

Evaluation and Measurement

Part I

1 Client performing operation (no concurrent)

- Below are the measurements for different operations like PUT, GET and DELETE.
- In this case single peer performing PUT, GET and DELETE operation.

Operation	Time (in millisecond)
PUT	2630
GET	2180
DELETE	1649

2 Client performing operation (Concurrent)

- Below are the measurements for different operations like PUT, GET and DELETE.
- In this case 2 peers are performing concurrent operations

Operation	Time (in millisecond)		
	Peer 1	Peer 2	Average
PUT	3233	3280	3256.5
GET	2730	2336	2533
DELETE	2297	1897	2097

4 Client performing operation (Concurrent)

- Below are the measurements for different operations like PUT, GET and DELETE.
- In this case 4 peers are performing concurrent operations

Operation	Time (in millisecond)				
	Peer 1	Peer 2	Peer 3	Peer 4	Average
PUT	3749	4253	3724	3393	3779.75
GET	2998	2954	2848	2592	2848
DELETE	2311	2366	2699	2296	2418

6 Client performing operation (Concurrent)

- Below are the measurements for different operations like PUT, GET and DELETE.
- In this case 6 peers are performing concurrent operations

	Time (in millisecond)						
Operation	Peer 1	Peer 2	Peer 3	Peer 4	Peer 5	Peer 6	Average
PUT	4310	4570	3954	4598	4316	3924	4278.6666667
GET	3075	2688	3174	3170	3372	3665	3190.6666667
DELETE	2761	2414	2815	2840	2084	2499	2568.8333333

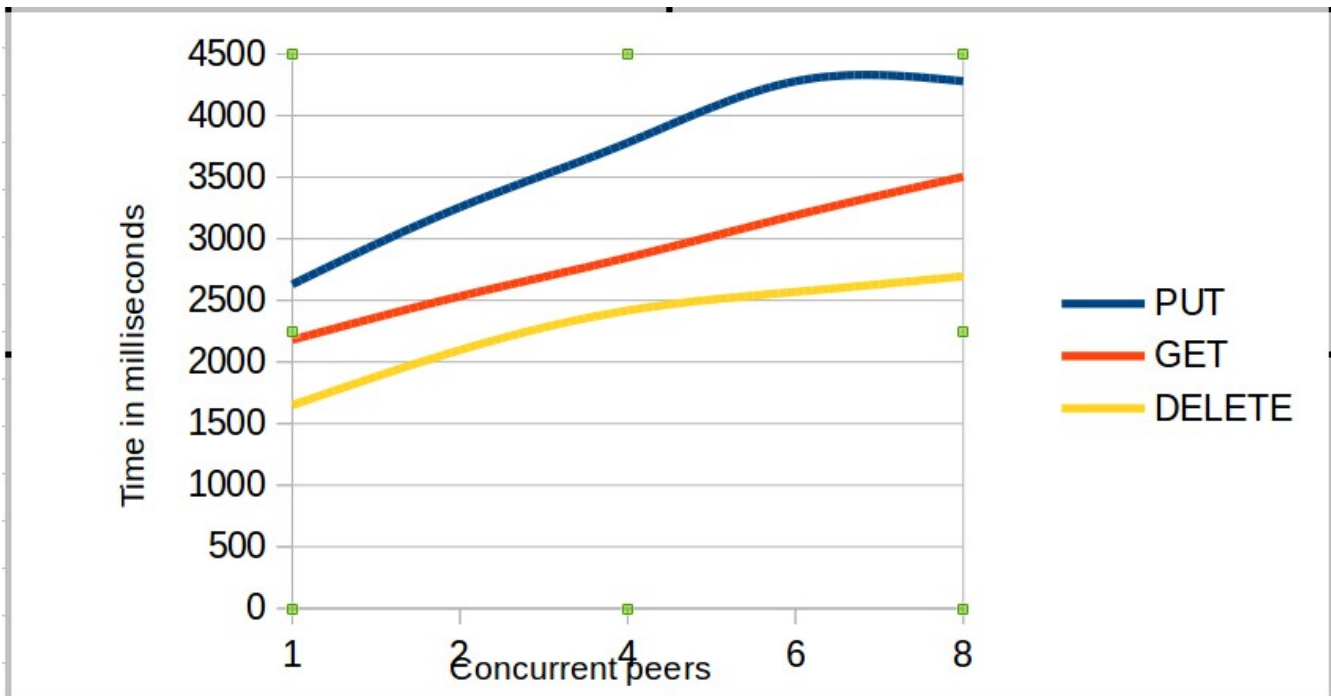
8 Client performing operation (Concurrent)

- Below are the measurements for different operations like PUT, GET and DELETE.
- In this case 8 peers are performing concurrent operations.

	Time (in millisecond)								
Operation	Peer 1	Peer 2	Peer 3	Peer 4	Peer 5	Peer 6	Peer 7	Peer 8	Average
PUT	3177	3978	3318	4882	3939	4634	5603	4701	4279
GET	3333	3390	2569	4057	2810	3994	4503	3370	3503.25
DELETE	2175	2528	2575	2995	3179	3382	2300	2427	2695.125

Average statistic for all combination mentioned above

Client	PUT	GET	DELETE
1	2630	2180	1649
2	3256.5	2533	2097
4	3779.75	2848	2418
6	4278.6666667	3190.6666667	2568.8333333
8	4279	3503.25	2695.125



Graph 1.1 - Performance evaluation with concurrent execution

Note: Evaluation has performed on single machine with configuration of

RAM: 4 GB

HDD: 500 GB

Processor: i5

Conclusion:

- From graph we can conclude that average time of PUT, GET and DELETE method is increases initially as we increased the number of concurrent peers execution.
- From later part of graph (for 6 peers and 8 peers) we can conclude that average time of execution is slightly stable and is not increases as it was initially, so keeping number of concurrent node increasing we can achieve stable performance.