
성능 테스트

Locust 셋업

부하테스트 도구

Apache Jmeter

SoapUI

Grinder (NGrinder)

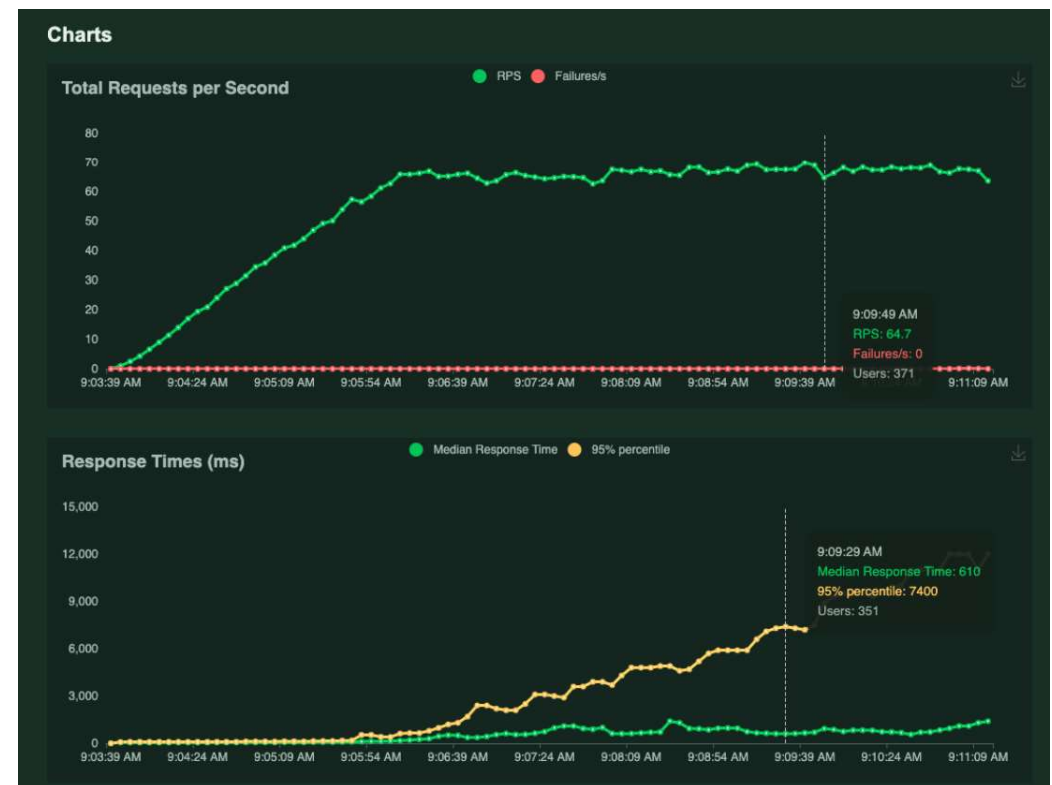
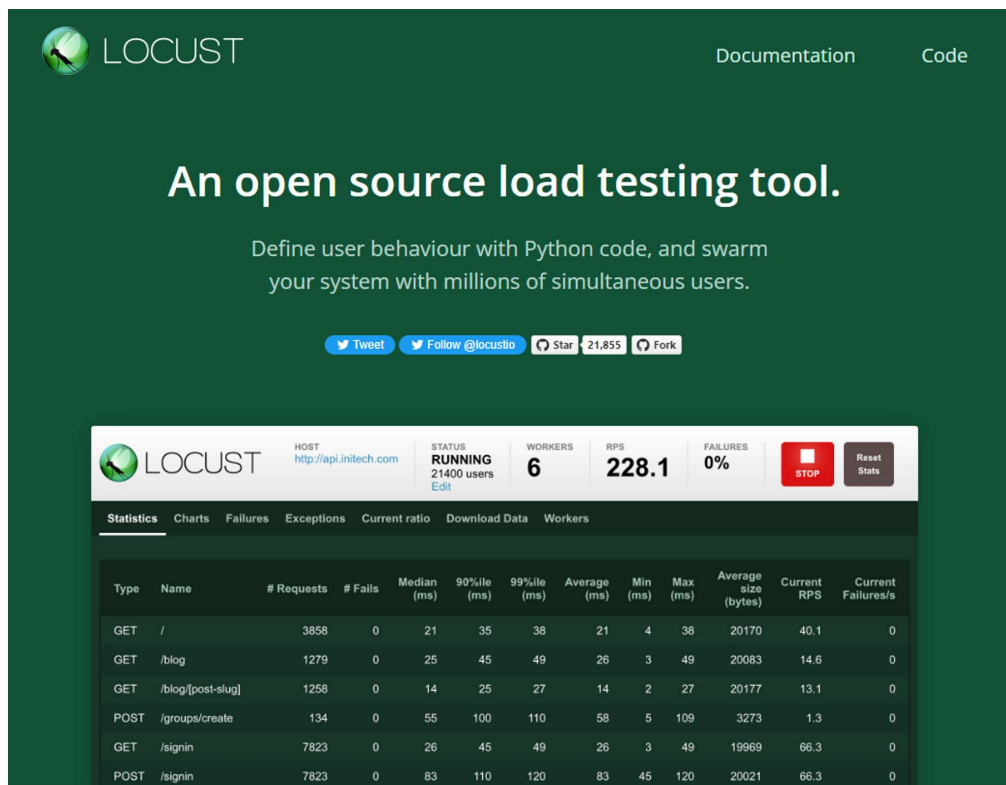
Roadrunner (상용)

Grafana K6

Locust

Locust

<https://locust.io>



Locust

- python 기반 부하 테스터
- 사용법이 간단
- 모니터링 web UI 제공
- worker cluster 구성을 통한 대규모 분산 부하테스트 가능
 - K8S 구성이 매우 간단

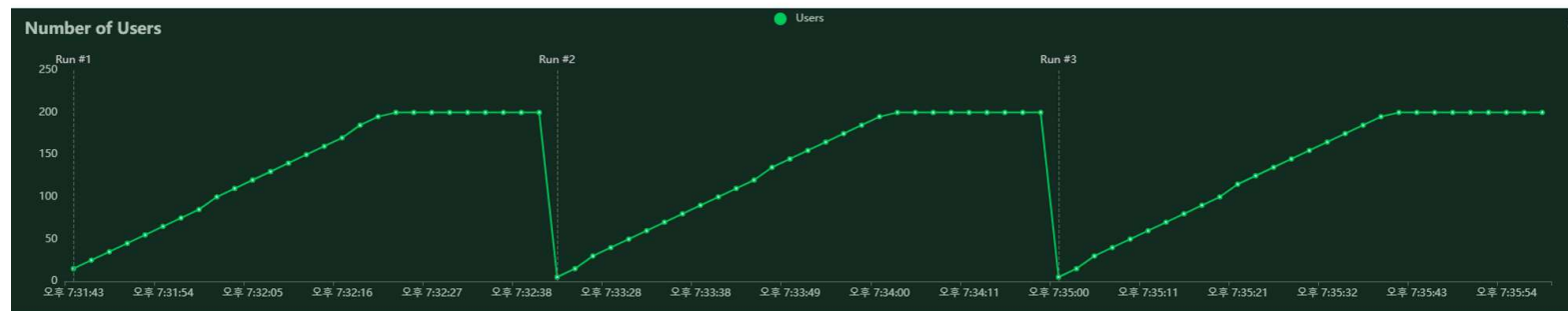
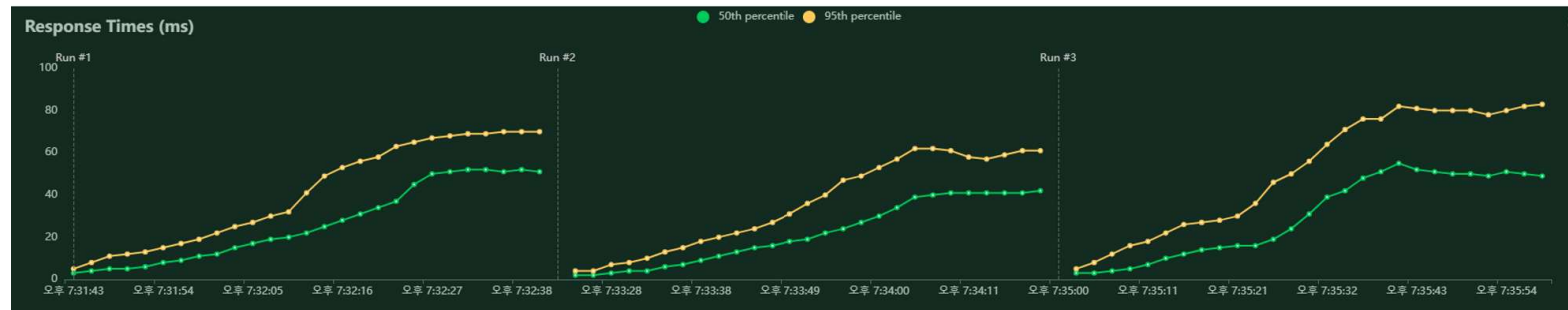
비동기 서비스 부하 테스트

Spring MVC / Webflux 성능 비교 #1

시나리오 1

- 단건조회
 - /article/{articleId}
- 테스트 조건
 - users : 200 users
 - spawn rate : 5 users / sec
 - run time : 1m

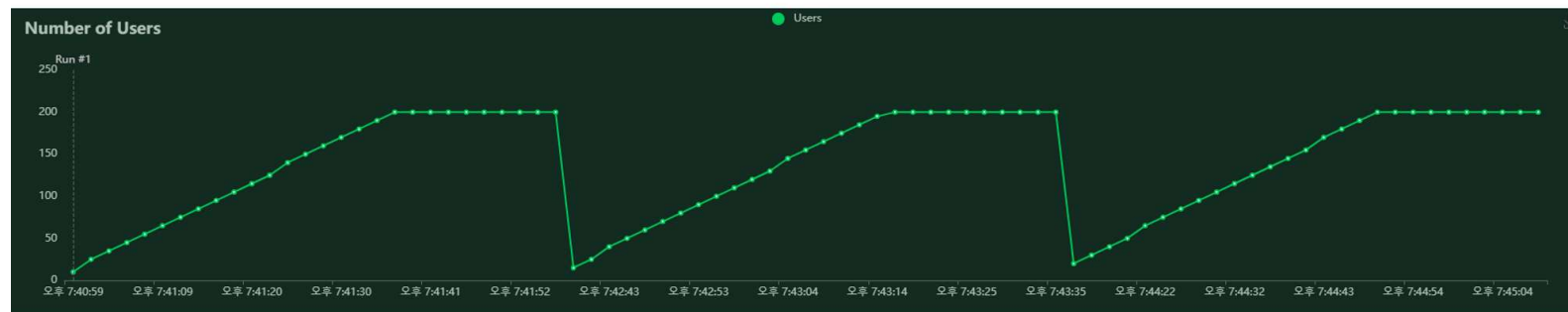
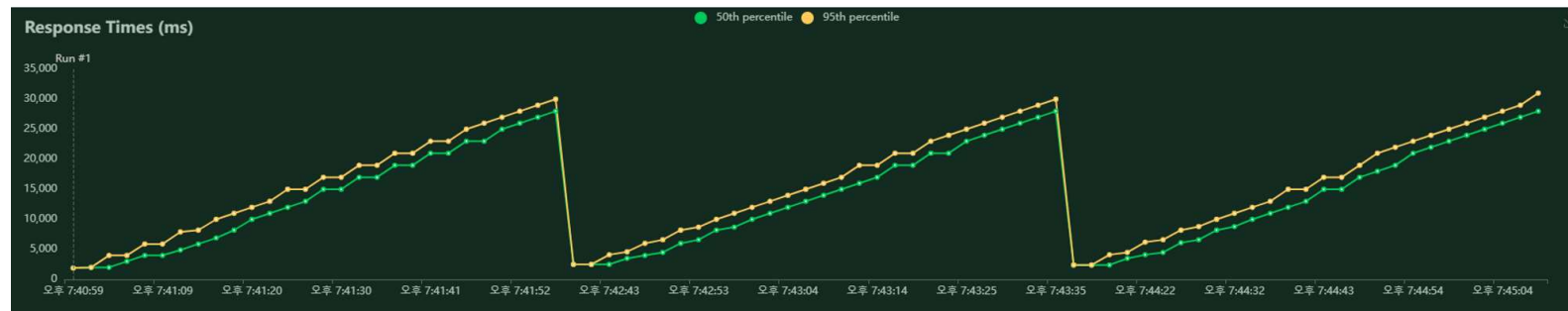
테스트 결과 1



시나리오 2

- 다건조회
 - /article/all?title=matched
- 테스트 조건
 - users : 200
 - spawn rate : 5 users / sec
 - run time : 1m

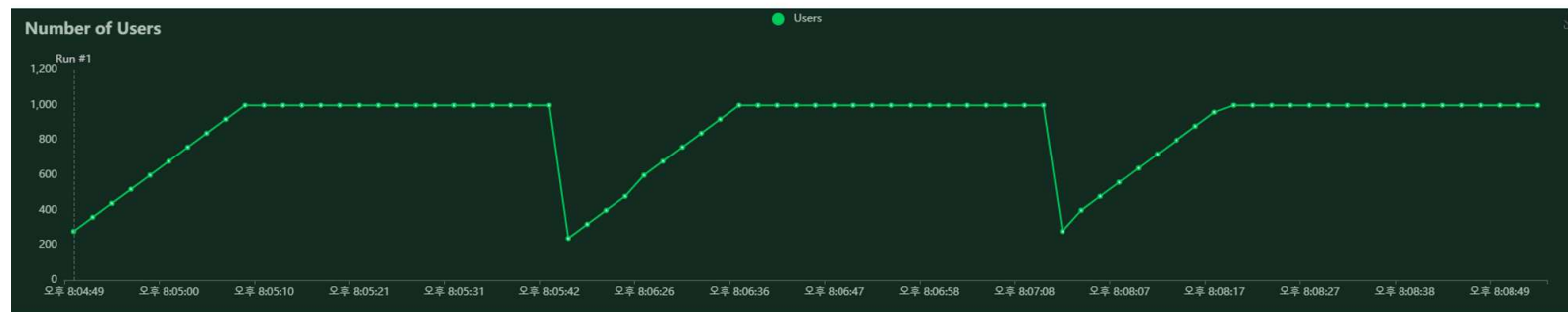
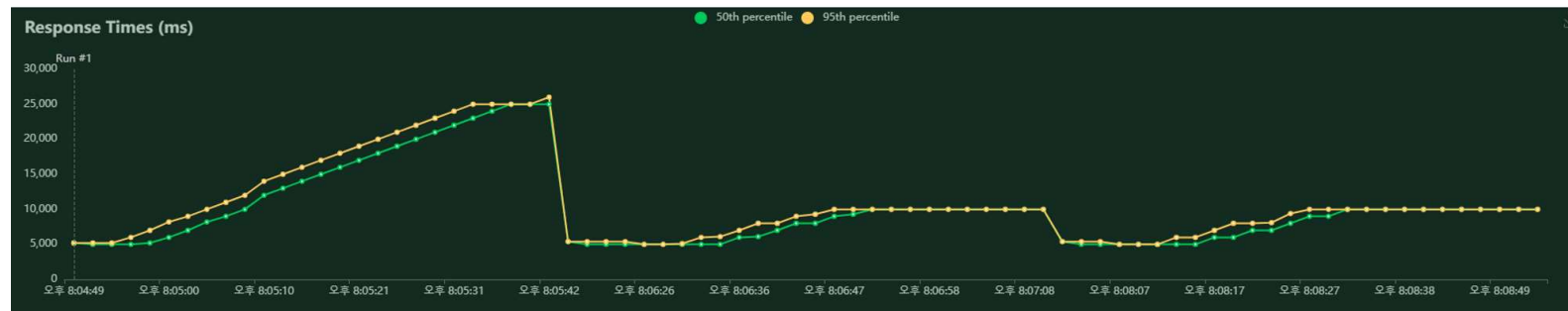
테스트 결과 2



시나리오 3

- 지연조회
 - /stress/delay
- 테스트 조건
 - users : 1000
 - spawn rate : 40 users / sec
 - run time : 1m

테스트 결과 3

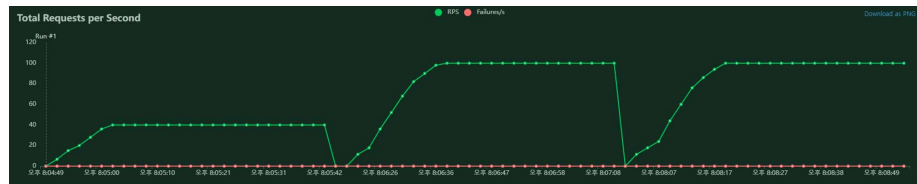


비동기 서비스 부하 테스트

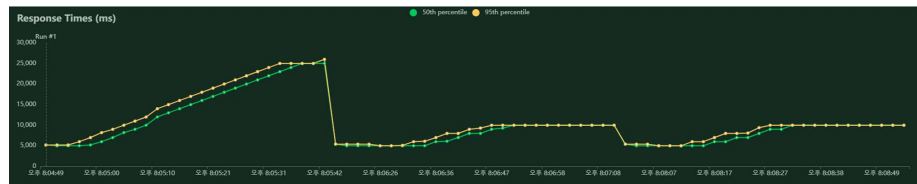
Spring MVC / Webflux 성능 비교 #2

가설

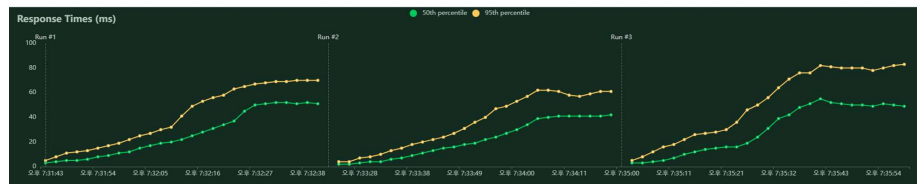
RDB 호출시 Webflux와 MVC간 성능은 비슷하다 ??



지연호출
sleep



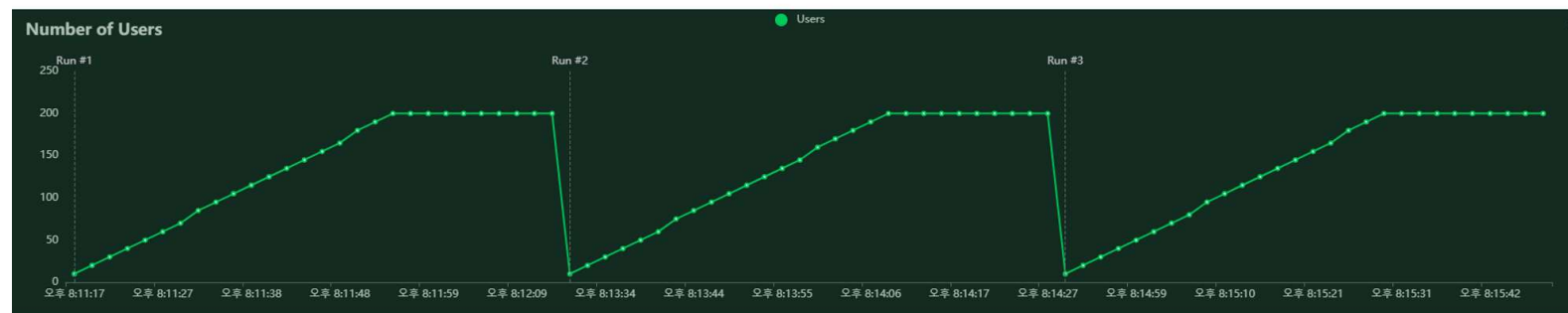
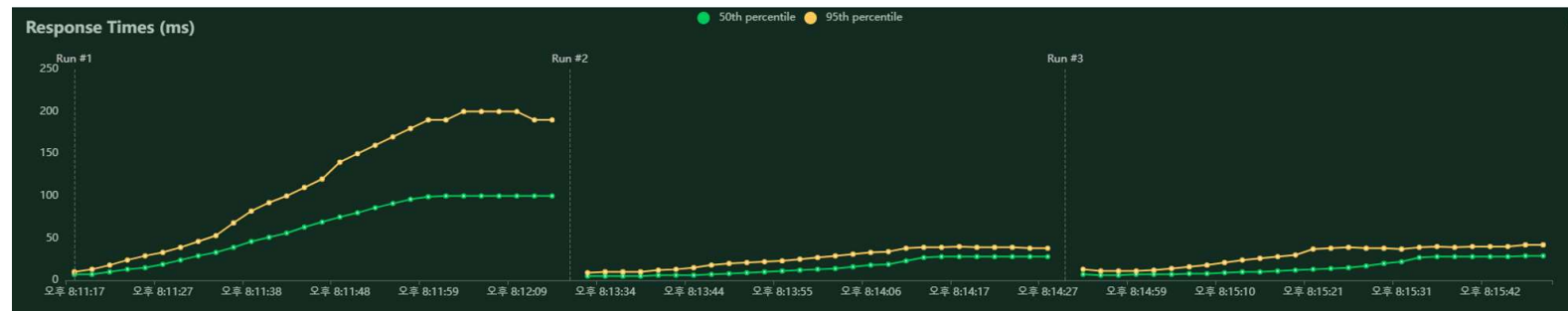
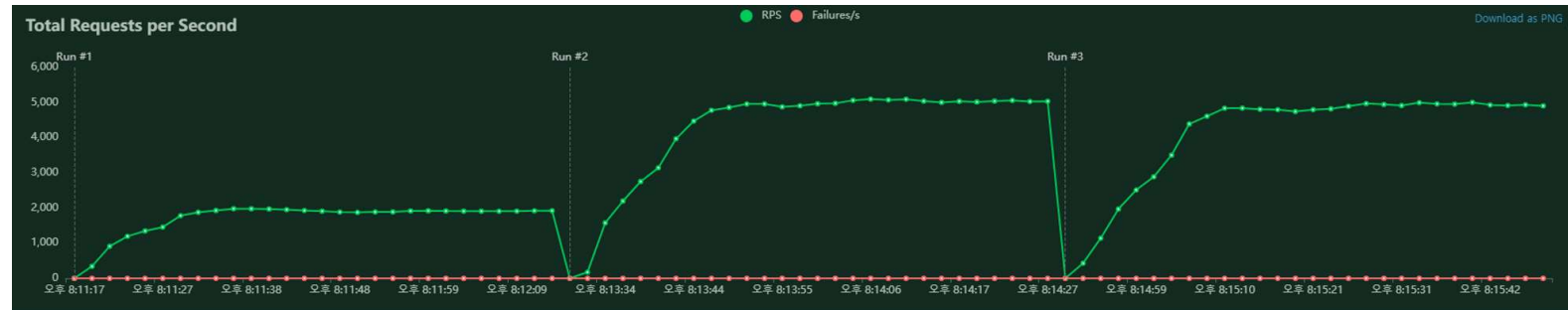
RDB 호출
Article 단건조회



시나리오 4

- 단건조회
 - /article/{articleId}
- 테스트 조건
 - users : 200 users
 - spawn rate : 5 users / sec
 - run time : 1m

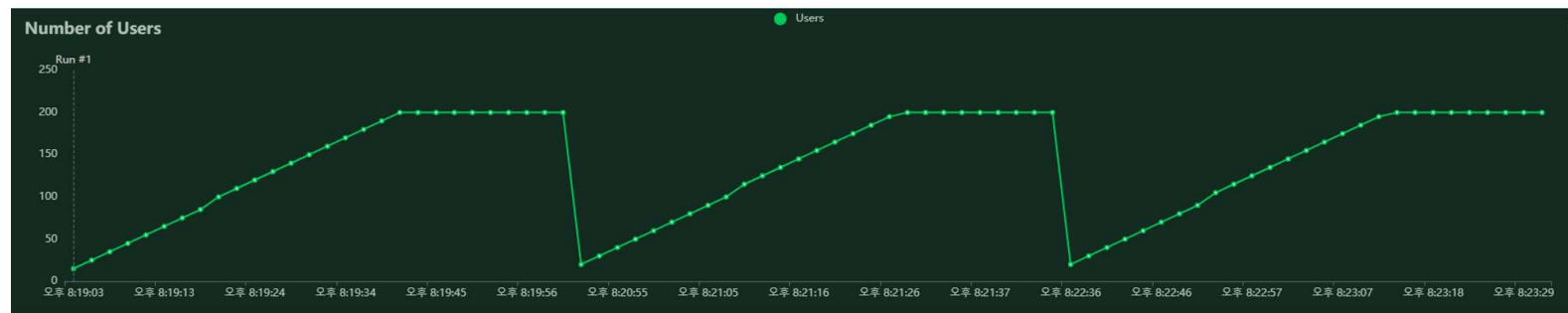
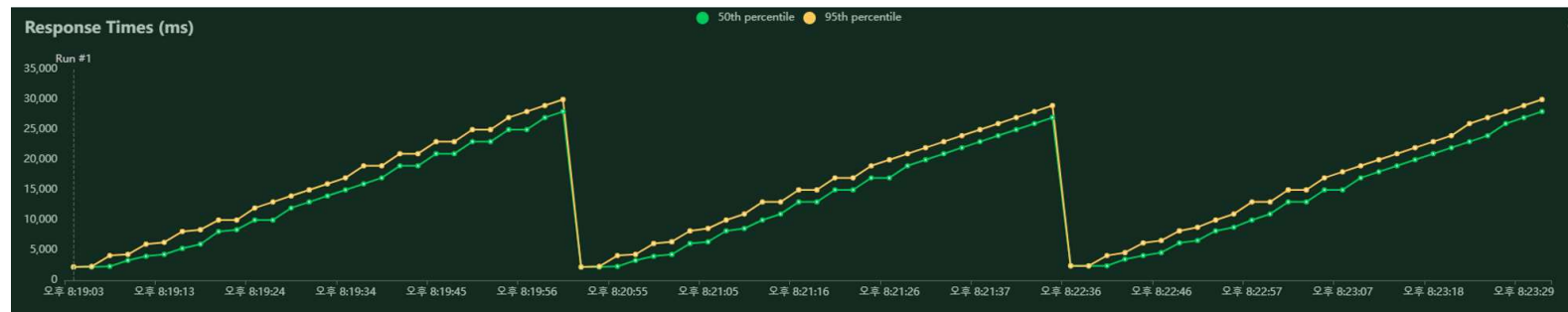
테스트 결과 4



시나리오 5

- 다건조회
 - /article/all?title=matched
- 테스트 조건
 - users : 200
 - spawn rate : 5 users / sec
 - run time : 1m

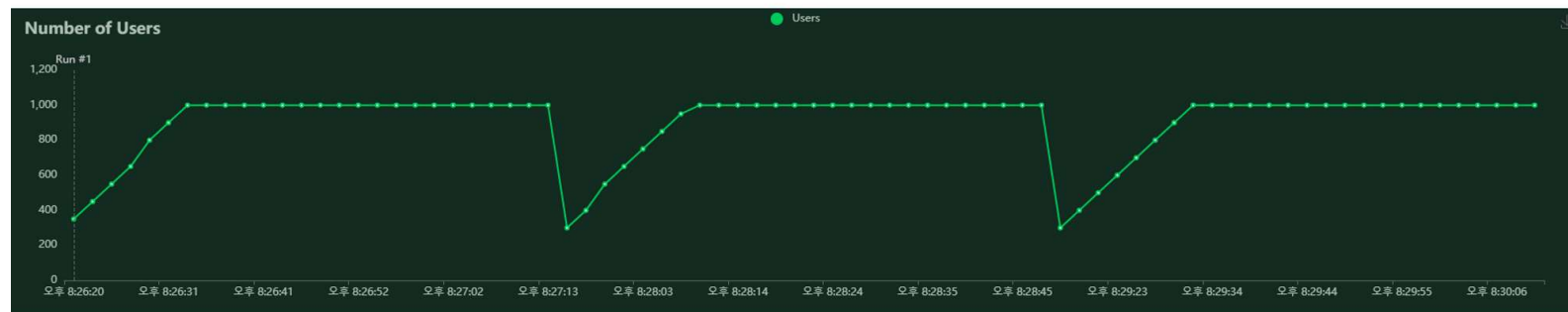
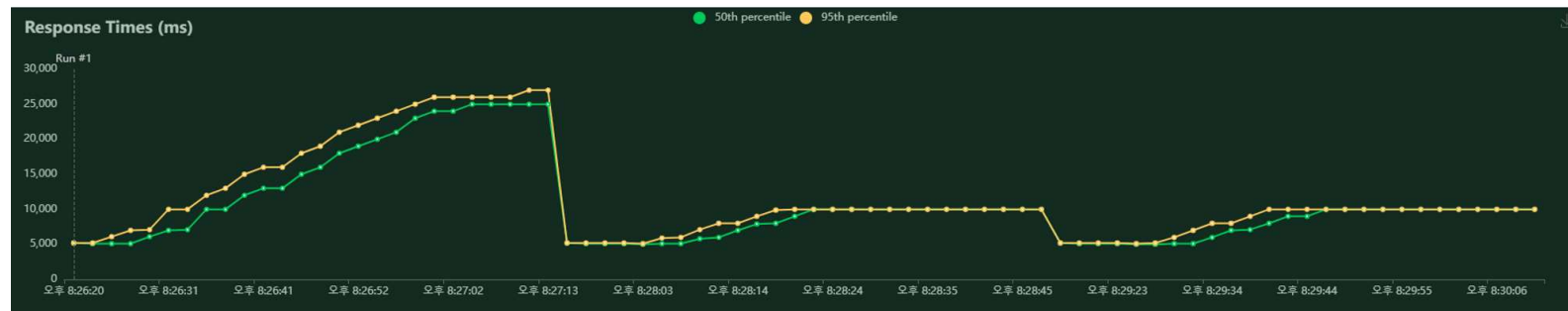
테스트 결과 5



시나리오 6

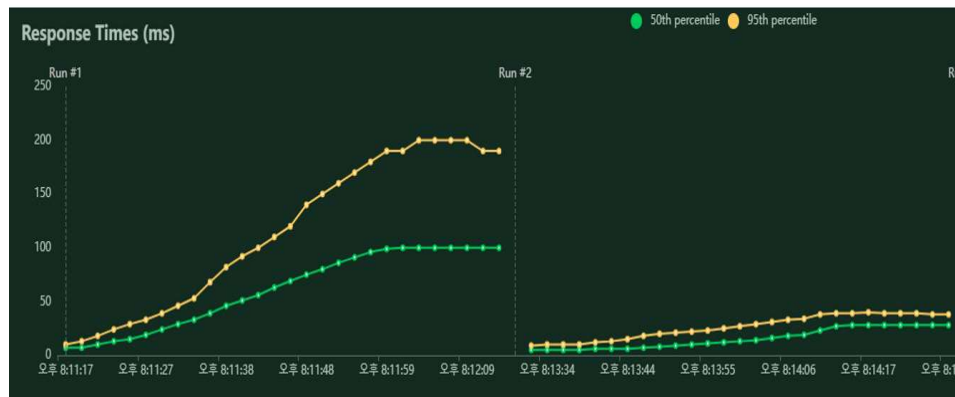
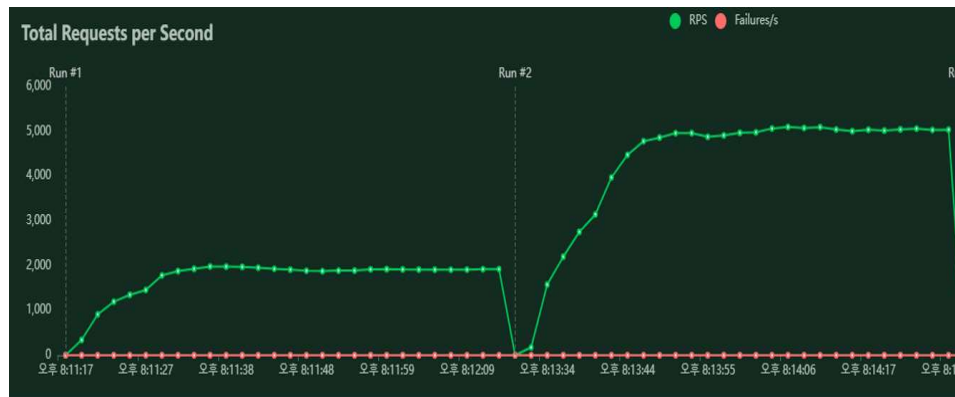
- 지연조회
 - /stress/delay
- 테스트 조건
 - users : 1000
 - spawn rate : 40 users / sec
 - run time : 1m

테스트 결과 6

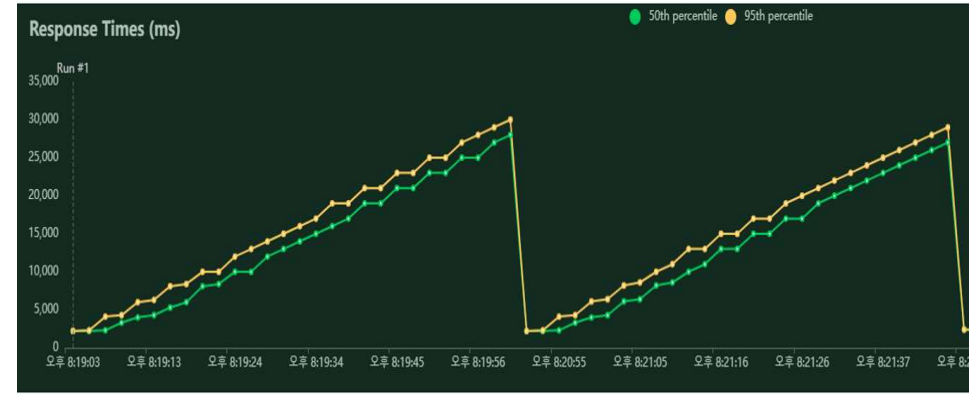


실제 상황

단건조회

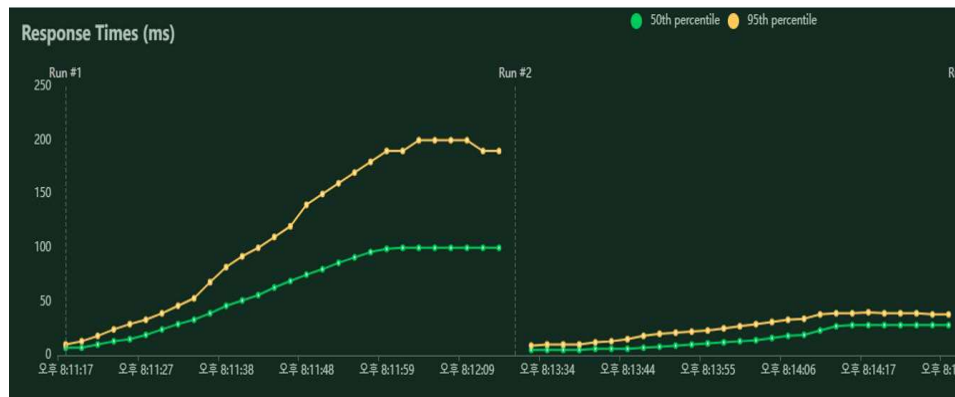
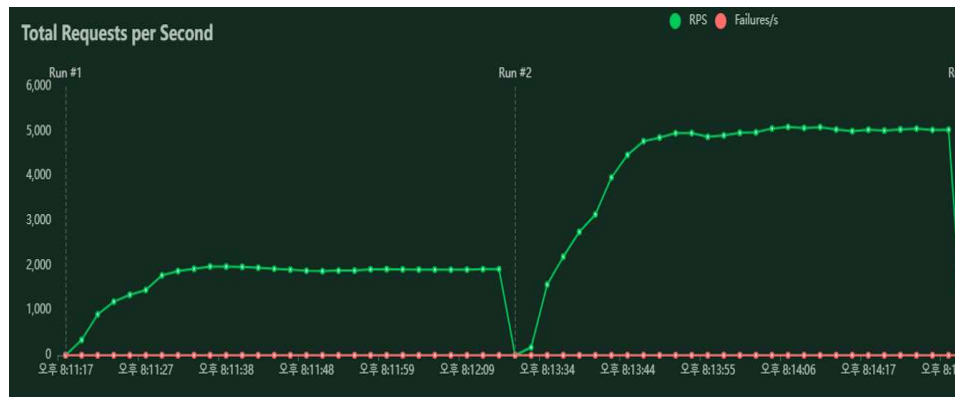


다건조회

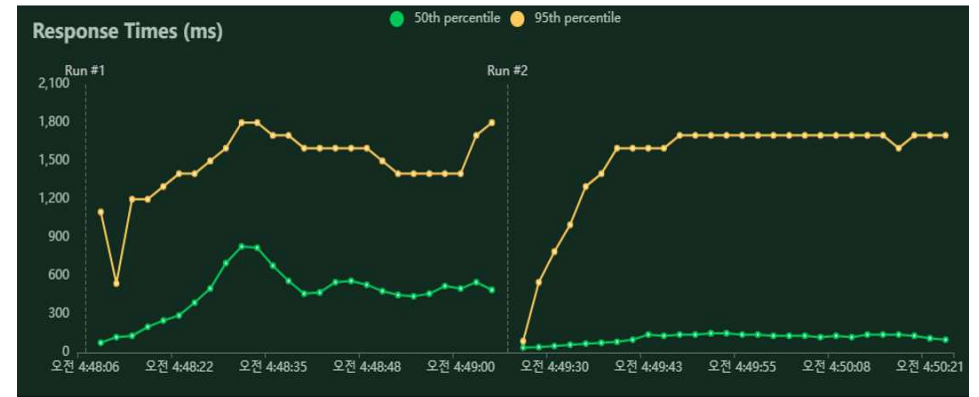


요약

단건조회



단건조회 + 다건조회



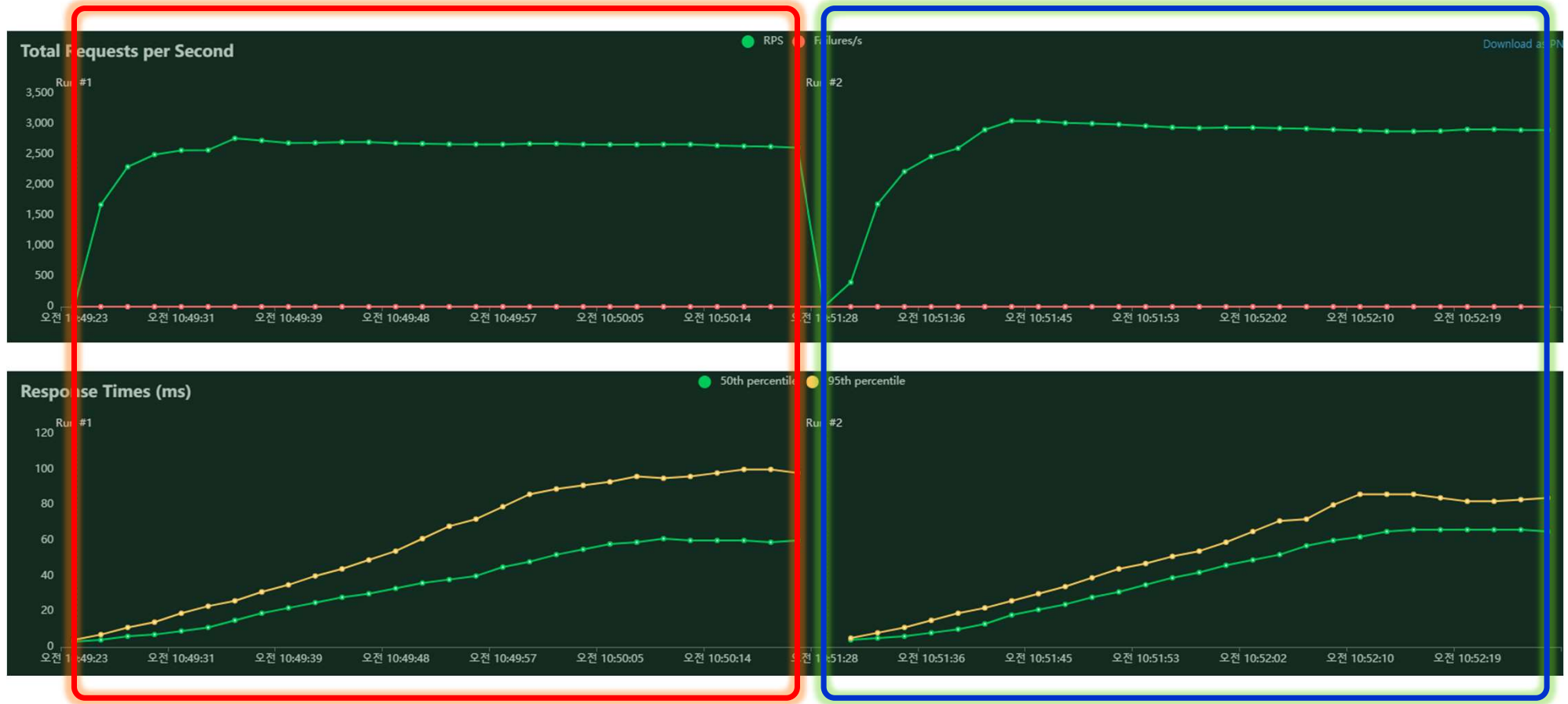
비동기 서비스 부하 테스트

Virtual Thread 성능 비교

Virtual Thread 성능 비교 (단건)

virtual-thread : **on**

virtual-thread : **off**



Virtual Thread 성능 비교 (단건 + 다건)

virtual-thread : **on**

virtual-thread : **off**

