

A dimly lit, open-plan office with several people working at desks with multiple computer monitors. The office has a modern, industrial feel with exposed ceiling pipes and a staircase in the background.

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# New Relic on Pivotal Cloud Foundry

Ben Hale ([bhale@pivotal.io](mailto:bhale@pivotal.io))  
Cloud Foundry Java Lead, Pivotal

**Here is my source code  
Run it on the cloud for me  
I do not care how**

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## Cloud Foundry Contract

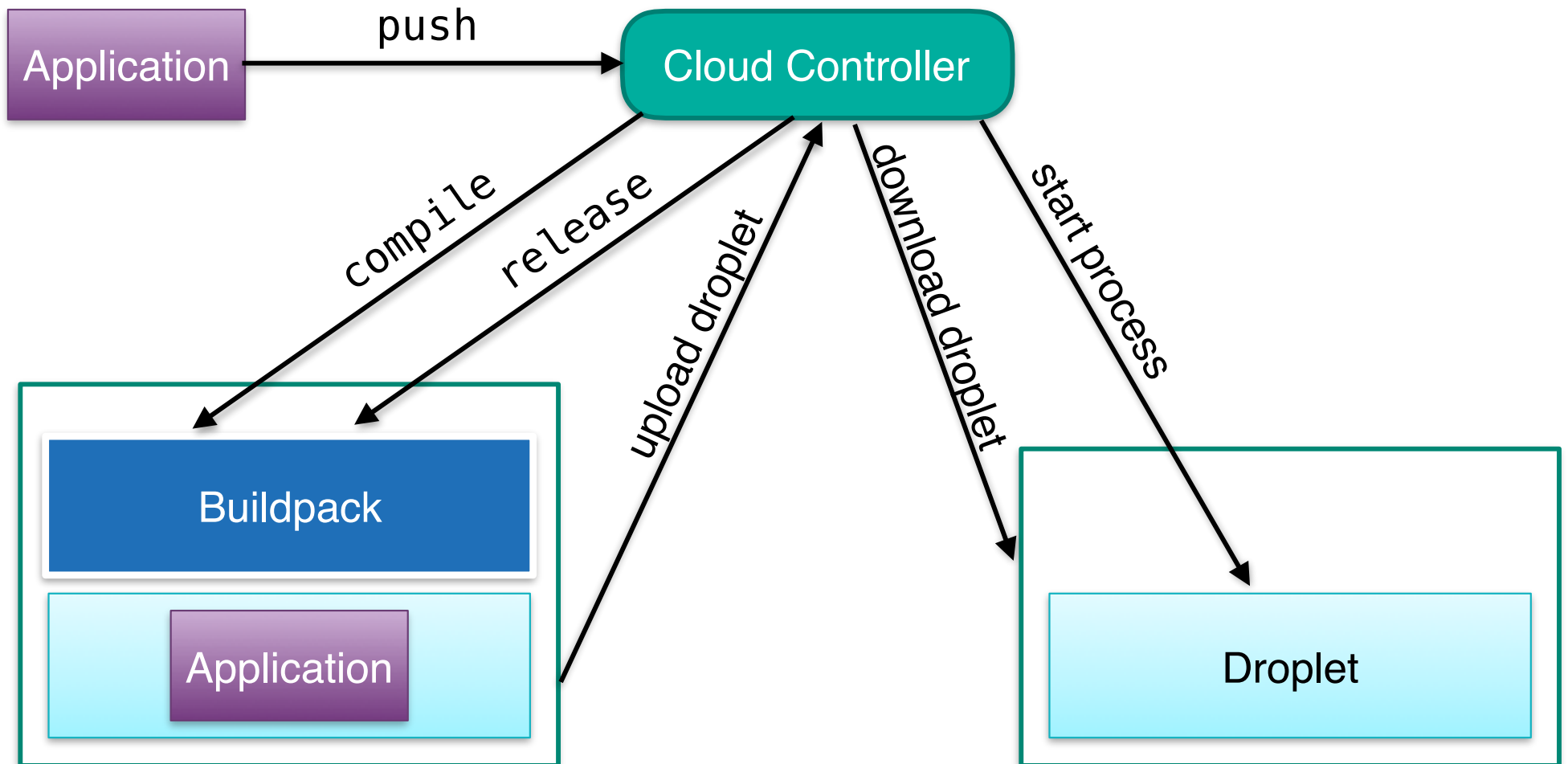
- Developers provide an application
  - Java, Node, Ruby, Go, ...
- Platform turns that into a runnable process
- Platform runs that process in an isolated container
  - Ensures that process is always running and recreates if necessary

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## Staging

- Staging is the process by which applications are transformed into running processes
- Buildpacks modify filesystem creating droplets
- Contact originally defined by Heroku
  - detect (*optional*)
  - compile
  - release

# Staging







Staging

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## Services

- Applications are intended to be stateless and disposable
- Everything an application depends on is referred to as a Service
- More generally, everything related to, but not part of an application is a Service

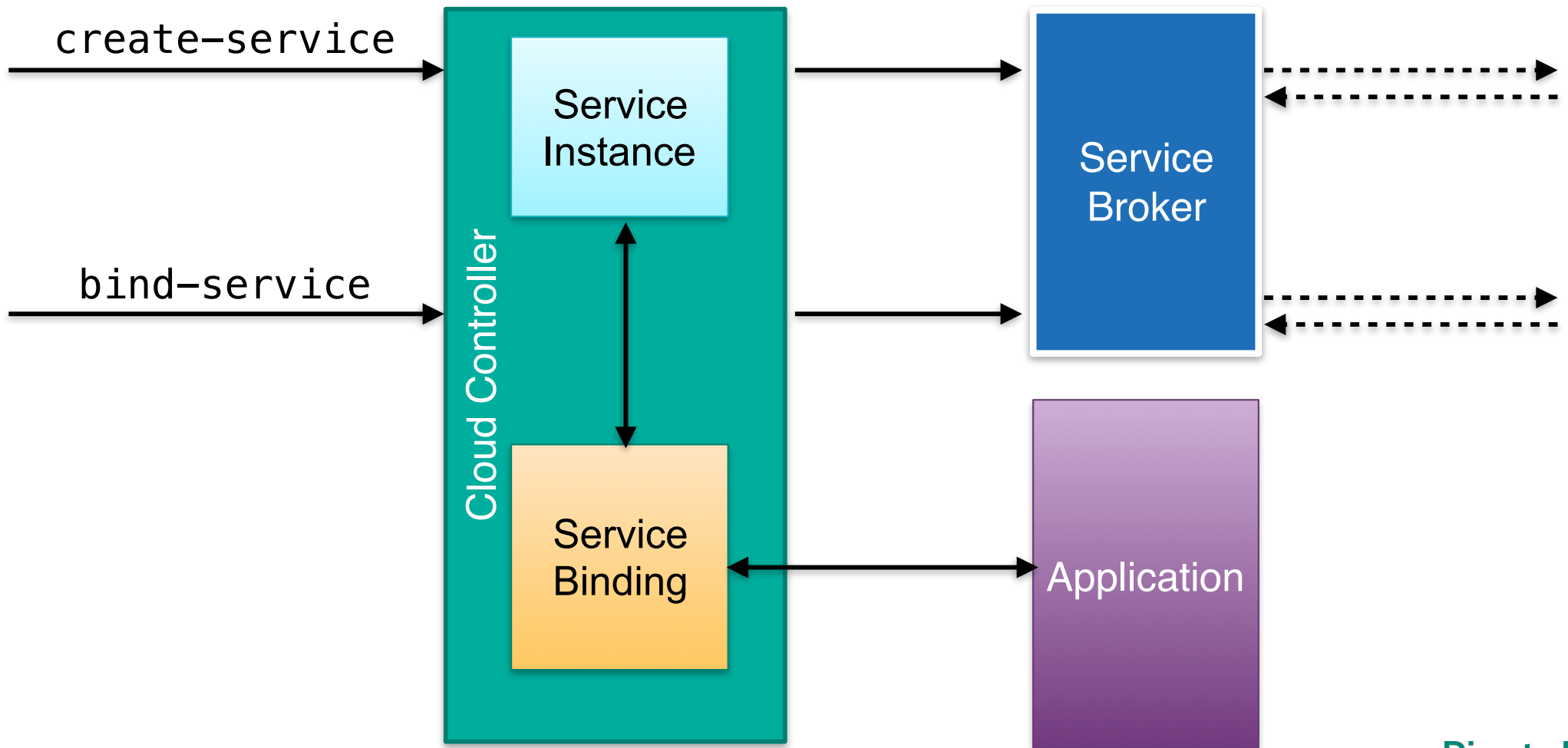
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## Service Lifecycle

- Services have a lifecycle separate from application
- Can be shared by multiple applications
- Contract
  - create/destroy
  - bind/unbind



# Service Lifecycle



## Service Binding

- Sounds more special than it is
- Exposure of a specially formatted payload in a specially named environment variable

```
VCAP_SERVICES={  
  "newrelic": [{  
    "credentials": {  
      "licenseKey": "fe71fb75927..."  
    }  
  }  
  ...  
}
```



# Service Bindings

## User Provided Services

- Service Brokers are not the only way to create services
- User Provided Services are full-fledged service instances created differently

```
cf create-user-provided-service -p "licenseKey"
```

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## Java Buildpack New Relic Support

- During staging, buildpacks have access to environment as well as application
- Can make decisions and download additional code
- Java Buildpack notices New Relic service and “Zero Touch” configures application

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## Java Buildpack New Relic Support

- Existence of a New Relic service is defined as the VCAP\_SERVICES payload containing a service who's name, label or tag has newrelic as a substring
- Created by service broker or user provided service
  - Services from New Relic tile qualify





# Java Buildpack

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## New Relic Configuration

- Zero Touch configuration aims to provide a good default experience
- Doesn't mean that New Relic isn't configurable
- In fact, New Relic has the *most* flexible configuration in Cloud Foundry

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## New Relic Configuration

- Three was to configure New Relic
  - JAVA\_OPTS
  - Service Binding Credentials
  - Java Buildpack Resource
- Descending precedence

## JAVA\_OPTS Configuration

- Most targeted configuration style
- Only changes a single application
- First stop when dealing with customers

```
cf set-env java-main-application JAVA_OPTS  
  '-Dnewrelic.config.cross_application_tracer.enabled=false'
```

## Service Binding Credentials Configuration

- Shared configuration for all application sharing a service instance
- New Relic Tile and Service Broker don't support, so stuck with user provided service for now

```
cf cups my-newrelic -p  
  'licenseKey,cross_application_tracer.enabled'
```

# Java Buildpack Configuration

- Shared configuration for all applications on the entire Cloud Foundry instance
- This really is the nuclear option and should only be used if you **really** mean it



The screenshot displays a GitHub web interface for the file `newrelic.yml` located at `java-buildpack / resources / new_relic_agent / newrelic.yml` on the `master` branch. The commit history shows a recent update by `cgfrost` on August 13, 2015. The file content is a YAML configuration for the New Relic Agent, starting with a header that explains its purpose and provides a link to the New Relic documentation. It includes a section for common settings and a placeholder for a license key.

```
1 # This file configures the New Relic Agent. New Relic monitors
2 # Java applications with deep visibility and low overhead. For more details and additional
3 # configuration options visit https://docs.newrelic.com/docs/java/java-agent-configuration.
4 #
5 # This section is for settings common to all environments.
6 # Do not add anything above this next line.
7 common: &default_settings
8
9 # ===== LICENSE KEY =====
10 # You must specify the license key associated with your New Relic
11 # account. This key binds your Agent's data to your account in the
12 # New Relic service.
```





# Configuration

## Pivotal Cloud Foundry ❤️ New Relic

- New Relic is exposed as a service, either through a Service Broker or User Provided Service
- Java Buildpack Zero Touch configurations New Relic for applications with bound service
- New Relic configuration through JAVA\_OPTS, service binding credentials, or Java Buildpack resource

# Get Involved

- Java Buildpack  
<https://github.com/cloudfoundry/java-buildpack>
- Cloud Foundry Slack  
<https://cloudfoundry.slack.com/messages/java-buildpack/>
- Presentation  
<https://github.com/nebhale/new-relic-on-pivotal-cloud-foundry-2016.git>



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