ShardingSphere Proxy multiple data source performance test report

1、server configuration

Item	configuration	number	Remark
Sysbench	CPU:8C Memory:16G Disk:20G	1	Initiating server
ShardingSphere-Proxy	CPU:16C Memory:32G Disk:100G	1	Proxy
MySQL	CPU:8C Memory:32G Disk:200G	1	Database Server

2、performance test command

1)、read only test

```
sysbench oltp_point_select --mysql-host='xxx.xxx.xxx.xxx' --mysql-port=3307 --mysql-user=root --mysql-password='xxxxxx' --mysql-db=sbtest_sharding    --tables=10 --table-size=100000 --report-interval=10 --time=60 --threads=32 --max-requests=0 --percentile=99
```

```
--mysql-ignore-errors="all" --rand-type=uniform --range_selects=off --auto_inc=off run
```

2、write only test

```
sysbench oltp_write_only --mysql-host=' xxx.xxx.xxx.xxx ' --mysql-port=3307 --mysql-user=root --mysql-password='xxxxxx' --mysql-db=sbtest_sharding    --tables=10 --table-size=100000 --report-interval=10 --time=60 --threads=8 --max-requests=0 --percentile=99 --mysql-ignore-errors="all" --rand-type=uniform --range_selects=off --auto_inc=off run
```

3、read write test

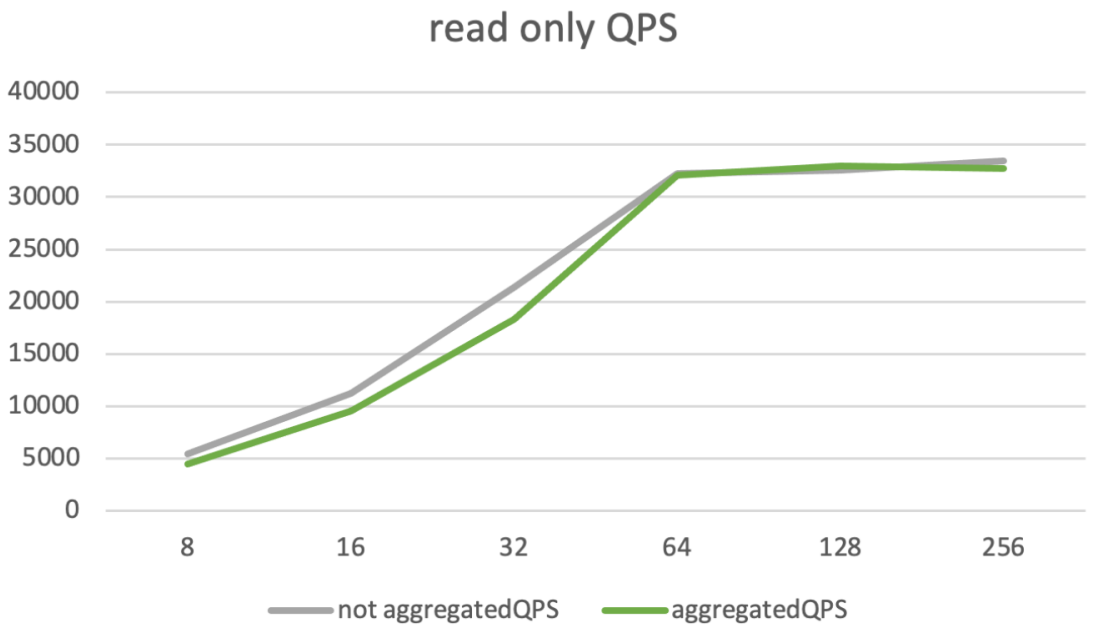
```
sysbench oltp_read_write --mysql-host=' xxx.xxx.xxx.xxx ' --mysql-port=3307 --mysql-user=root --mysql-password='xxxxxx' --mysql-db=sbtest_sharding    --tables=10 --table-size=100000 --report-interval=10 --time=60 --threads=8 --max-requests=0 --percentile=99 --mysql-ignore-errors="all" --rand-type=uniform --range_selects=off --auto_inc=off run
```

3、Test Data

1、read only test

Threads	*not aggregated QPS*	*Actual database connections*	*aggregated QPS*	*Actual database connections*
8	*5428*	*16*	*4461*	*8*

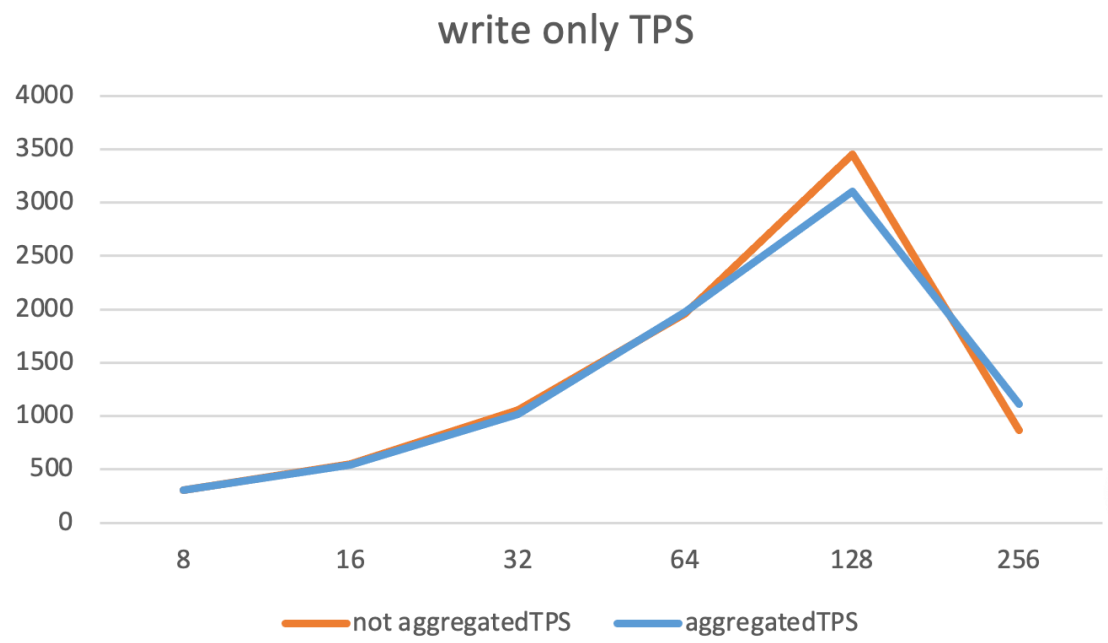
16	11224	28	9512	16
32	21362	40	18326	32
64	32256	52	32056	54
128	32587	56	32943	84
256	33495	64	32741	90



2、write only test

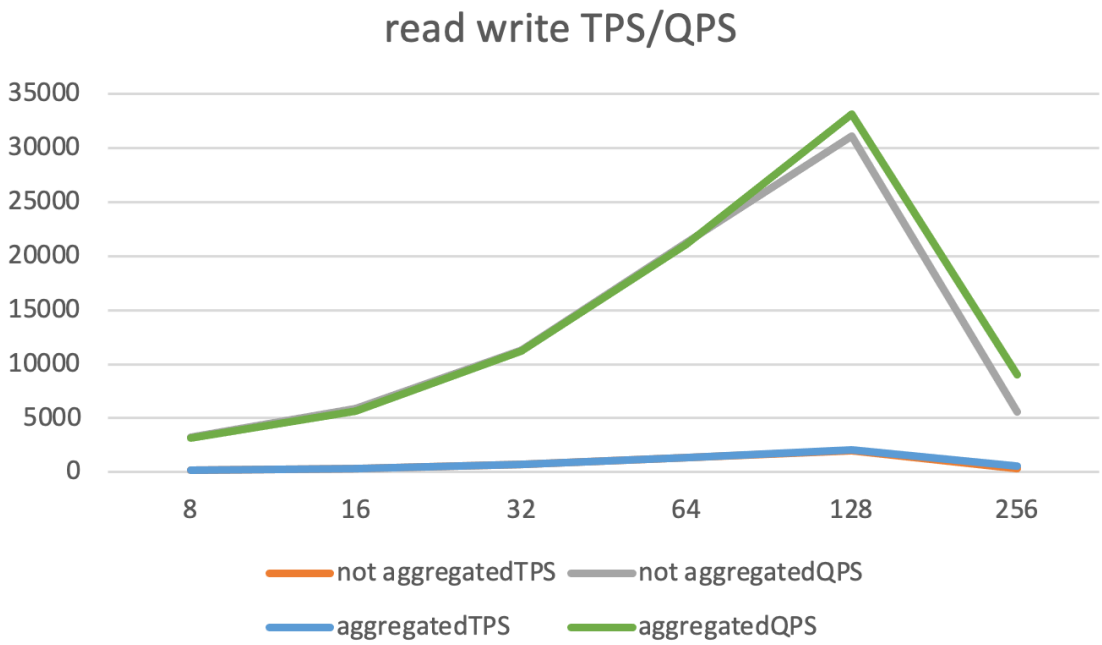
Threads	not aggregated TPS	Actual database connections	aggregated TPS	Actual database connections
8	304	16	303	16
16	552	32	541	32
32	1057	64	1017	64
64	1958	128	1977	128
128	3451	256	3108	256

256	865	512	1111	512



3、read write test

Threads	not aggregated TPS	not aggregated QPS	Actual database connections	aggregated TPS	aggregated QPS	Actual database connections
8	204	3265	16	199	3184	16
16	367	5874	32	355	5693	32
32	706	11303	64	702	11235	64
64	1328	21256	128	1318	21097	128
128	1968	31105	280	2070	33123	256
256	351	5617	512	563	9022	512



4、*Test conclusion*

Functional aspects:

1. Turn on the connection pool aggregation, and the data routing is as expected.

2. And the connection pool will converge to one connection pool, and the number of connections will be limited by the upper limit of the size of a single connection pool.

In terms of performance:

1. In the read-only scenario, when connection pool aggregation is enabled, the query performance of the aggregated connection pool is reduced by 5% to 10% compared with the performance of the multi-connection pool.

2. In the read-write scenario, the performance of enabling connection pool aggregation is not much different from that of not enabling it.