

压测报告

机器信息

Mac os m1 8核

内存16GB

JDK 21

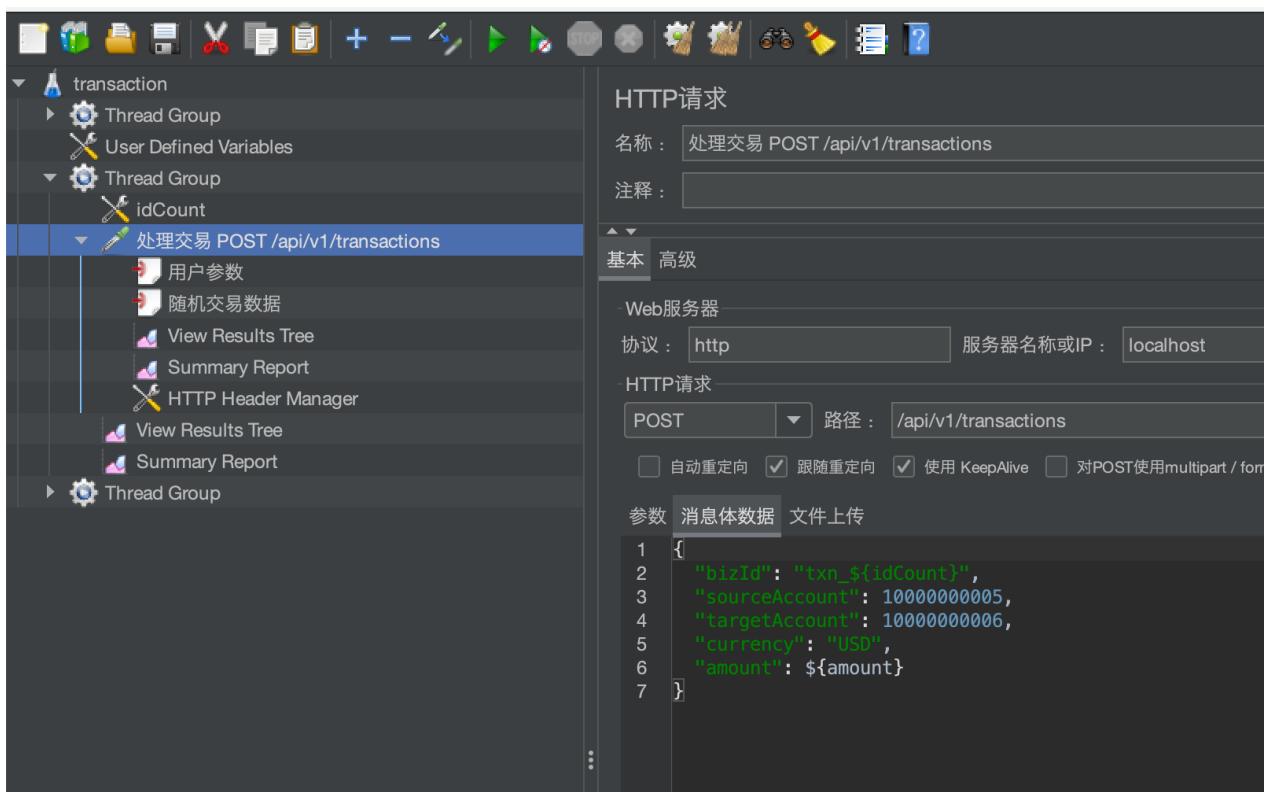
jmeter 5.6.3

MySQL和redis 在本机 Docker部署

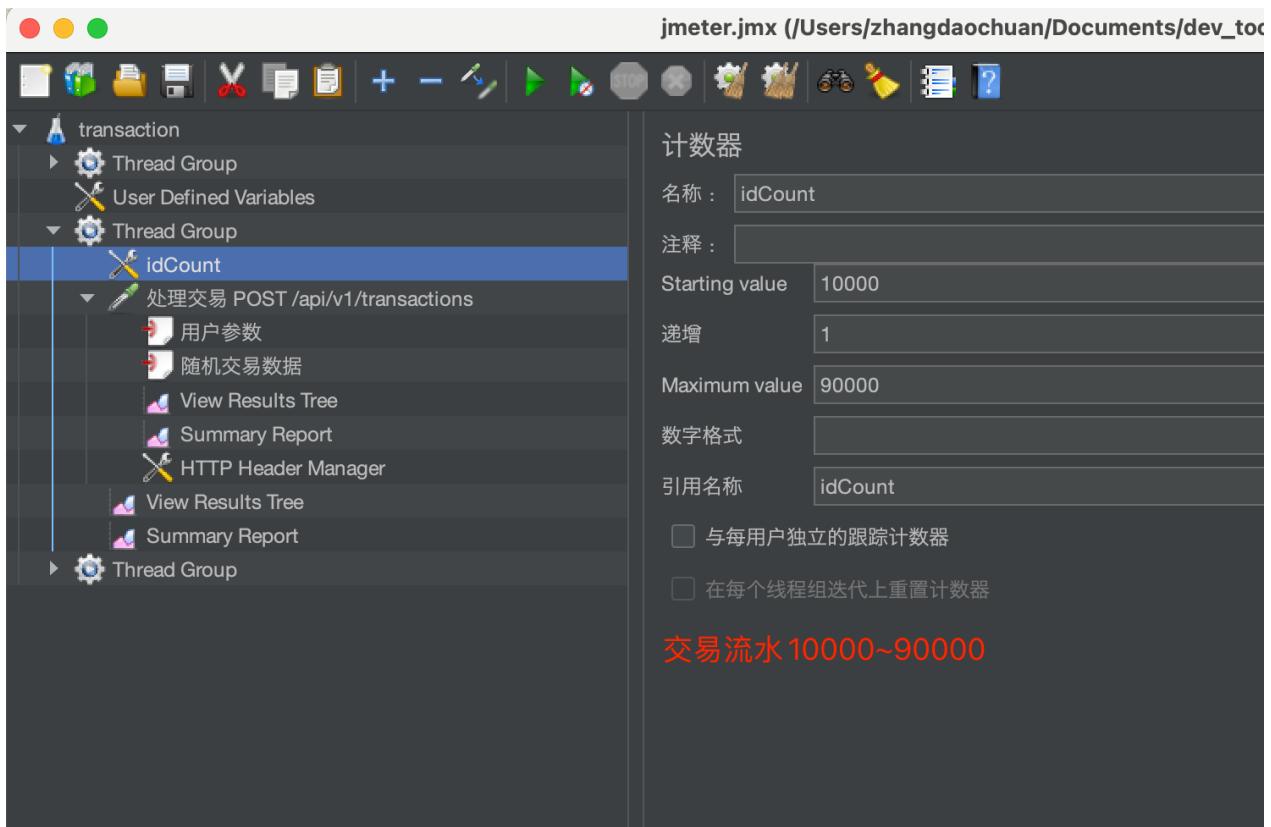
本地发压

一：转账交易

测试并发给相同的source target账户转账



交易流水号10000~90000



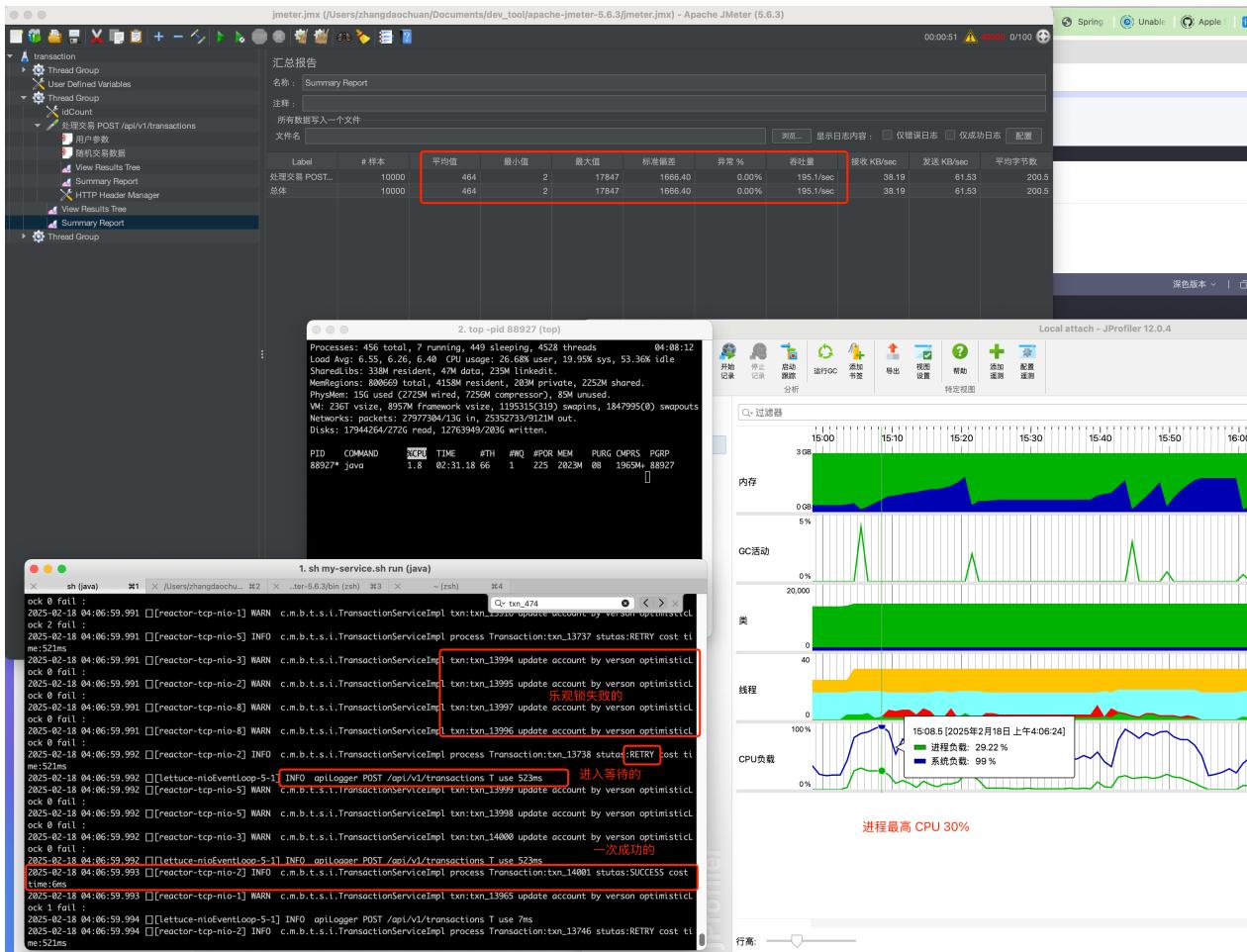
线程数稳定在25

服务进程峰值CPU 30% (机器8核)

处理交易接口为 195/s, 从日志看, 出现大量乐观锁失败, 也有一次性成功的, 耗时6ms

很多请求失败后, 进入递增sleep 重试, 导致523ms,影响了吞吐

GC 线程总数均正常



查看数据库，压测期间竞争很激烈，重试次数有的到7，

对象	accounts@balance (my...)	accounts@balance (my...)	无标题 @balance (myMa...)	transactions@balance (...)	transactions@balance (...)
transaction_id	biz_id	source_account	target_account	amount	status
19783	txn_19251	1000000005	1000000006	120.00	SUCCESS
19782	txn_19250	1000000005	1000000006	120.00	SUCCESS
19781	txn_19249	1000000005	1000000006	120.00	SUCCESS
19780	txn_19248	1000000005	1000000006	120.00	SUCCESS
19779	txn_19247	1000000005	1000000006	120.00	SUCCESS
19778	txn_19246	1000000005	1000000006	120.00	SUCCESS
19777	txn_19245	1000000005	1000000006	120.00	SUCCESS
19776	txn_19244	1000000005	1000000006	120.00	SUCCESS
19775	txn_19243	1000000005	1000000006	120.00	SUCCESS
19774	txn_19242	1000000005	1000000006	120.00	SUCCESS
19773	txn_19241	1000000005	1000000006	120.00	SUCCESS
19772	txn_19239	1000000005	1000000006	120.00	SUCCESS
19771	txn_19238	1000000005	1000000006	120.00	SUCCESS
19770	txn_19237	1000000005	1000000006	120.00	SUCCESS
19769	txn_19240	1000000005	1000000006	120.00	SUCCESS
19768	txn_19236	1000000005	1000000006	120.00	SUCCESS
19767	txn_19234	1000000005	1000000006	120.00	SUCCESS
19766	txn_19235	1000000005	1000000006	120.00	SUCCESS
19765	txn_19233	1000000005	1000000006	120.00	SUCCESS
19764	txn_19232	1000000005	1000000006	120.00	SUCCESS
19763	txn_19231	1000000005	1000000006	120.00	SUCCESS
19762	txn_19230	1000000005	1000000006	120.00	SUCCESS
19761	txn_19229	1000000005	1000000006	120.00	SUCCESS
19760	txn_19228	1000000005	1000000006	120.00	SUCCESS
19759	txn_19227	1000000005	1000000006	120.00	SUCCESS
19758	txn_19226	1000000005	1000000006	120.00	SUCCESS
19757	txn_19225	1000000005	1000000006	120.00	SUCCESS
19756	txn_19224	1000000005	1000000006	120.00	SUCCESS
19755	txn_19223	1000000005	1000000006	120.00	SUCCESS
19754	txn_19222	1000000005	1000000006	120.00	SUCCESS
19753	txn_19221	1000000005	1000000006	120.00	SUCCESS
19752	txn_19220	1000000005	1000000006	120.00	SUCCESS
19751	txn_19219	1000000005	1000000006	120.00	SUCCESS
19750	txn_19218	1000000005	1000000006	120.00	SUCCESS
19749	txn_19217	1000000005	1000000006	120.00	SUCCESS
19748	txn_19216	1000000005	1000000006	120.00	SUCCESS
19747	txn_19215	1000000005	1000000006	120.00	SUCCESS

压测尾声，竞争减少

transaction_id	biz_id	source_account	target_account	amount	status	retry	error	created_at	updated_at	curr
20531	txn_19999	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.3817 ***	2025-02-18 04:07:11.3847 ***	USD
20530	txn_19998	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.373556	2025-02-18 04:07:11.376312	USD
20529	txn_19997	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.366708	2025-02-18 04:07:11.369668	USD
20528	txn_19996	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.360016	2025-02-18 04:07:11.363089	USD
20527	txn_19995	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.353634	2025-02-18 04:07:11.356500	USD
20526	txn_19994	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.347994	2025-02-18 04:07:11.350071	USD
20525	txn_19993	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.3339901	2025-02-18 04:07:11.3442269	USD
20524	txn_19992	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.332869	2025-02-18 04:07:11.336512	USD
20523	txn_19991	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.312920	2025-02-18 04:07:11.316647	USD
20522	txn_19990	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.305971	2025-02-18 04:07:11.308913	USD
20521	txn_19989	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.296845	2025-02-18 04:07:11.299694	USD
20520	txn_19988	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.290847	2025-02-18 04:07:11.293032	USD
20519	txn_19987	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.284132	2025-02-18 04:07:11.287755	USD
20518	txn_19986	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.276609	2025-02-18 04:07:11.280506	USD
20517	txn_19985	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.270810	2025-02-18 04:07:11.273408	USD
20516	txn_19984	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.262963	2025-02-18 04:07:11.265802	USD
20515	txn_19983	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.258653	2025-02-18 04:07:11.259850	USD
20514	txn_19982	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.251839	2025-02-18 04:07:11.253102	USD
20513	txn_19981	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.246622	2025-02-18 04:07:11.248558	USD
20512	txn_19980	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.239999	2025-02-18 04:07:11.242500	USD
20511	txn_19979	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.232194	2025-02-18 04:07:11.235094	USD
20510	txn_19978	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.224373	2025-02-18 04:07:11.227244	USD
20509	txn_19977	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.216962	2025-02-18 04:07:11.220539	USD
20508	txn_19976	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.207825	2025-02-18 04:07:11.210325	USD
20507	txn_19975	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.199878	2025-02-18 04:07:11.203204	USD
20506	txn_19974	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.188271	2025-02-18 04:07:11.191849	USD
20505	txn_19973	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.179886	2025-02-18 04:07:11.182735	USD
20504	txn_19972	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.172394	2025-02-18 04:07:11.174832	USD
20503	txn_19971	10000000005	10000000006	120.00	SUCCESS	2	(NULL)	2025-02-18 04:07:11.157187	2025-02-18 04:07:11.328969	USD
20502	txn_19970	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.151212	2025-02-18 04:07:11.17953	USD
20501	txn_19969	10000000005	10000000006	120.00	SUCCESS	1	(NULL)	2025-02-18 04:07:11.110097	2025-02-18 04:07:11.167185	USD
20500	txn_19968	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.109916	2025-02-18 04:07:11.111049	USD
20499	txn_19967	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.105921	2025-02-18 04:07:11.107335	USD
20498	txn_19966	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.101252	2025-02-18 04:07:11.102562	USD
20497	txn_19965	10000000005	10000000006	120.00	SUCCESS	1	(NULL)	2025-02-18 04:07:11.097994	2025-02-18 04:07:11.152356	USD
20496	txn_19964	10000000005	10000000006	120.00	SUCCESS	0	(NULL)	2025-02-18 04:07:11.096963	2025-02-18 04:07:11.098641	USD
20495	txn_19963	10000000005	10000000006	120.00	SUCCESS	2	(NULL)	2025-02-18 04:07:11.093848	2025-02-18 04:07:11.256112	USD

source和target account 余额相加符合预期

account_id	account_type	balance	currency	version	created_at	updated_at
100000000000	1	1000.00	CNY	0	2025-02-17 04:02:43.253998	2025-02-17 04:02:43.276605
100000000001	1	371.00	USD	29	2025-02-17 12:18:33.450915	2025-02-17 16:18:08.398514
100000000002	1	2000.00	CNY	0	2025-02-17 12:18:40.290489	2025-02-17 12:18:40.293002
100000000003	1	2500.00	USD	0	2025-02-17 12:18:50.656179	2025-02-17 12:18:50.657935
100000000004	1	2325.00	USD	28	2025-02-17 12:37:57.452673	2025-02-17 16:18:08.408989
100000000005	1	9998025295.00	USD	16469	2025-02-18 01:18:37.997202	2025-02-18 04:16:04.066462
I 100000000006	1	10001974705.00	USD	16469	2025-02-18 01:18:38.056482 ***	2025-02-18 04:07:17.959033 ***
100000000007	1	100000000000.00	USD	0	2025-02-18 01:18:37.997652	2025-02-18 01:18:38.072514
100000000008	1	100000000000.00	USD	0	2025-02-18 01:18:37.997539	2025-02-18 01:18:38.073007
100000000009	1	100000000000.00	USD	0	2025-02-18 01:18:37.997367	2025-02-18 01:18:38.073145
100000000010	1	100000000000.00	USD	0	2025-02-18 01:18:37.997813	2025-02-18 01:18:38.073675
100000000011	1	100000000000.00	USD	0	2025-02-18 01:18:37.997207	2025-02-18 01:18:38.073314
100000000012	1	100000000000.00	USD	0	2025-02-18 01:18:37.997387	2025-02-18 01:18:38.073921
9998025295.00+10001974705.00 = 20,000,000,000				7.998056		2025-02-18 01:18:38.074973
初始余额均为 10, 000, 000, 000 相加为 20, 000, 000, 000 20,000,000,000				3.034854		2025-02-18 01:18:38.095591
				3.116981		2025-02-18 01:18:38.119119
				3.366834		2025-02-18 01:18:38.368876
				3.370218		2025-02-18 01:18:38.371422
				3.373826		2025-02-18 01:18:38.376877
				3.375409		2025-02-18 01:18:38.377548
				3.378450		2025-02-18 01:18:38.380885
				3.379778		2025-02-18 01:18:38.381665
				3.387588		2025-02-18 01:18:38.389189
				3.390160		2025-02-18 01:18:38.393344

统计本次压测的10000个请求，成功有8210

status	count
FAILED	1789
SUCCESS	8210

失败原因均为重试次数过多导致，可以通过提高重试次数缓解

13	<code>SELECT * FROM transactions WHERE STATUS = "FAILED" and transaction_id > 10532</code>																																																																																																																																							
14	<table border="1"> <thead> <tr> <th>信息</th><th>摘要</th><th>结果 1</th><th>剖析</th><th>状态</th></tr> </thead> <tbody> <tr> <td>transaction_id</td><td>biz_id</td><td>source_account</td><td>target_account</td><td>amount</td><td>status</td><td>retry</td><td>error</td><td>created_at</td><td>updated_at</td></tr> <tr> <td>10533</td><td>txn_10002</td><td>10000000005</td><td>10000000006</td><td>120.00</td><td>FAILED</td><td>8</td><td>retry times exceed 6,need manual process</td><td>2025-02-18 04:06:20.315488</td><td>2025-02-18 04:0</td></tr> <tr> <td>10534</td><td>txn_10003</td><td>10000000005</td><td>10000000006</td><td>120.00</td><td>FAILED</td><td>8</td><td>retry times exceed 6,need manual process</td><td>2025-02-18 04:06:20.315327</td><td>2025-02-18 04:0</td></tr> <tr> <td>10538</td><td>txn_10006</td><td>10000000005</td><td>10000000006</td><td>120.00</td><td>FAILED</td><td>8</td><td>retry times exceed 6,need manual process</td><td>2025-02-18 04:06:20.385602</td><td>2025-02-18 04:0</td></tr> <tr> <td>10544</td><td>txn_10012</td><td>10000000005</td><td>10000000006</td><td>120.00</td><td>FAILED</td><td>8</td><td>retry times exceed 6,need manual process</td><td>2025-02-18 04:06:20.490810</td><td>2025-02-18 04:0</td></tr> <tr> <td>10553</td><td>txn_10021</td><td>10000000005</td><td>10000000006</td><td>120.00</td><td>FAILED</td><td>8</td><td>retry times exceed 6,need manual process</td><td>2025-02-18 04:06:20.600202</td><td>2025-02-18 04:0</td></tr> <tr> <td>10562</td><td>txn_10030</td><td>10000000005</td><td>10000000006</td><td>120.00</td><td>FAILED</td><td>8</td><td>retry times exceed 6,need manual process</td><td>2025-02-18 04:06:20.689769</td><td>2025-02-18 04:0</td></tr> <tr> <td>10569</td><td>txn_10038</td><td>10000000005</td><td>10000000006</td><td>120.00</td><td>FAILED</td><td>8</td><td>retry times exceed 6,need manual process</td><td>2025-02-18 04:06:20.792279</td><td>2025-02-18 04:0</td></tr> <tr> <td>10593</td><td>txn_10061</td><td>10000000005</td><td>10000000006</td><td>120.00</td><td>FAILED</td><td>8</td><td>retry times exceed 6,need manual process</td><td>2025-02-18 04:06:20.983413</td><td>2025-02-18 04:0</td></tr> <tr> <td>10600</td><td>txn_10067</td><td>10000000005</td><td>10000000006</td><td>120.00</td><td>FAILED</td><td>8</td><td>retry times exceed 6,need manual process</td><td>2025-02-18 04:06:21.015459</td><td>2025-02-18 04:0</td></tr> <tr> <td>10612</td><td>txn_10080</td><td>10000000005</td><td>10000000006</td><td>120.00</td><td>FAILED</td><td>8</td><td>retry times exceed 6,need manual process</td><td>2025-02-18 04:06:21.069600</td><td>2025-02-18 04:0</td></tr> <tr> <td>10634</td><td>txn_10102</td><td>10000000005</td><td>10000000006</td><td>120.00</td><td>FAILED</td><td>8</td><td>retry times exceed 6,need manual process</td><td>2025-02-18 04:06:21.173554</td><td>2025-02-18 04:0</td></tr> <tr> <td>10639</td><td>txn_10107</td><td>10000000005</td><td>10000000006</td><td>120.00</td><td>FAILED</td><td>8</td><td>retry times exceed 6,need manual process</td><td>2025-02-18 04:06:21.201235</td><td>2025-02-18 04:0</td></tr> </tbody> </table>	信息	摘要	结果 1	剖析	状态	transaction_id	biz_id	source_account	target_account	amount	status	retry	error	created_at	updated_at	10533	txn_10002	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:20.315488	2025-02-18 04:0	10534	txn_10003	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:20.315327	2025-02-18 04:0	10538	txn_10006	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:20.385602	2025-02-18 04:0	10544	txn_10012	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:20.490810	2025-02-18 04:0	10553	txn_10021	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:20.600202	2025-02-18 04:0	10562	txn_10030	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:20.689769	2025-02-18 04:0	10569	txn_10038	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:20.792279	2025-02-18 04:0	10593	txn_10061	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:20.983413	2025-02-18 04:0	10600	txn_10067	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:21.015459	2025-02-18 04:0	10612	txn_10080	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:21.069600	2025-02-18 04:0	10634	txn_10102	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:21.173554	2025-02-18 04:0	10639	txn_10107	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:21.201235	2025-02-18 04:0
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10538	txn_10006	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:20.385602	2025-02-18 04:0																																																																																																																															
10544	txn_10012	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:20.490810	2025-02-18 04:0																																																																																																																															
10553	txn_10021	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:20.600202	2025-02-18 04:0																																																																																																																															
10562	txn_10030	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:20.689769	2025-02-18 04:0																																																																																																																															
10569	txn_10038	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:20.792279	2025-02-18 04:0																																																																																																																															
10593	txn_10061	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:20.983413	2025-02-18 04:0																																																																																																																															
10600	txn_10067	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:21.015459	2025-02-18 04:0																																																																																																																															
10612	txn_10080	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:21.069600	2025-02-18 04:0																																																																																																																															
10634	txn_10102	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:21.173554	2025-02-18 04:0																																																																																																																															
10639	txn_10107	10000000005	10000000006	120.00	FAILED	8	retry times exceed 6,need manual process	2025-02-18 04:06:21.201235	2025-02-18 04:0																																																																																																																															

二：查询交易状态和账户信息

交易流水递增查询

HTTP请求

名称： 获取账户信息 GET /api/v1/accounts/{accountId}

注释：

基本 高级

Web服务器

协议： http 服务器名称或IP： localhost

HTTP请求

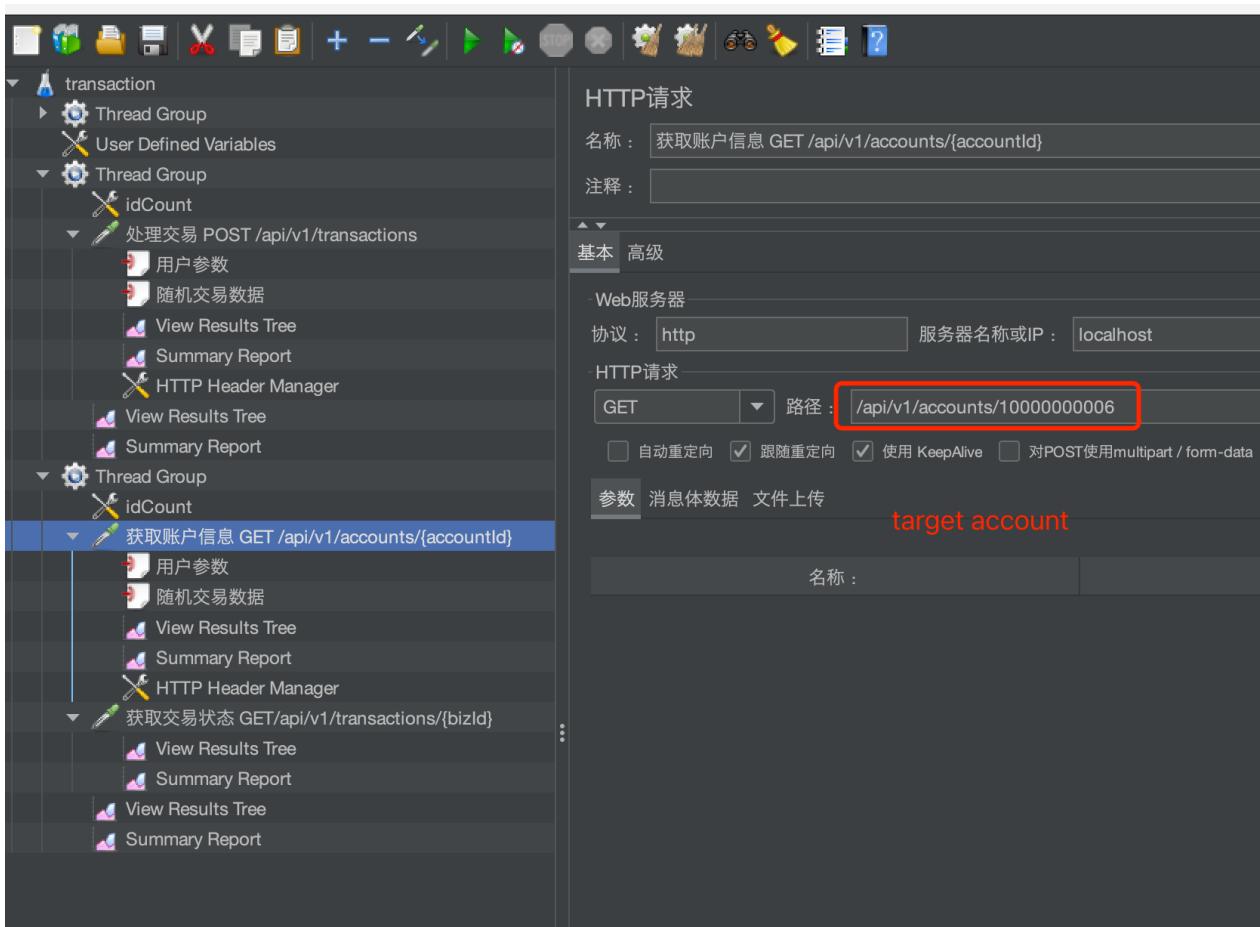
GET 路径： /api/v1/accounts/10000000006

自动重定向 跟随重定向 使用 KeepAlive 对POST使用multipart / form-data

参数 消息体数据 文件上传

target account

名称：



交易流水递增查询

HTTP请求

名称： 获取交易状态 GET/api/v1/transactions/{bizId}

注释：

基本 高级

Web服务器

协议： http 服务器名称或IP： localhost

HTTP请求

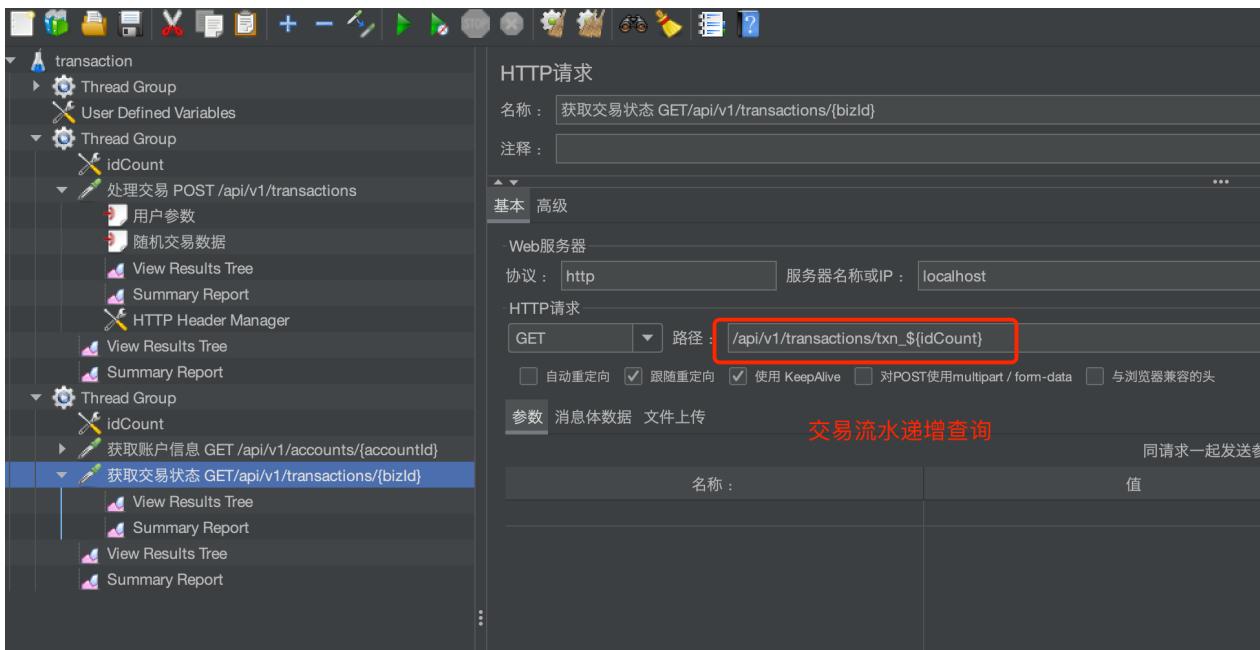
GET 路径： /api/v1/transactions/txn_\${idCount}

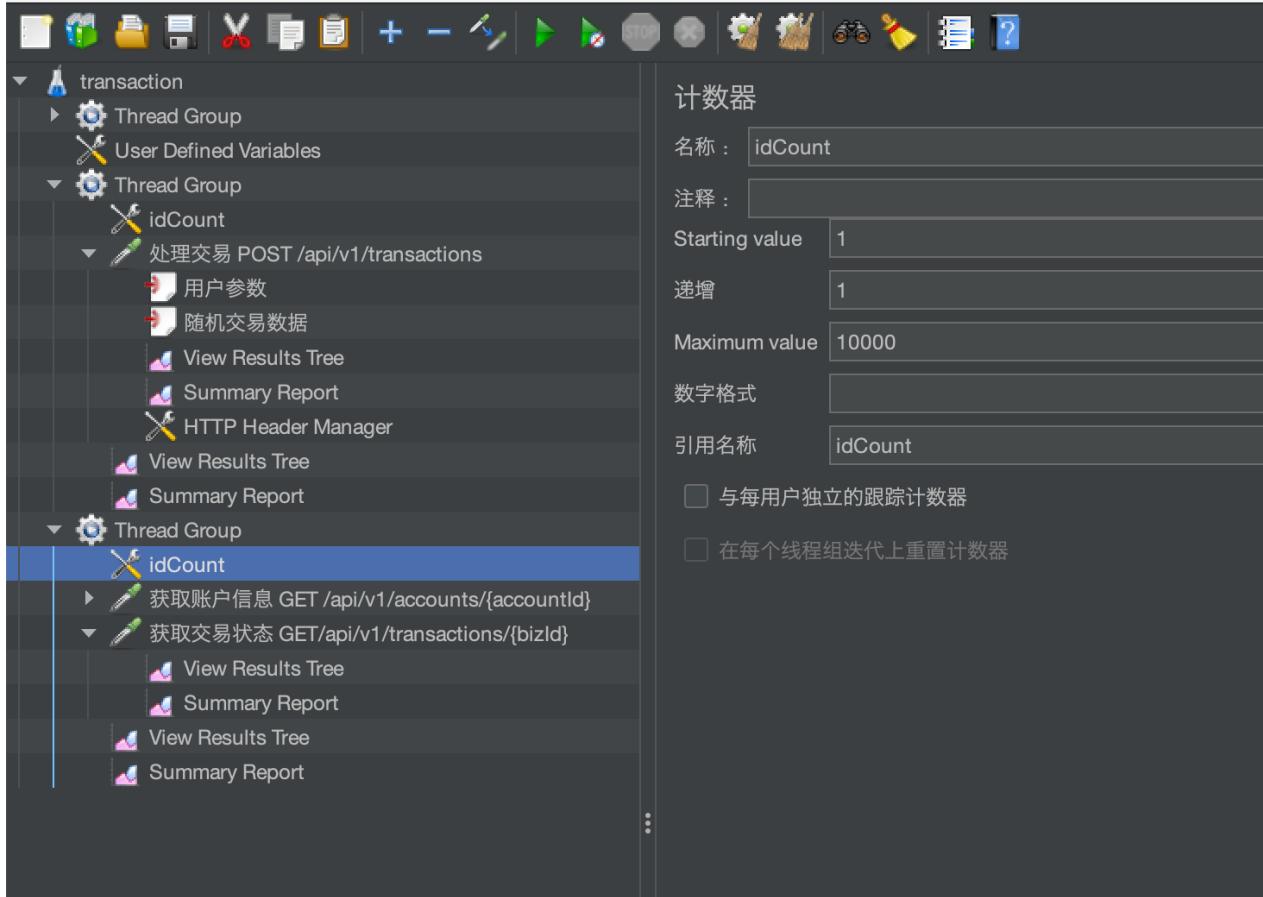
自动重定向 跟随重定向 使用 KeepAlive 对POST使用multipart / form-data 与浏览器兼容的头

参数 消息体数据 文件上传

交易流水递增查询 同请求一起发送参数

名称：	值





线程数稳定在25

峰值CPU 32%，机器8核

2个接口均为 1700/s 合计 3400/s

由于接口有redis缓存，所以基本是打到redis上，没有能压到上限

GC 线程总数均正常

