

The background of the slide is a faded, blue-tinted image of the Golden Gate Bridge in San Francisco. The bridge's iconic towers and suspension cables are visible, stretching across the frame from the left towards the right. The water of the bay is visible below the bridge deck.

Pivotal

Cloud Native Architectures

Spring Cloud Netflix & SteelToe

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Microservice: benefits



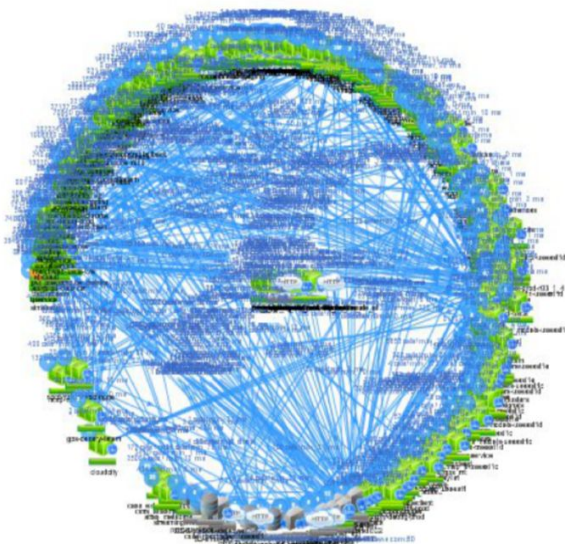
- Change cycles are decoupled: Enabling frequent deploys
- Allow for efficient and independent scaling
- Developers learn a smaller codebase faster
- Better coordination and scaling of development: Fewer developers in each code base
- Eliminate long-term commitment to technical stack

BUT ...

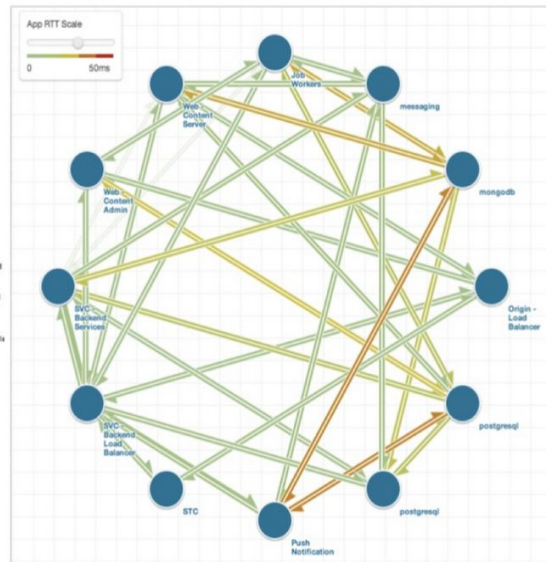
Challenges in a Distributed System

- Configuration management
- Registration and discovery
- Routing and load balancing
- Fault tolerance and isolation
- Aggregation and transformation
- Monitoring and distributed tracing
- Process management

Microservice pioneers



Netflix



Gilt Groupe (12 of 450)

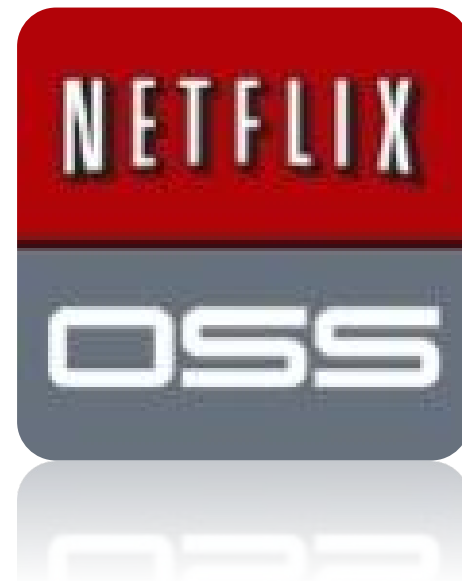


Twitter

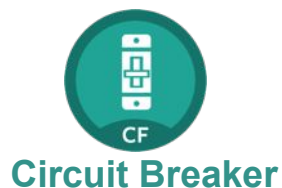
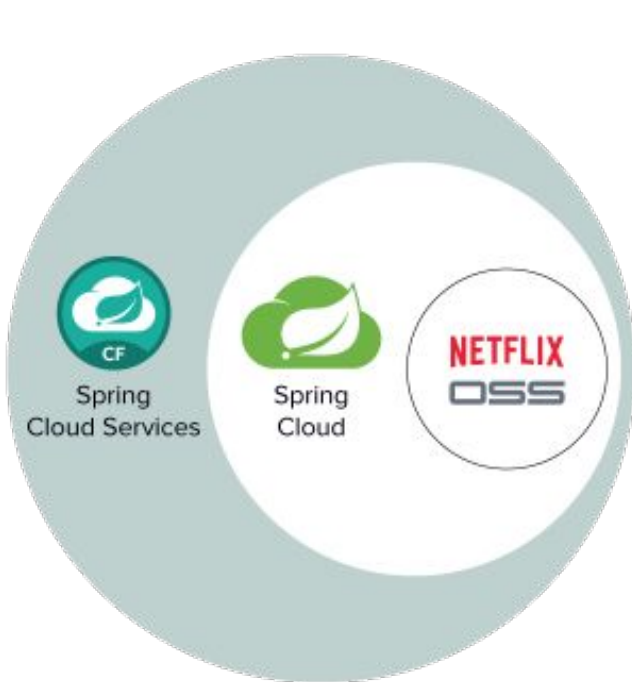


Netflix Cloud Libraries

- Netflix needed to be faster to win / disrupt
- Pioneer and vocal proponent of microservices – the key to their speed and success
- Config Server, Eureka, Hystrix, Ribbon, Zuul ...
- Netflix OSS supplies parts, but it's not a solution



Spring Cloud - Spring Cloud Services



- Operationalizes Spring Cloud in your deployment environment
- Provisions highly available infrastructure (messaging, databases) to support Spring Cloud deployments
- Adds key security features, including OAuth support, required for enterprise deployment of Spring Cloud

Spring Cloud Netflix for .NET: Project STEELTOE



<http://steeltoe.io/>



Enterprise-ready .NET toolkit for common microservices patterns

Breaking the Monolith

- Project Steeltoe contains best of breed components around configuration, service discovery, and soon, distributed tracing from NetflixOSS and Spring Cloud Services.
- These can be used to evolve an infrastructure from a monolithic application to a set of microservices.

Write Once, Scale Anywhere

- Project Steeltoe is built to work especially well with platforms like Pivotal Cloud Foundry. It also integrates seamlessly with Java microservices written with Spring Cloud, allowing for true polygot architecture.

What would be better? The future!

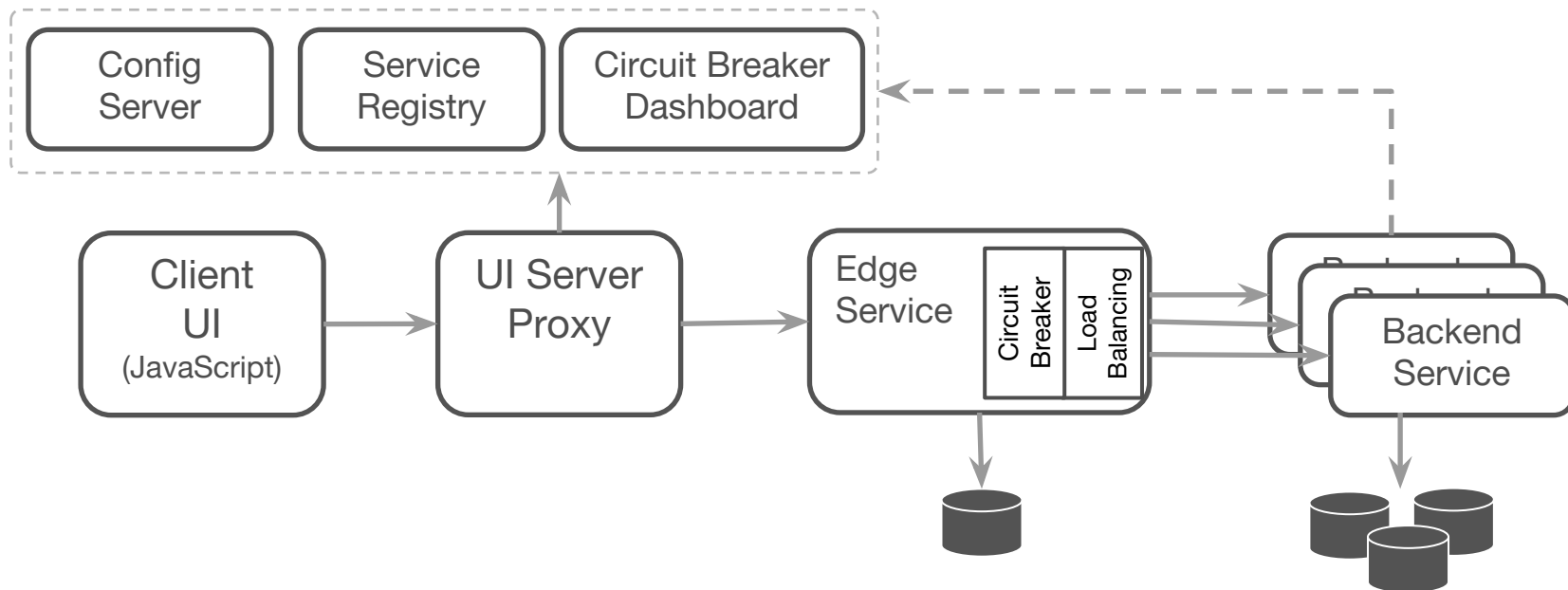
Steeltoe

- Spring Cloud clients for ASP.NET and ASP.NET Core
 - Spring Cloud Config Server
 - Service Discovery with Eureka
 - Spring Cloud Connectors
 - Works with OSS or Spring Cloud Services
 - Open Source!
- Spring Cloud Connectors
 - SQL Server + EF6 (Windows / Greenhouse)
 - MySQL
 - Redis
 - RabbitMQ
 - PostgreSQL

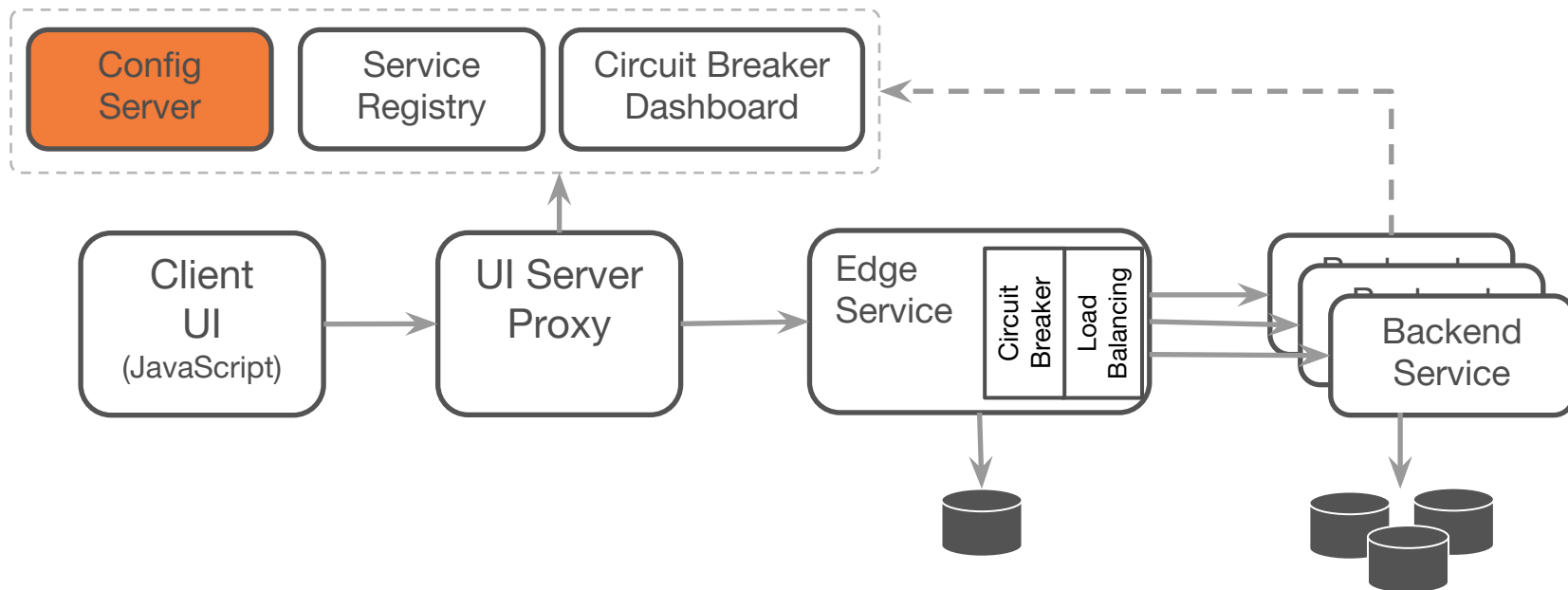


Steeltoe RC1 available 7-October!

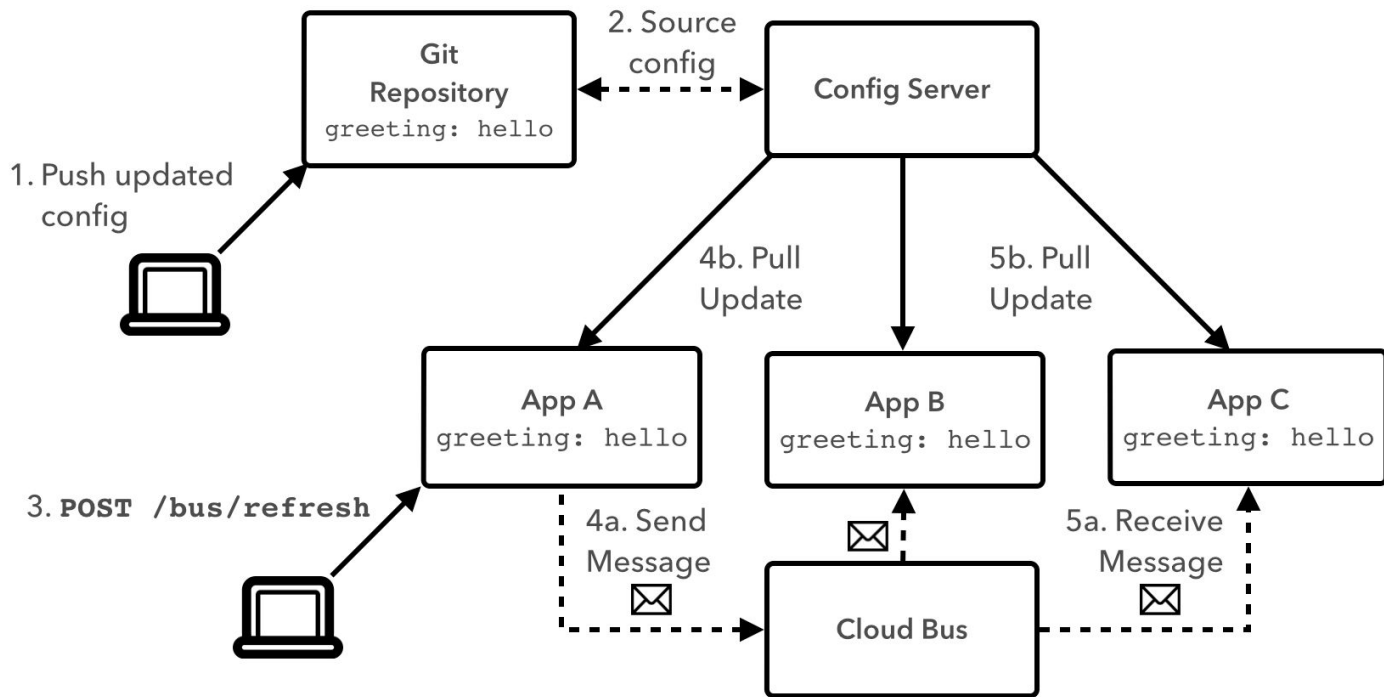
Design Patterns & Automation to the Rescue!



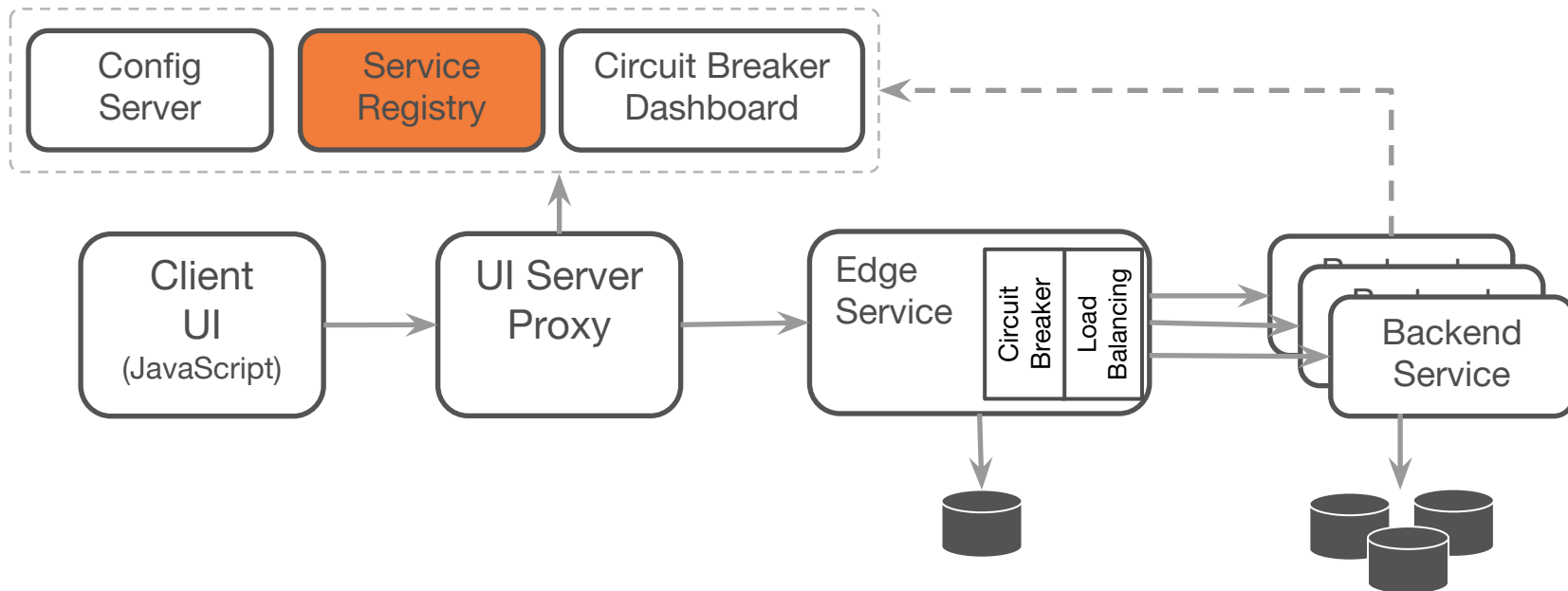
Configuration Management



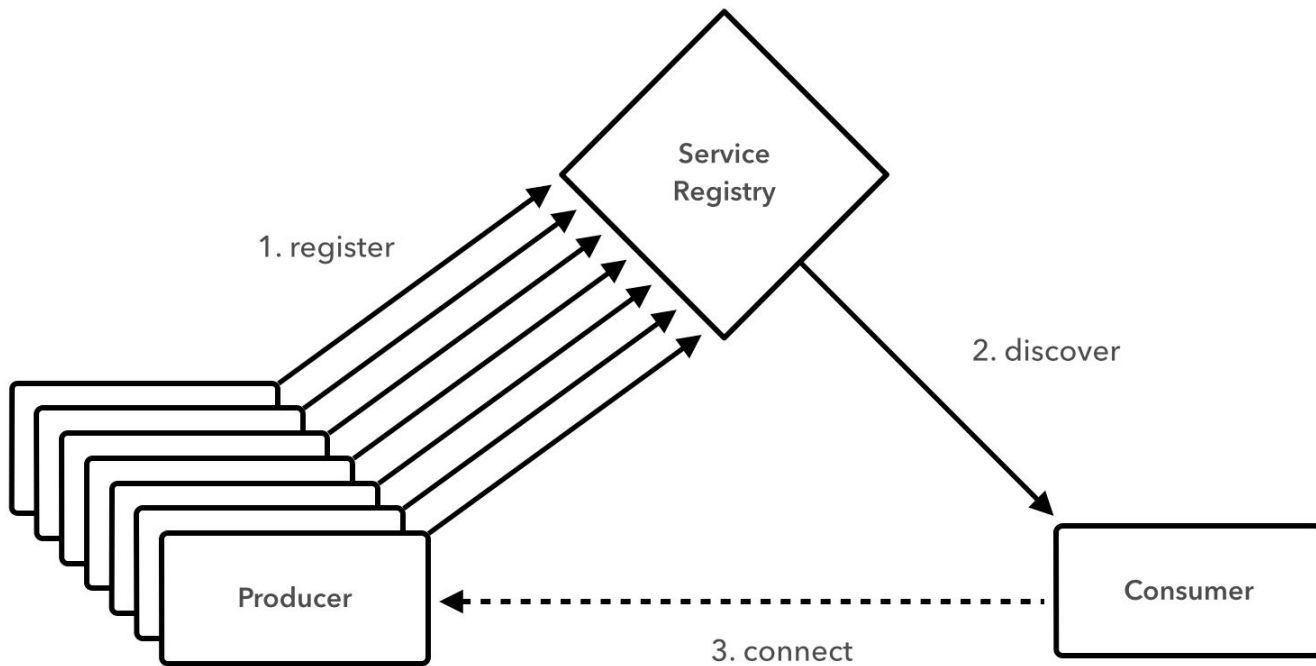
Configuration Server



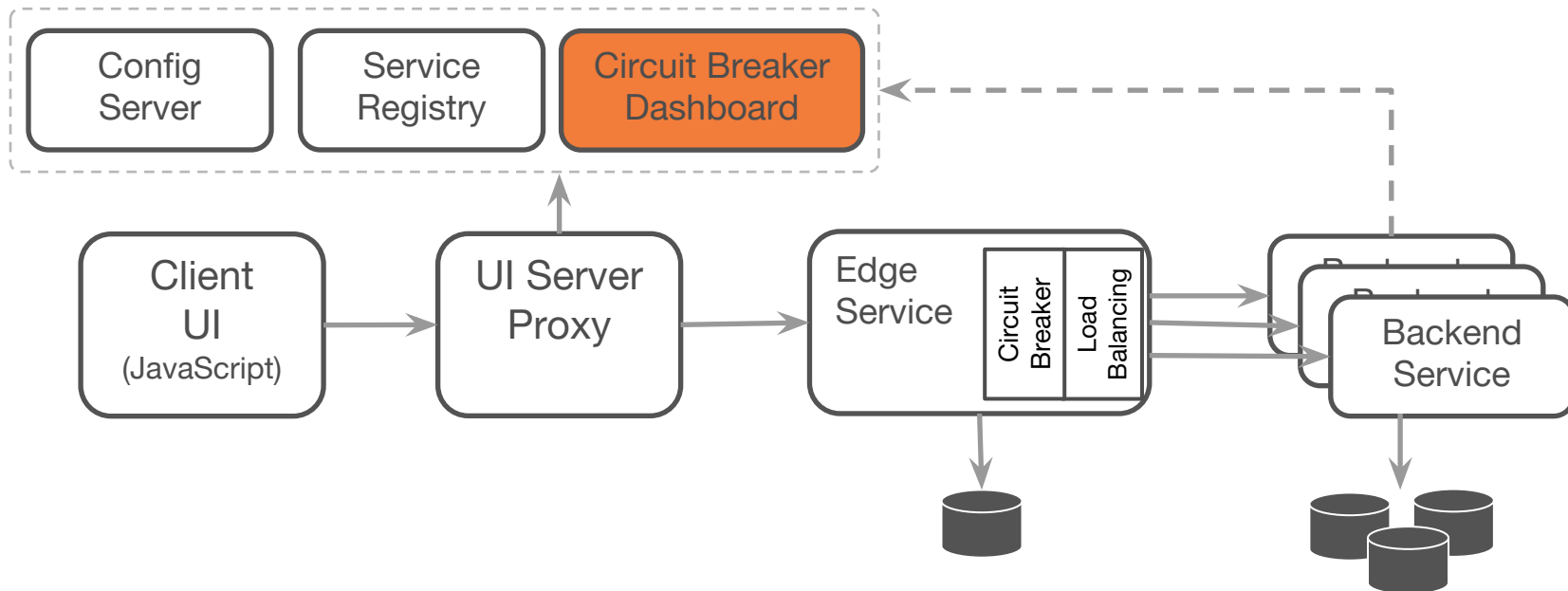
Registration and Discovery



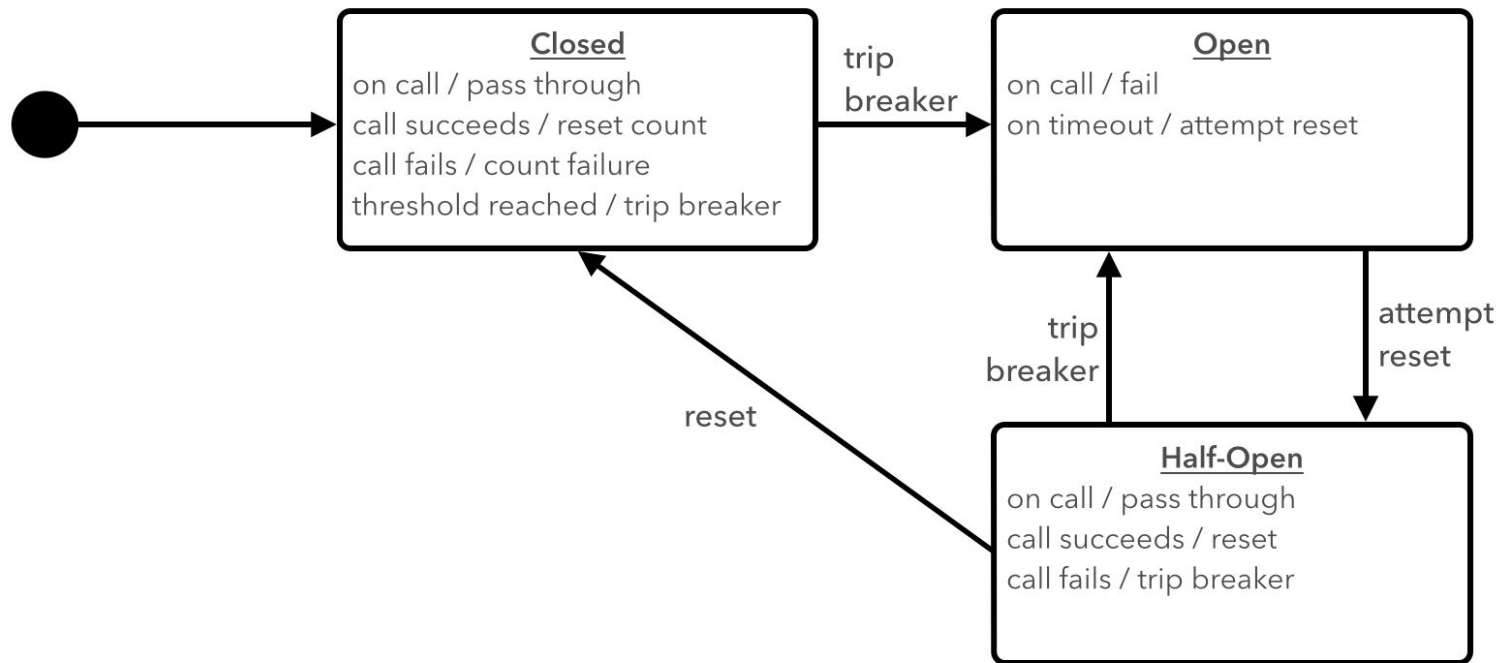
Registration and Discovery Server




Fault Tolerance and Isolation



Circuit Breaker





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Thank You!

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