

# SPRING CLOUD \*



DISCOVERY AND CONFIG SYSTEMS COMPARISON  
SPENCER GIBB

<https://github.com/spencergibb/spring-cloud-star>

<http://spencer.gibb.us>



# Pivotal®

CLOUD  FOUNDRY

 **spring**  
by Pivotal.

 **RabbitMQ**  
Messaging that just works

 **redis**



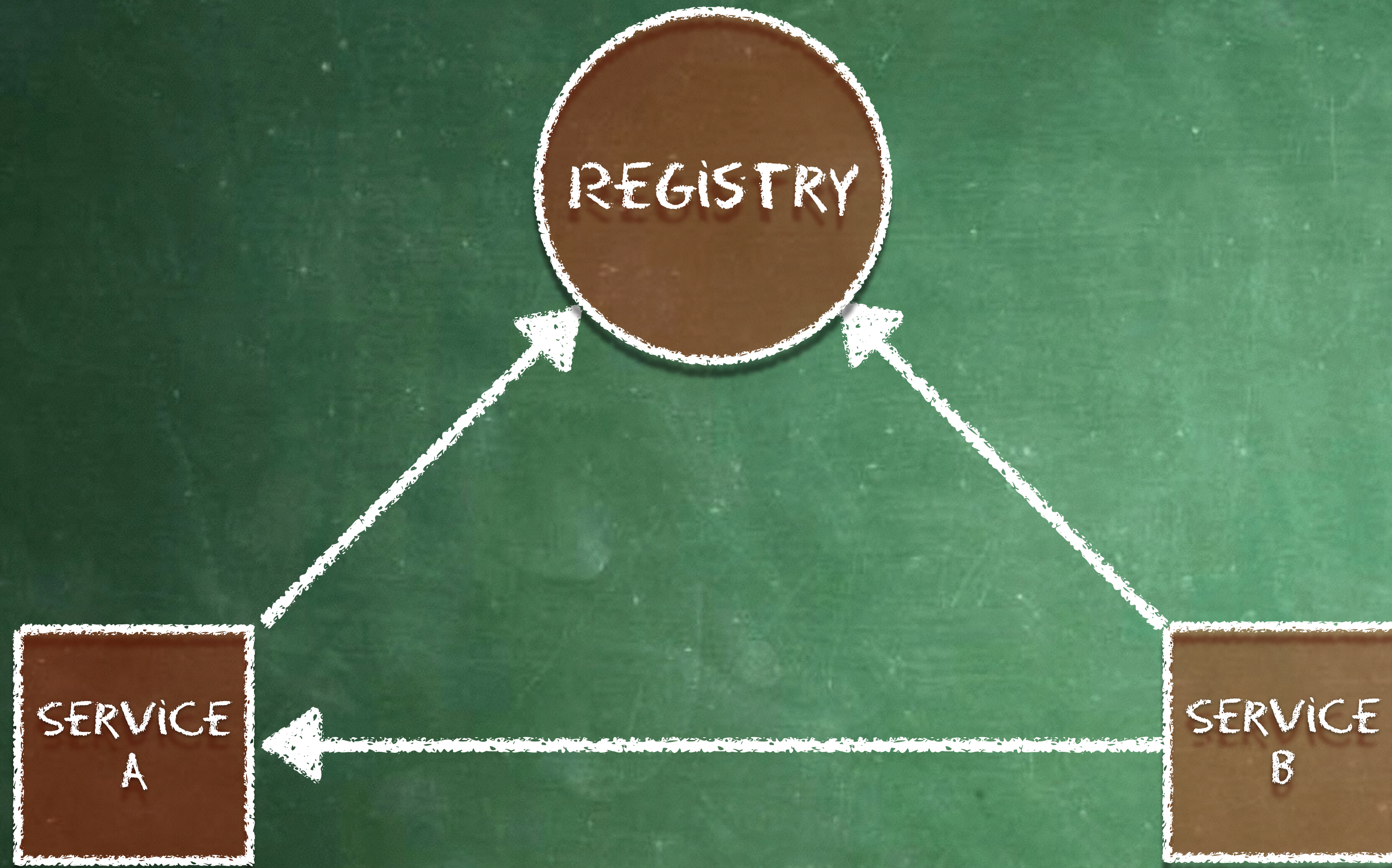
 **APACHE  
GEODE**

 **GREENPLUM  
DATABASE**

 **spring**  
by Pivotal.



# SERVICE REGISTRATION & DISCOVERY



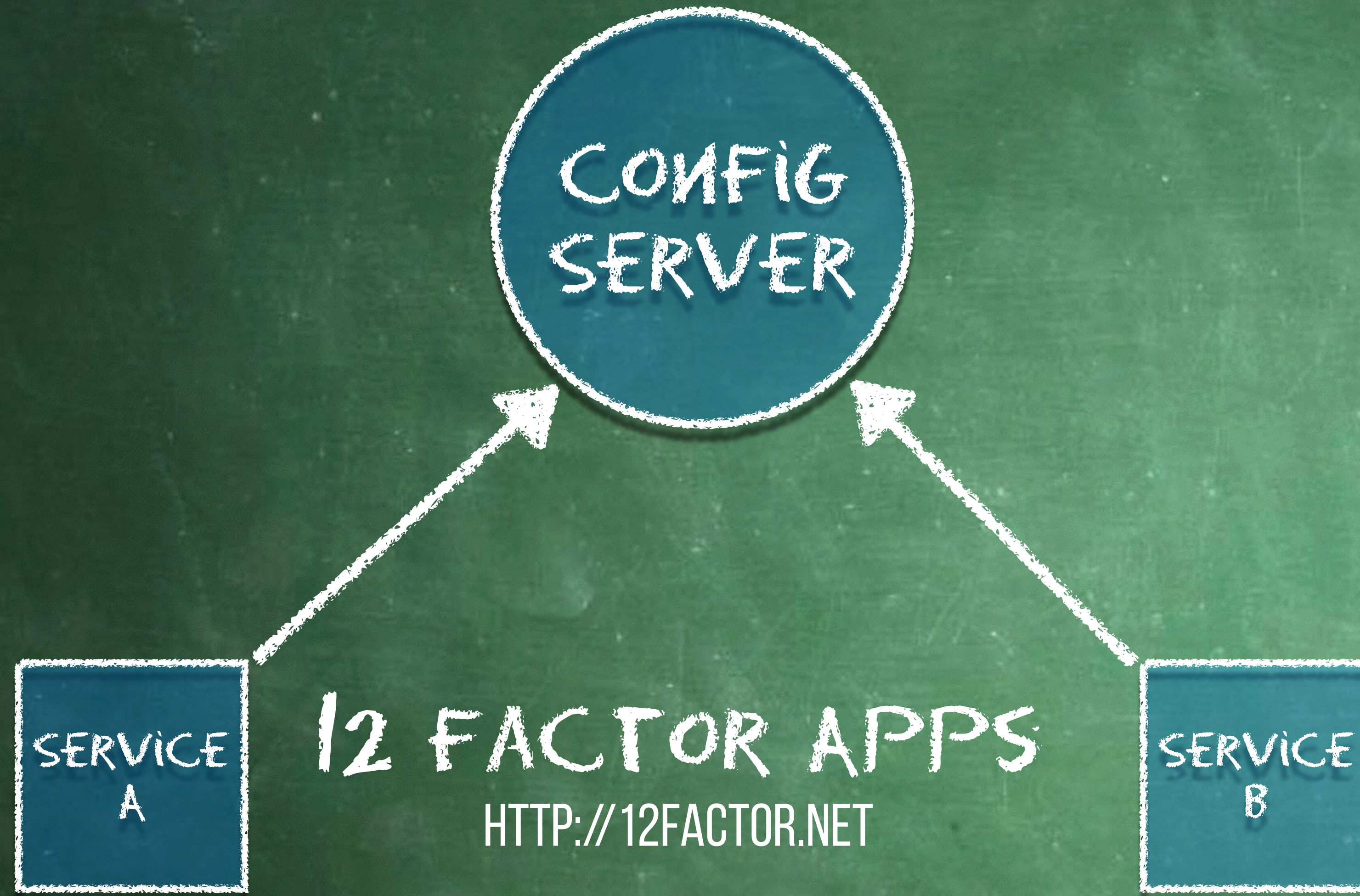


# DISCOVERYCLIENT

- @EnableDiscoveryClient
- ServiceInstance si =  
discoveryClient.choose("serviceId")
- RestTemplate
- @FeignClient

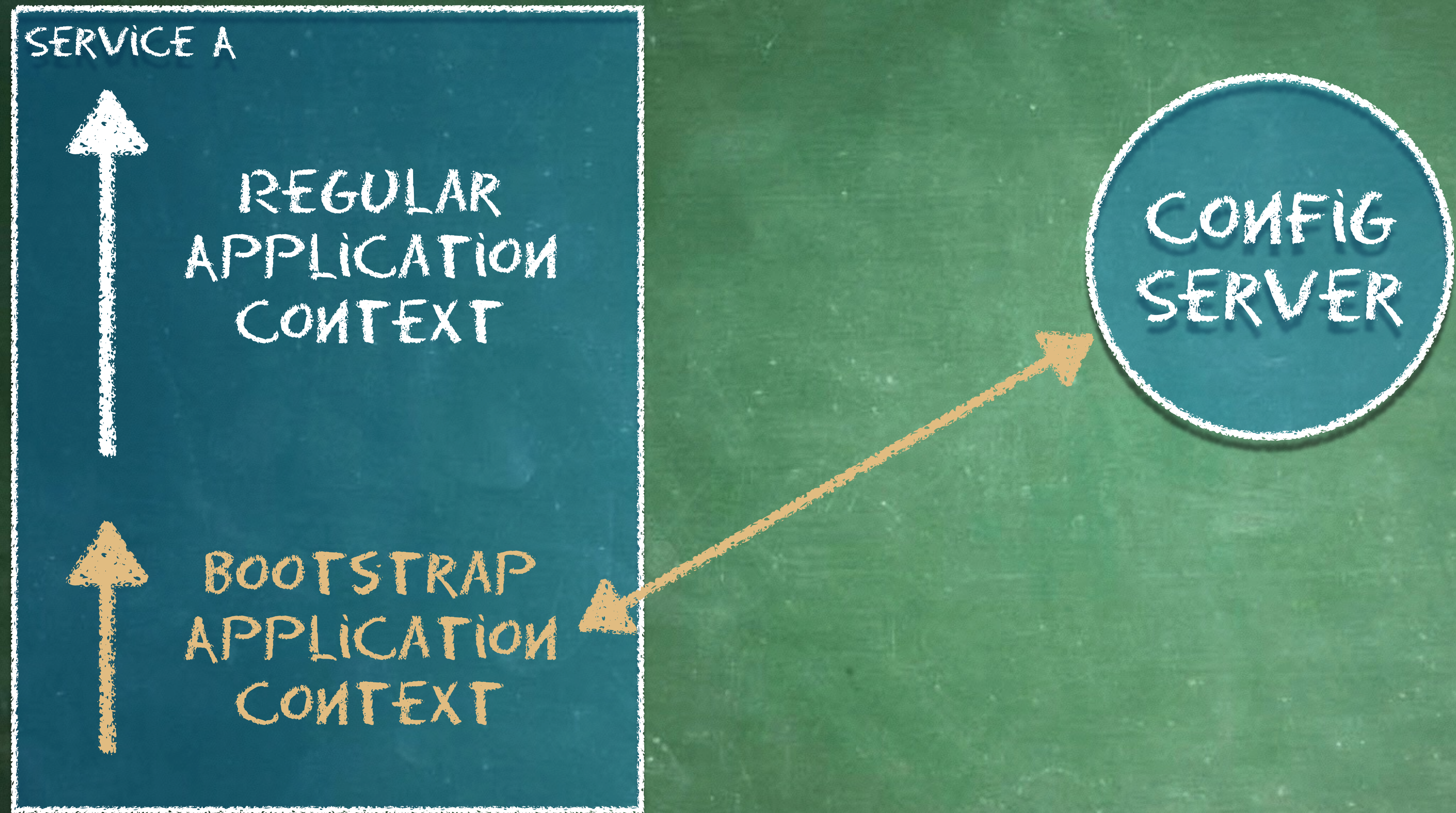


# DISTRIBUTED CONFIGURATION





# CONTEXT LIFECYCLE





# ENVIRONMENT

- @ConfigurationProperties
- @Value
- Environment



# SPRING CLOUD CONFIG SERVER

- GREENFIELD

- HTTP API SIMILAR TO  
NETFLIX CONFIG SERVER

- BACKED BY VCS: GIT,  
SVN

- STATELESS

- @RefreshScope

- USES SPRING-BOOT  
CONFIGURATION FILES &  
SEMANTICSAUTO-  
CONFIGURED CLIENT

- REFRESH VIA BUS

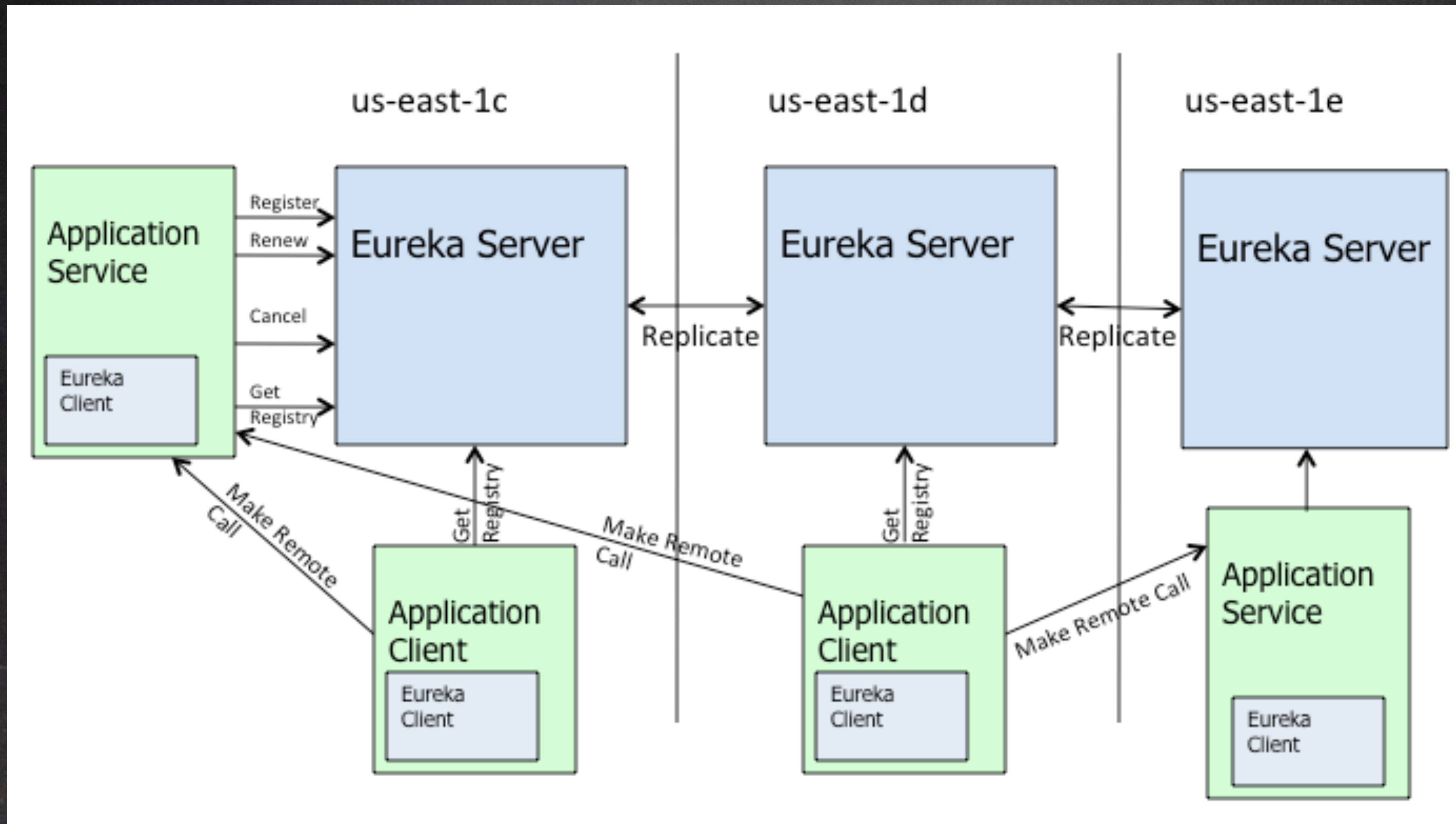
- WEBHOOK SUPPORT FOR  
GITHUB, GITLAB AND  
BITBUCKET



DEMO



# NETFLIX EUREKA





# EUREKA PRO'S

- HIGHLY-AVAILABLE
- MATURE / PROVEN BY NETFLIX
- TIGHT RIBBON INTEGRATION



# EUREKA COM'S

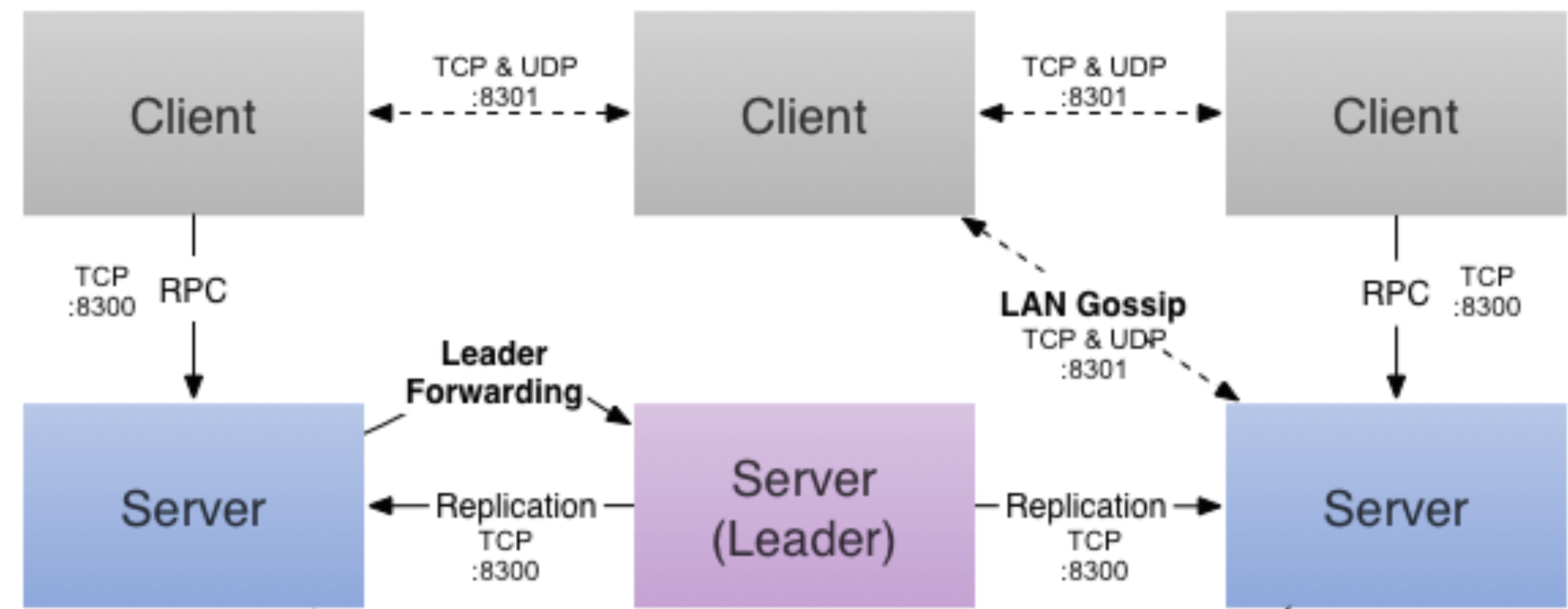
- JVM BASED
- THICK JAVA CLIENT
- POLYGLOT BY SIDECAR
- BUILT FOR AWS INITIALLY
- LONG THRESHOLDS FOR REGISTRATION AND CACHE REFRESH (30S)



# CONSUL



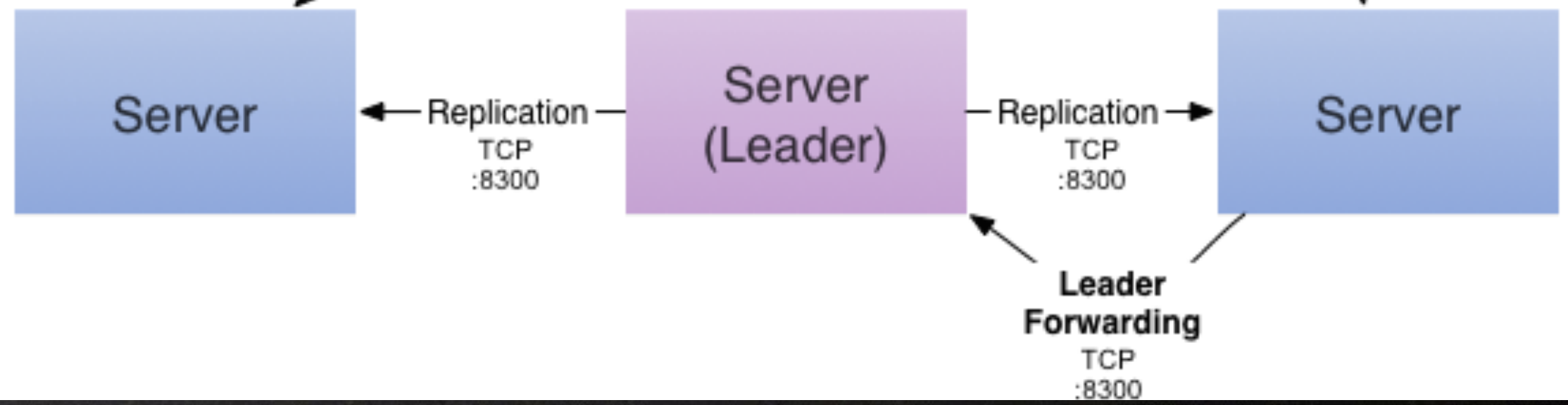
## Datacenter 1



## Internet



## Datacenter 2





# CONSUL PRO'S

OPOLYGLOT

OHTTP API AND DNS  
INTERFACE

OACL'S

OHEALTH CHECKS

OMULTI-DATACENTER

OVault INTEGRATION

OYAML AND  
PROPERTIES BLOBS  
SUPPORTED

OPEER-TO-PEER  
GOSSIP SYSTEM

ONICE UI



# CONSUL COM'S

○ YOUNG

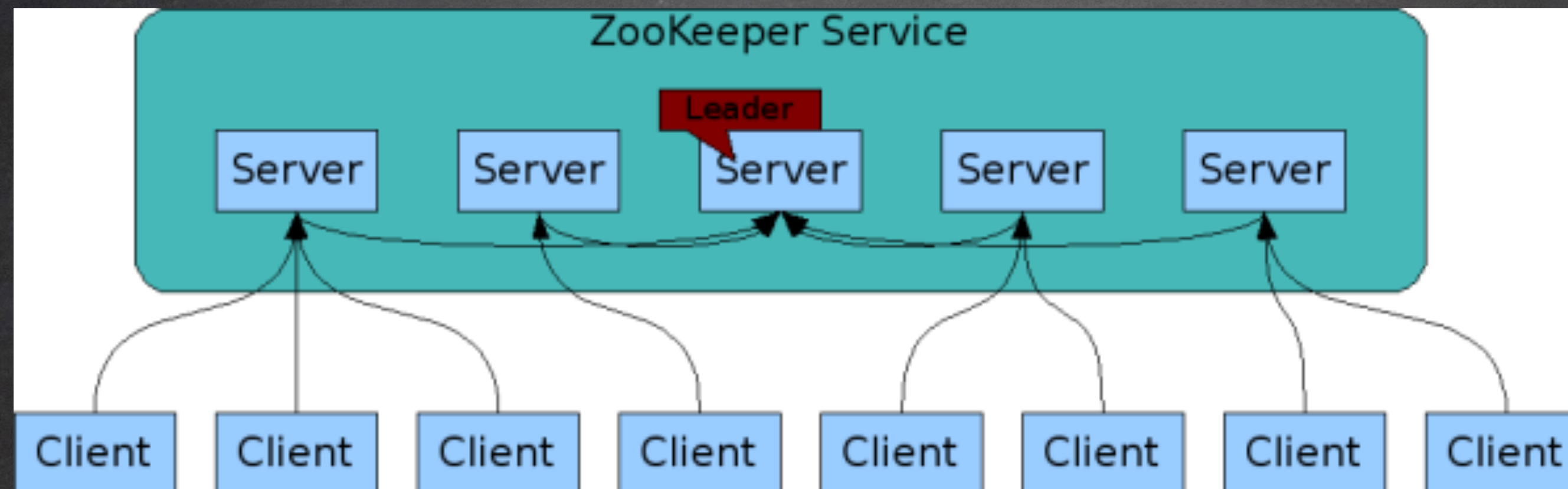
○ AGENT ON EVERY HOST



DEMO



# ZOOKEEPER



Apache  
Zookeeper



# ZOOKEEPER PRO'S

- CONSISTENT STORE

- STARTED LIFE AS A HADOOP SUB-PROJECT (2007?)

- MATURE, USED IN MANY COMPANIES

- USEFUL IF ZK IS ALREADY PART OF YOUR INFRASTRUCTURE

- EPHEMERAL NODES / PERSISTENT CONNECTIONS

- USES APACHE CURATOR AND ITS SERVICE DISCOVERY RECIPE



# ZOOKEEPER COM'S

- SCALE ISSUES

- OPS HEADACHES

- NEEDS MANAGEMENT PROCESS LIKE  
NETFLIX EXHIBITOR

- PERSISTENT CONNECTIONS



# HONORABLE MENTION

○ SPRING CLOUD CLOUDFOUNDRY

○ SPRING CLOUD LATTICE (DEPRECATED)

○ SPRING CLOUD ETCD (EXPERIMENTAL)



# QUESTIONS?

The Pivotal logo is displayed within a teal rectangular box. The word "Pivotal" is written in a white, sans-serif font, with a registered trademark symbol (®) at the end.

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