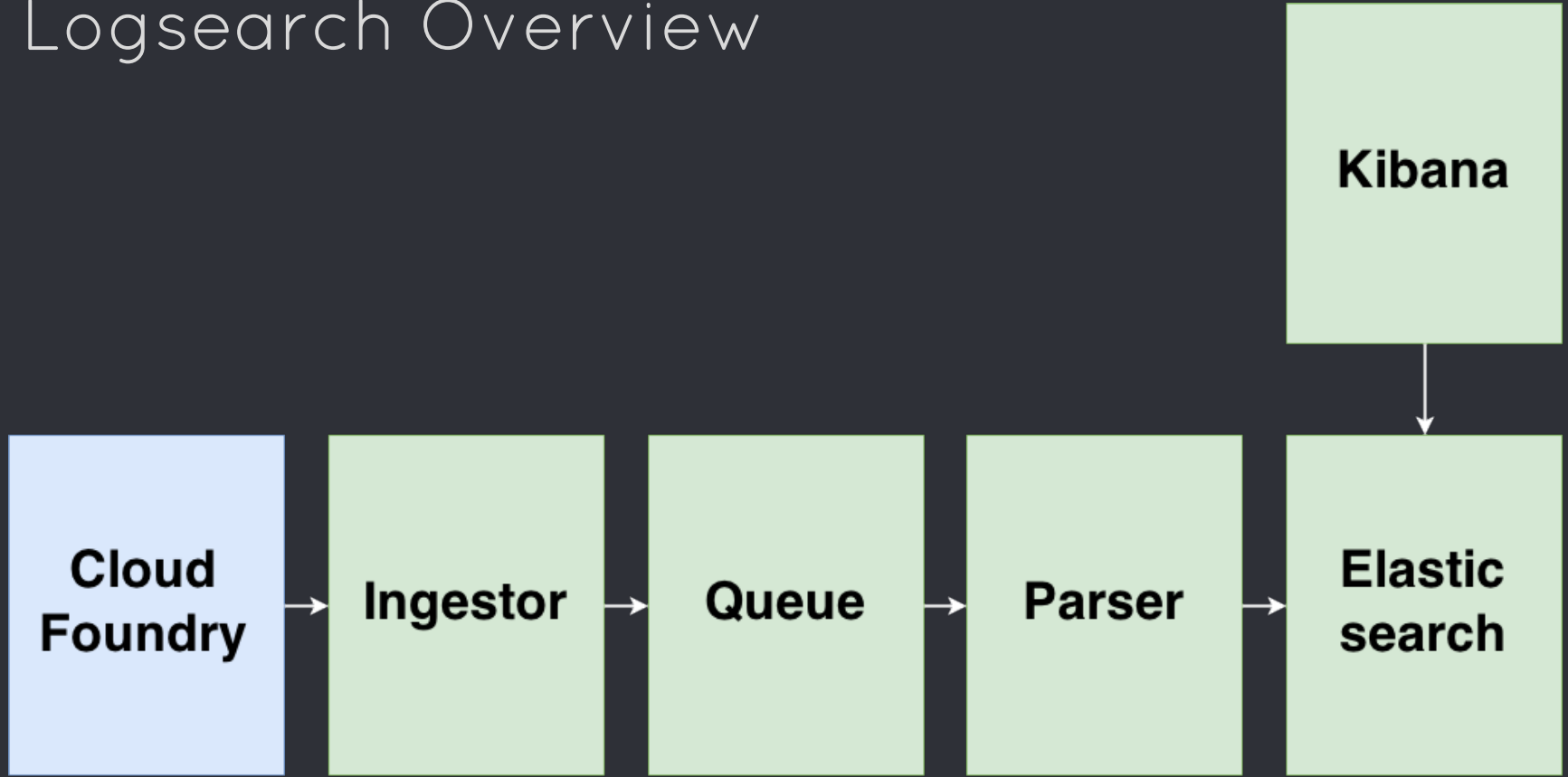
# Integrating ELK with Cloud Foundry

- **logsearch**
- Packages the **ELK** stack as a **BOSH release**
- It's completely open source and free!
- [www.logsearch.io](http://www.logsearch.io)

# Integrating ELK with Cloud Foundry

- **logsearch-for-cloudfoundry**
- Customises logsearch to work with Cloud Foundry data
- Consumes data from both the **firehose** and the **syslog component log**
- Provides log dashboards for CF developers, as well as CF operators

# Logsearch Overview



# Step-by-Step Walkthrough

Deploying logsearch for Cloud Foundry

# Integrating ELK with Cloud Foundry

## Step 1: Upload logsearch BOSH release

- git clone the logsearch-boshrelease repo
- Upload the latest BOSH release to your BOSH

## Step 2: Deploy logsearch

- Craft logsearch deployment manifest
- bosh deploy

# Integrating ELK with Cloud Foundry

## Step 3: Forward CF logs to logsearch ingestor

- Open your CF deployment manifest file
- Set the following properties

*properties:*

*syslog\_daemon\_config:*

*address: <logsearch ingestor IP address>*

*port: 5515*

*transport: relp*

# Integrating ELK with Cloud Foundry

- Why should you choose logsearch?
- It's **open source**
- Extracts the complexity of managing the ELK stack
- **Easy to scale**



Metrics?

# Integrating Graphite with Cloud Foundry

Graphite historian and graphite-nozzle

# Integrating Graphite with Cloud Foundry

- Approach 1 - Using the **collector**
- An optional Cloud Foundry component
- Soon to be deprecated in favour of the **firehose**
- Queries CF components' **/healthz** and **/varz** endpoints
- Provides a **Graphite historian** to send data to Graphite

# Integrating Graphite with Cloud Foundry

*properties:*

*collector:*

*use\_graphite: true*

*graphite:*

*address: <IP address of Graphite server>*

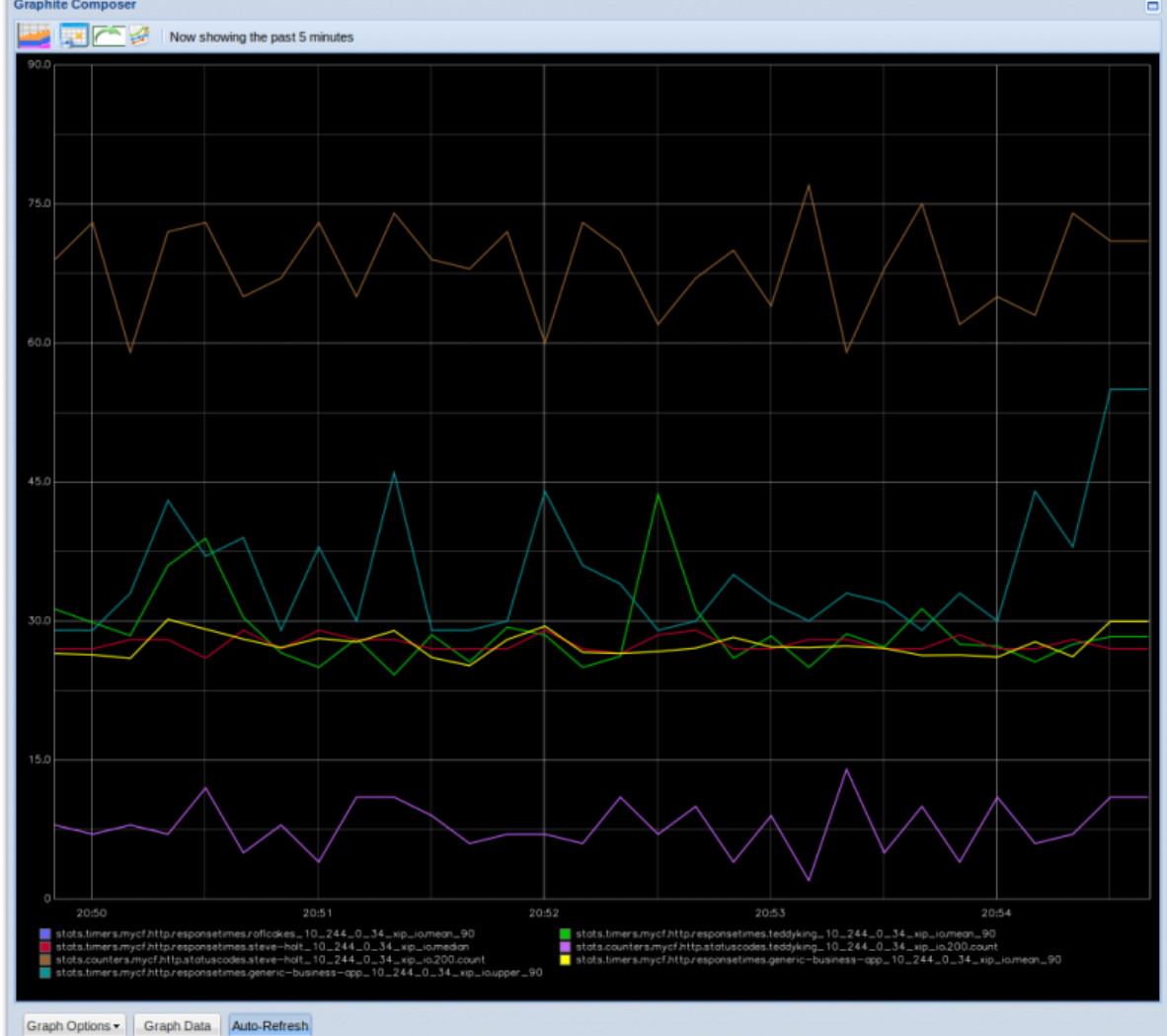
*port: 2003*

# Integrating Graphite with Cloud Foundry

- Approach 2 - Using **graphite-nozzle**
- Attaches to the **firehose** and extracts metrics Events
- Parses the metrics Events into a format that can be sent to **StatsD**
- Available on the CloudCredo Github page

Tree Search Auto-Completer

- steve-holt\_10\_244\_0\_34\_xip\_io
  - 200
    - count
    - rate
- teddyking\_10\_244\_0\_34\_xip\_io
  - 200
    - count
    - rate
  - 404
    - count
    - rate
  - uaa\_10\_244\_0\_34\_xip\_io
- statsd
- gauges
- mycf
  - ops
    - LoggregatorTrafficController
    - dea\_logging\_agent
    - router\_0
      - memoryStats
        - lastGCPauseTimeNS
        - numBytesAllocated
        - numBytesAllocatedHeap
        - numBytesAllocatedStack
        - numFrees
        - numMallocs
        - numCPUS
        - numGoRoutines
    - syslog\_drain\_binder
- statsd
- statsd
- timers
  - mycf
    - http
      - responsetimes
        - api\_10\_244\_0\_34\_xip\_io
        - generic-business-app\_10\_244\_0\_34\_xip\_io
          - count
          - count\_ps
          - lower
          - mean
          - mean\_90
          - median
          - std
          - sum
          - sum\_90
          - upper



# Goodbye!

Thank you for listening

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