

Folio Performance Test Report

Contents

1.Goal.....	2
2.Environment.....	2
3.Test Plan.....	2
4.Test APIs.....	3
5.Conclusion.....	3

1. Goal

In order to verify the performance of folio system, select the book lending interface, compare the input and pressure test results of using native OPAKI and using okapiAdapter to forward okapi requests.

为测试FOLIO系统性能，选择图书借出接口，对比原有okapi模式和新建一个okapiAdapter用于转发okapi的请求测试结果，验证优化后系统的性能表现。

2. Environment

Test Tool

Name	Version	Description
Jmeter	5.0	Performance test tool

Environments of the two tests (differences marked in red):

	Native OKAPI	Use okapiAdapter to forward requests
Deployment information	2 application servers, 1 database server 2台应用+1台数据库测试	1 application servers, 1 database server 1台应用+1台数据库测试
Network 网络环境	LAN 100m (shared) 内网环境，带宽100M（与其他环境共用）	LAN 100m (shared) 内网环境，带宽100M（与其他环境共用）
OS 服务器版本	ubuntu18.04 64 digits	ubuntu18.04 64 digits
Server Setup 服务器配置	2 ECS 8 cores 16G 2台ECS 8c16g	1 ECS 8 cores 32G 1台8C32G
D a t a b a s e server 数据库信息	1 server 8 cores 6G 1台 8C16G	1 server 8 cores 6G 1台8C16G
D a t a b a s e version 数据库版本	pgsql 12.2	pgsql 12.2

3. Test Plan

Compare the performance in the scenarios of using and not using okapiAdapter.
按照优化前设置的并发数和并发时间，执行测试，记录并对比测试结果。

4. Test APIs

Use case: book lending
压测业务场景：图书借阅

Name 业务名称	URL 接口地址	POST 请求类型	Contention Ratio 并发比例
Item checkout 图书借阅	/circulation/check-out-by-barcode	Post	1

5. Results

部分测试结果对比：

With okapi Adapter? 是否优化	concurrency 压测模式	Number of servers 服务器量	Total requests 总线程数	Requests handled per second 吞吐量	90%Line	95%Line	Median	Error%	Running time 执行时间	
No 否	20 固定并发 20	2	400	11.7/s	3307	3386	1316	0.25%	34S	
		2	400	12.6/s	3007	3064	492	0.25%	31S	
		1	400	6.0/s	3717	3827	3259	0.25%	67S	
Yes 是	20 固定并发 20	1	400	50.3/s	443	474	361	0.00%	7S	
		100 固定并发 100	1	1296	41.2/s	2931	3237	2309	0.08%	31S
		200 固定并发 200	1	1231	35.3/s	9300	10626	4498	0.00%	35S

50 固定 并发 50	1	1288	42.5/s	1541	1881	1901	0.16%	30S
----------------------	---	------	--------	------	------	------	-------	-----

Analysis:

In the circumstance of 1 server and 20 concurrents (marked in red), requests handled per second increased from 6/s to 50.3/s. However, the server setup were different in the two tests: 8C16G (without okapiAdapter) vs 8C32G (with okapiAdapter). Tests should be conducted under the same environment with same server setup in order to better evaluate the actual performance improvement.

结果分析：对比两次测试结果，优化后同样20的并发下，吞吐量由6/s提升至50.3/s,提升8倍多。但本次测试虽然只有单台，但配置由原1台8C16G升级为1台8C32G，实际性能提升效果还需再在配置相同的环境下进行验证。