



Spring Boot Microservices

Beginner to Guru

Developer Oriented Gateways



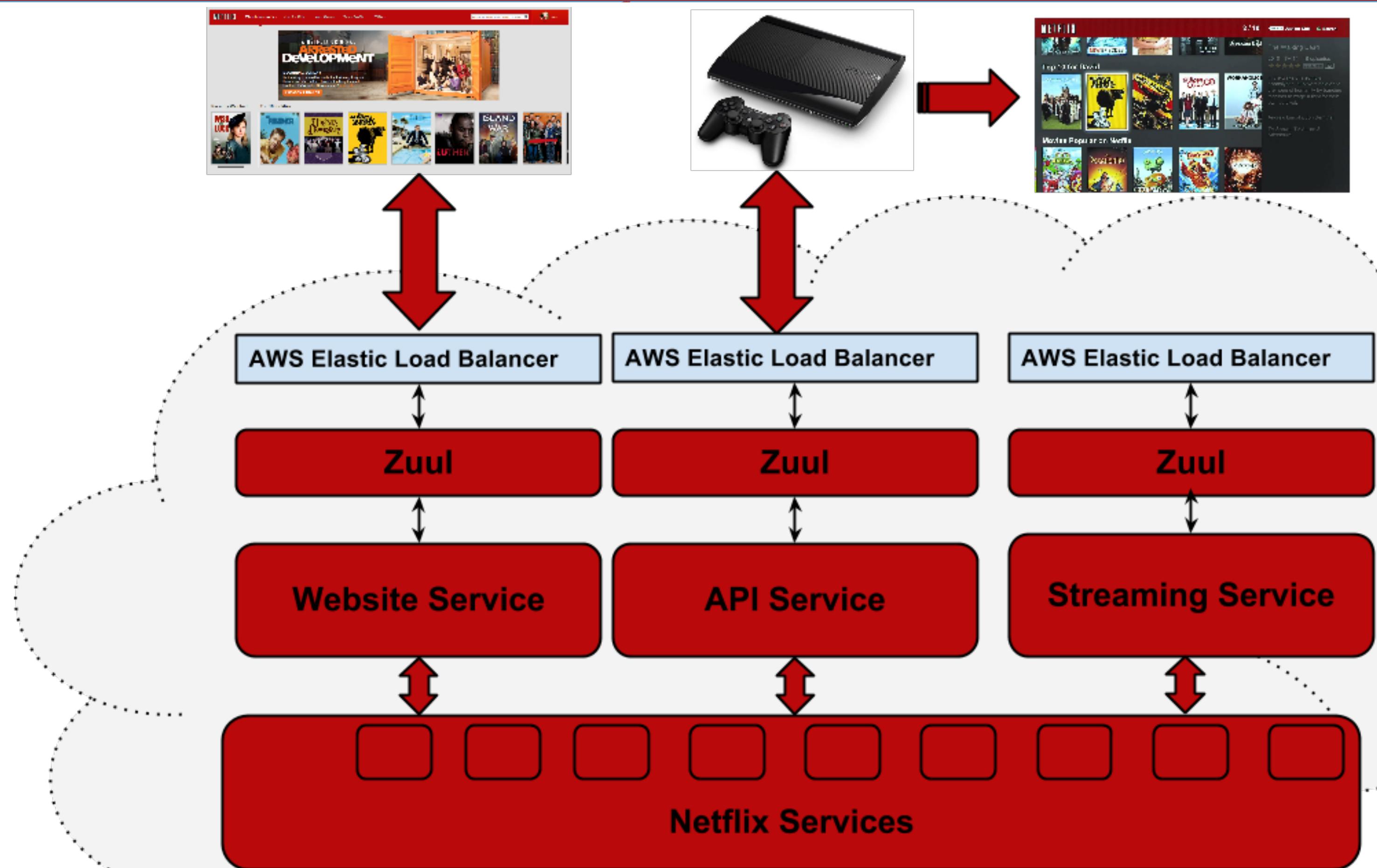
Zuul - Ghostbuster's Gatekeeper



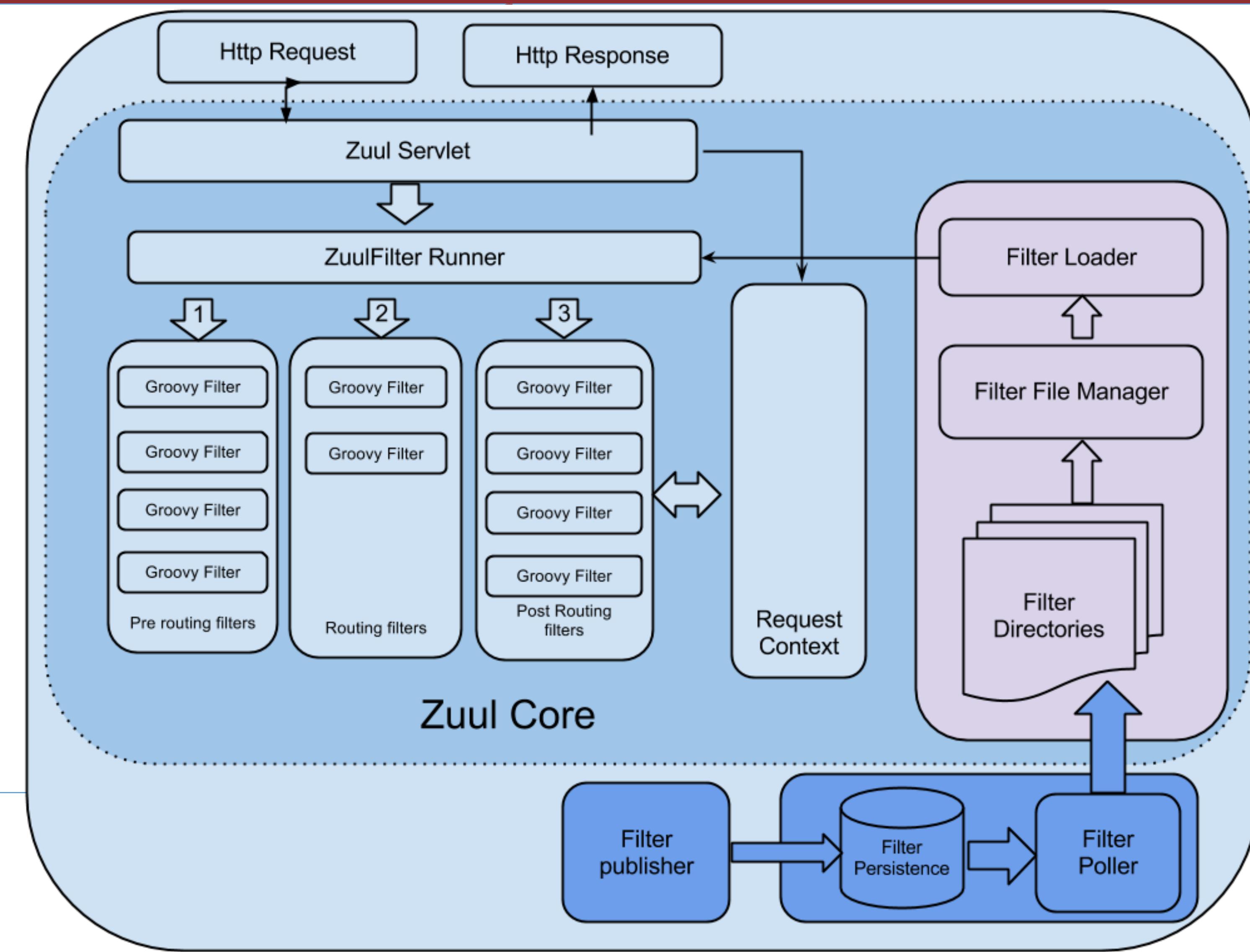


History - Developer Oriented Gateways

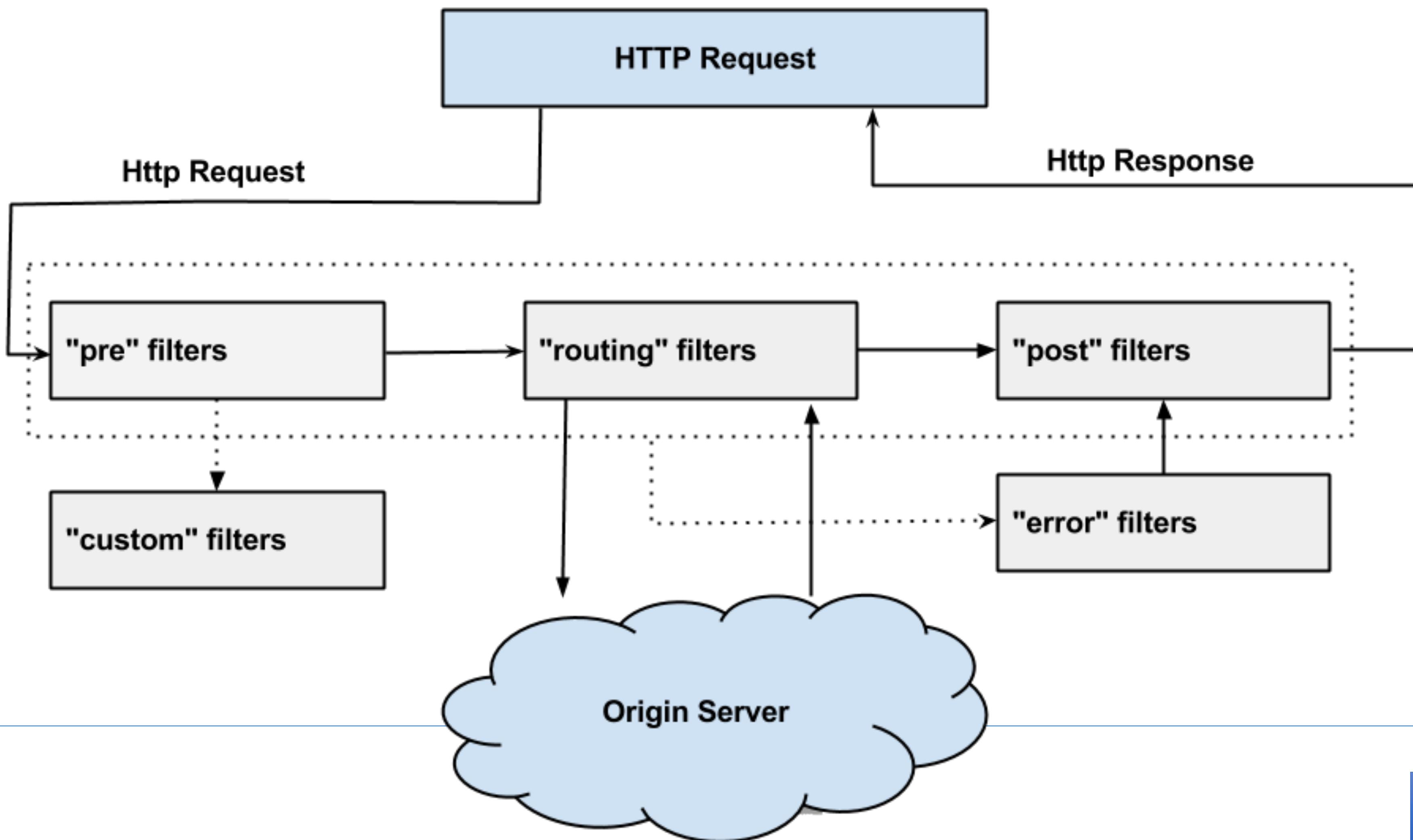
- Netflix on June 12th, 2013 announced it was open sourcing Zuul
 - “Edge Service in the Cloud”
 - 1,000 different client types
 - 50,000+ requests per second



Source Netflix



Source Netflix

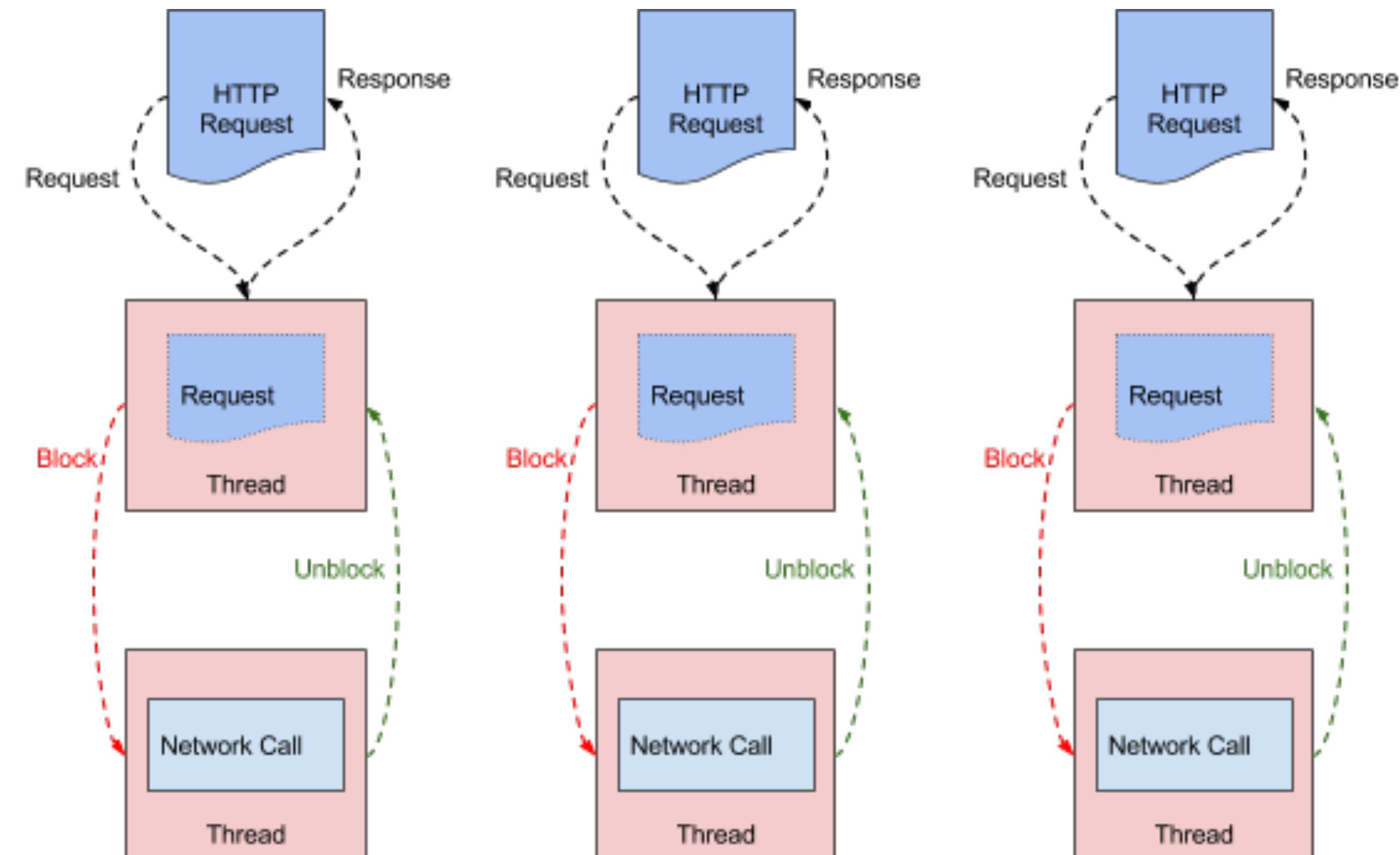


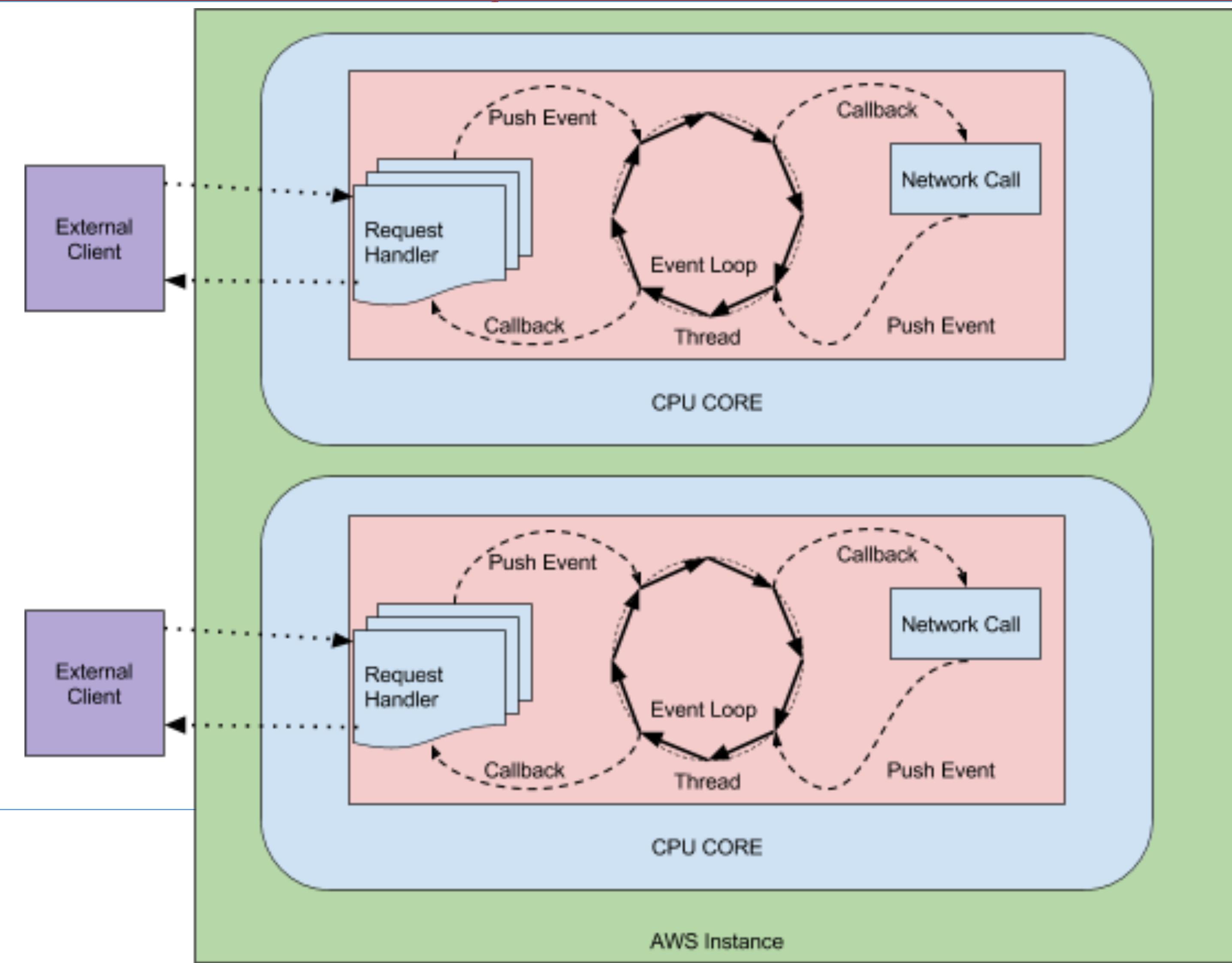
Source Netflix



Problems with Zuul 1

- Used Java's HTTP Servlet API
 - Blocking - Inefficient
 - Did not support HTTP 2
- September 2016 Netflix moved to Zuul 2
 - Non-Blocking - much more efficient
 - Support for HTTP 2
 - Announced they planned to Open Source Zuul 2





Source Netflix



Spring Cloud Gateway

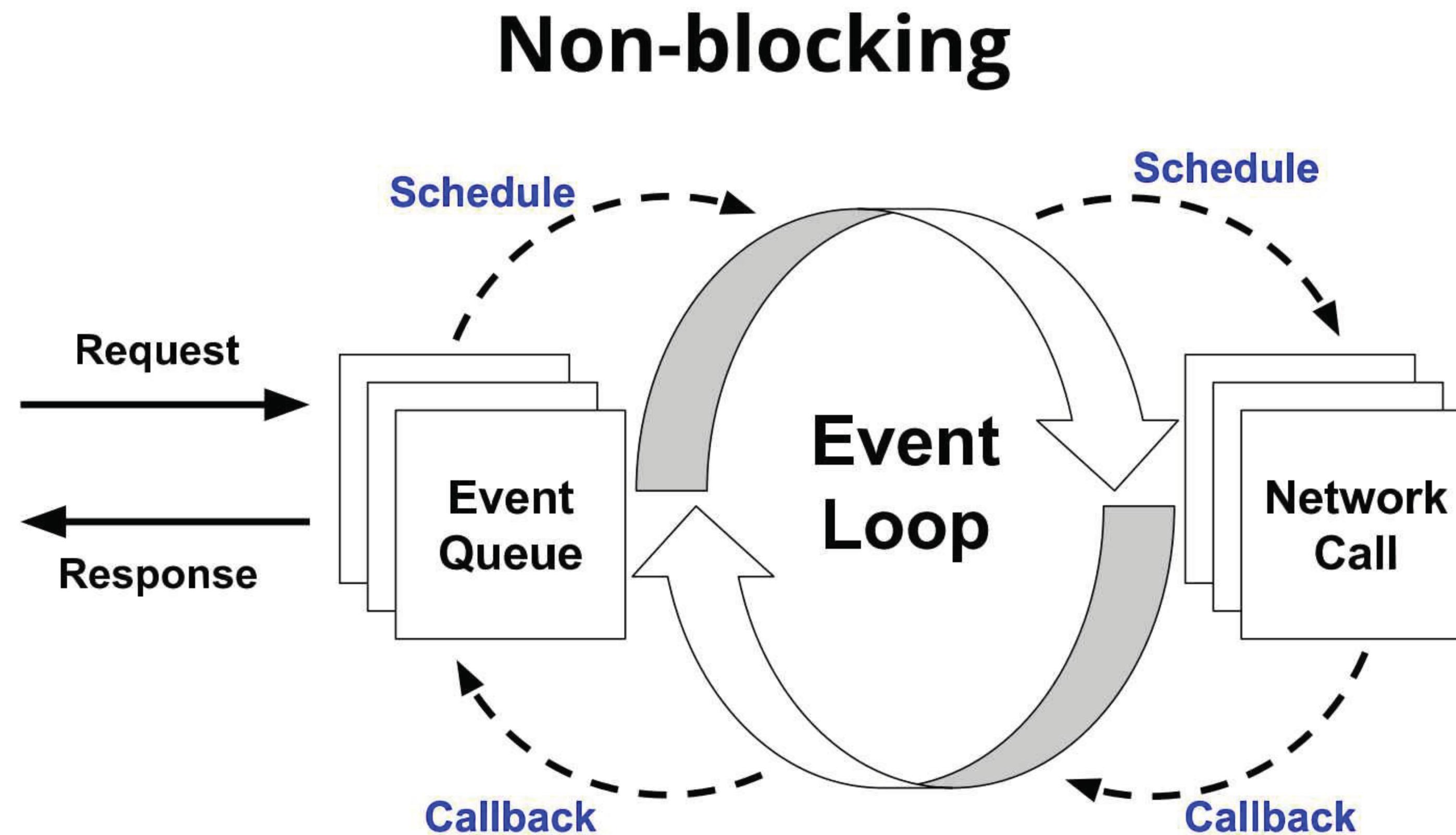
- In 2017, the Spring Cloud team decided to not migrate Spring Cloud to Zuul 2
- Direction of Zuul 2 was unclear at the time
- While Netflix had open sourced Zuul 1, some components were still closed source
- Also when Spring 5 had recently gone GA, which included reactive support
- First milestone release in August, 2017
- 1.0 GA Release in November, 2017



Spring Cloud Gateway

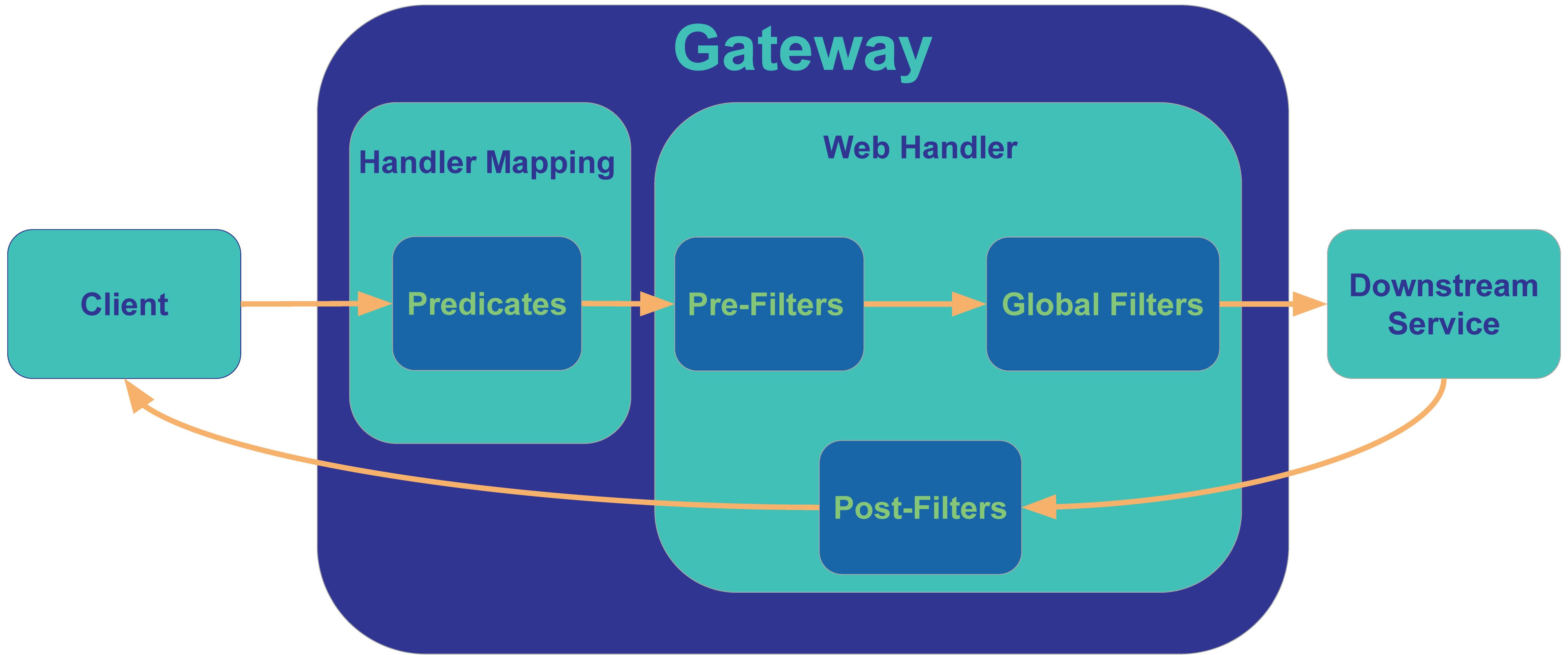
- Features
 - Java 8+, Spring Framework 5, Spring Boot 2, Project Reactor
 - Non-blocking, HTTP 2 Support, Netty
 - Dynamic Routing
 - Route Mapping on HTTP Request attributes
 - Filters for HTTP Request and Response

Reactive Gateway



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Gateway Flow





Summary

- Spring Cloud Originally used Zuul 1
- Spring Cloud Gateway developed as a replacement to Zuul 1
- Zuul and Spring Cloud Gateway are not the only developer oriented gateways
- In this course we will focus on using Spring Cloud Gateway

