Result for each thread number of server, the speed of communication.

| Client Thread Number | Server Thread Number | Test Running Time | Result        |
|----------------------|----------------------|-------------------|---------------|
| 100                  | 1                    | 5                 | 18.0 RPCs/s   |
| 100                  | 5                    | 5                 | 108.4 RPCs/s  |
| 100                  | 10                   | 5                 | 217.6 RPCs/s  |
| 100                  | 100                  | 5                 | 1688.4 RPCs/s |

## Operation:

The whole operation you can see txt file. Below is example for each operation and exception.

```
Client log: Feb 27,2020 20:32:33:669 CLIENT_ID: 1 SEND: "PUT" KEY-> 66 VALUE-> 31
Client log: Feb 27,2020 20:32:33:694 CLIENT_ID: 7 SEND: "PUT" KEY-> 85 VALUE-> 127
Client log: Feb 27,2020 20:32:33:695 CLIENT_ID: 12 SEND: "PUT" KEY-> -24 VALUE-> 22
Client log: Feb 27,2020 20:32:33:696 CLIENT_ID: 15 SEND: "PUT" KEY-> 116 VALUE-> -98
Client log: Feb 27,2020 20:32:33:697 CLIENT_ID: 22 SEND: "PUT" KEY-> -2 VALUE-> -60
Client log: Feb 27,2020 20:32:33:698 CLIENT_ID: 31 SEND: "PUT" KEY-> -111 VALUE-> 50
Client log: Feb 27,2020 20:32:33:699 CLIENT_ID: 54 SEND: "PUT" KEY-> -75 VALUE-> -43
Client log: Feb 27,2020 20:32:33:699 CLIENT_ID: 56 SEND: "PUT" KEY-> 67 VALUE-> 91
Client log: Feb 27,2020 20:32:33:700 CLIENT_ID: 59 SEND: "PUT" KEY-> -80 VALUE-> -18
Server log: Feb 27,2020 20:32:33:838 CLIENT_ID: 56 -> SERVER_ID: 21 RECEIVE: "PUT" KEY-> 67 VALUE-> 91
Server log: Feb 27,2020 20:32:33:894 SERVER_ID: 21 -> CLIENT_ID: 56 SEND: "PUT" KEY-> 67 VALUE-> 91
Server log: Feb 27,2020 20:32:33:895 CLIENT_ID: 54 -> SERVER_ID: 16 RECEIVE: "PUT" KEY-> -75 VALUE-> -43
Client log: Feb 27,2020 20:32:33:899 CLIENT_ID: 64 SEND: "PUT" KEY-> 79 VALUE-> -69
Client log: Feb 27,2020 20:32:33:899 SERVER_ID: 21 -> CLIENT_ID: 56 RESPONSE: "PUT" SUCESS KEY-> 67 VALUE-> 91
Server log: Feb 27,2020 20:32:33:946 SERVER_ID: 16 -> CLIENT_ID: 54 SEND: "PUT" KEY-> -75 VALUE-> -43
Server log: Feb 27,2020 20:32:33:947 CLIENT_ID: 1 -> SERVER_ID: 17 RECEIVE: "PUT" KEY-> 66 VALUE-> 31
Client log: Feb 27,2020 20:32:33:948 SERVER_ID: 16 -> CLIENT_ID: 54 RESPONSE: "PUT" SUCESS KEY-> -75 VALUE-> -43
Client log: Feb 27,2020 20:32:33:948 CLIENT_ID: 65 SEND: "GET" KEY-> 67
Server log: Feb 27,2020 20:32:34:002 SERVER_ID: 17 -> CLIENT_ID: 1 SEND: "PUT" KEY-> 66 VALUE-> 31
Server log: Feb 27,2020 20:32:34:002 CLIENT_ID: 22 -> SERVER_ID: 19 RECEIVE: "PUT" KEY-> -2 VALUE-> -60
Client log: Feb 27,2020 20:32:34:005 SERVER_ID: 17 -> CLIENT_ID: 1 RESPONSE: "PUT" SUCESS KEY-> 66 VALUE-> 31
Client log: Feb 27,2020 20:32:34:005 CLIENT_ID: 66 SEND: "DELETE" KEY-> 67
Server log: Feb 27,2020 20:32:34:054 SERVER_ID: 19 -> CLIENT_ID: 22 SEND: "PUT" KEY-> -2 VALUE-> -60
Server log: Feb 27,2020 20:32:34:054 CLIENT_ID: 31 -> SERVER_ID: 20 RECEIVE: "PUT" KEY-> -111 VALUE-> 50
Client log: Feb 27,2020 20:32:34:055 SERVER_ID: 19 -> CLIENT_ID: 22 RESPONSE: "PUT" SUCESS KEY-> -2 VALUE-> -60
Client log: Feb 27,2020 20:32:34:055 CLIENT_ID: 67 SEND: "GET" KEY-> 66
Server log: Feb 27,2020 20:32:34:105 SERVER_ID: 20 -> CLIENT_ID: 31 SEND: "PUT" KEY-> -111 VALUE-> 50
Server log: Feb 27,2020 20:32:34:105 CLIENT_ID: 59 -> SERVER_ID: 23 RECEIVE: "PUT" KEY-> -80 VALUE-> -18 Client log: Feb 27,2020 20:32:34:107 SERVER_ID: 20 -> CLIENT_ID: 31 RESPONSE: "PUT" SUCESS KEY-> -111 VALUE-> 50
Client log: Feb 27,2020 20:32:34:107 CLIENT_ID: 68 SEND: "GET" KEY-> -2
Server log: Feb 27,2020 20:32:34:157 SERVER_ID: 23 -> CLIENT_ID: 59 SEND: "PUT" KEY-> -80 VALUE-> -18
Server log: Feb 27,2020 20:32:34:158 CLIENT_ID: 12 -> SERVER_ID: 22 RECEIVE: "PUT" KEY-> -24 VALUE-> 22 Client log: Feb 27,2020 20:32:34:159 SERVER_ID: 23 -> CLIENT_ID: 59 RESPONSE: "PUT" SUCESS KEY-> -80 VALUE-> -18
Client log: Feb 27,2020 20:32:34:159 CLIENT_ID: 69 SEND: "DELETE" KEY-> -111

Server log: Feb 27,2020 20:32:34:209 SERVER_ID: 22 -> CLIENT_ID: 12 SEND: "PUT" KEY-> -24 VALUE-> 22
Server log: Feb 27,2020 20:32:34:209 CLIENT_ID: 7 -> SERVER_ID: 18 RECEIVE: "PUT" KEY-> 85 VALUE-> 127
Client log: Feb 27,2020 20:32:34:210 SERVER_ID: 22 -> CLIENT_ID: 12 RESPONSE: "PUT" SUCESS KEY-> -24 VALUE-> 22
```

```
Client log: Feb 27,2020 20:32:34:107 CLIENT_ID: 68 SEND: "GET" KEY-> -2
Server log: Feb 27,2020 20:32:34:157 SERVER_ID: 23 -> CLIENT_ID: 59 SEND: "PUT" KEY-> -80 VALUE-> -18
Server log: Feb 27,2020 20:32:34:158 CLIENT_ID: 12 -> SERVER_ID: 22 RECEIVE: "PUT" KEY-> -24 VALUE-> 22
Client log: Feb 27,2020 20:32:34:159 SERVER_ID: 23 -> CLIENT_ID: 59 RESPONSE: "PUT" SUCESS KEY-> -80 VALUE-> -18 Client log: Feb 27,2020 20:32:34:159 CLIENT_ID: 69 SEND: "DELETE" KEY-> -111
Server log: Feb 27,2020 20:32:34:209 SERVER_ID: 22 -> CLIENT_ID: 12 SEND: "PUT" KEY-> -24 VALUE-> 22
Server log: Feb 27,2020 20:32:34:209 CLIENT_ID: 7 -> SERVER_ID: 18 RECEIVE: "PUT" KEY-> 85 VALUE-> 127
Client log: Feb 27,2020 20:32:34:210 SERVER_ID: 22 -> CLIENT_ID: 12 RESPONSE: "PUT" SUCESS KEY-> -24 VALUE-> 22 Client log: Feb 27,2020 20:32:34:210 CLIENT_ID: 70 SEND: "DELETE" KEY-> -80 Server log: Feb 27,2020 20:32:34:263 SERVER_ID: 18 -> CLIENT_ID: 7 SEND: "PUT" KEY-> 85 VALUE-> 127
Server log: Feb 27,2020 20:32:34:263 CLIENT_ID: 15 -> SERVER_ID: 13 RECEIVE: "PUT" KEY-> 116 VALUE-> -98
Client log: Feb 27,2020 20:32:34:266 CLIENT_ID: 71 SEND: "DELETE" KEY-> 66
Client log: Feb 27,2020 20:32:34:266 SERVER_ID: 18 -> CLIENT_ID: 7 RESPONSE: "PUT" SUCESS KEY-> 85 VALUE-> 127 Server log: Feb 27,2020 20:32:34:315 SERVER_ID: 13 -> CLIENT_ID: 15 SEND: "PUT" KEY-> 116 VALUE-> -98 Server log: Feb 27,2020 20:32:34:316 CLIENT_ID: 64 -> SERVER_ID: 24 RECEIVE: "PUT" KEY-> 79 VALUE-> -69
Client log: Feb 27,2020 20:32:34:317 SERVER_ID: 13 -> CLIENT_ID: 15 RESPONSE: "PUT" SUCESS KEY-> 116 VALUE-> -98
Client log: Feb 27,2020 20:32:34:317 SERVER_ID: 13 => CLIENT_ID: KEY-> 123 VALUE-> -117 Server_log: Feb 27,2020 20:32:34:317 CLIENT_ID: 72 SEND: "PUT" KEY-> 123 VALUE-> -117 Server_log: Feb 27,2020 20:32:34:367 SERVER_ID: 24 -> CLIENT_ID: 64 SEND: "PUT" KEY-> 79 VALUE-> -69 Server_log: Feb 27,2020 20:32:34:367 CLIENT_ID: 65 -> SERVER_ID: 21 RECEIVE: "GET" KEY-> 67 Client_log: Feb 27,2020 20:32:34:368 SERVER_ID: 24 -> CLIENT_ID: 64 RESPONSE: "PUT" SUCESS KEY-> 79 VALUE-> -69
Client log: Feb 27,2020 20:32:34:368 CLIENT_ID: 73 SEND: "PUT" KEY-> 51 VALUE-> 88
Server log: Feb 27,2020 20:32:34:377 SERVER_ID: 21 -> CLIENT_ID: 65 SEND: "GET" KEY-> 67 VALUE-> 91
Server log: Feb 27,2020 20:32:34:379 CLIENT_ID: 66 -> SERVER_ID: 17 RECEIVE: "DELETE" KEY-> 67
Client log: Feb 27,2020 20:32:34:380 SERVER_ID: 21 -> CLIENT_ID: 65 RESPONSE: "GET" SUCESS KEY-> 67 VALUE-> 91
Client log: Feb 27,2020 20:32:34:381 CLIENT_ID: 74 SEND: "PUT" KEY-> 117 VALUE-> 84
Server log: Feb 27,2020 20:32:34:435 SERVER_ID: 17 -> CLIENT_ID: 66 SEND: "DELETE" KEY-> 67
Server log: Feb 27,2020 20:32:34:435 SERVER_ID: 17 -> CLIENT_ID: 66 SEND: "DELETE" KEY-> 67
Server log: Feb 27,2020 20:32:34:435 CLIENT_ID: 67 -> SERVER_ID: 19 RECEIVE: "GET" KEY-> 66
Client log: Feb 27,2020 20:32:34:436 SERVER_ID: 17 -> CLIENT_ID: 66 RESPONSE: "DELETE" SUCESS KEY-> 67
Client log: Feb 27,2020 20:32:34:436 CLIENT_ID: 75 SEND: "UPDATE" KEY-> -2 VALUE-> 33
Server log: Feb 27,2020 20:32:34:446 SERVER_ID: 19 -> CLIENT_ID: 67 SEND: "GET" KEY-> 66 VALUE-> 31
Server log: Feb 27,2020 20:32:34:448 CLIENT_ID: 68 -> SERVER_ID: 20 RECEIVE: "GET" KEY-> -2
Server log: Feb 27,2020 20:32:34:448 SERVER_ID: 19 -> CLIENT_ID: 67 RESPONSE: "GET" SUCESS KEY-> 66 VALUE-> 31 Client log: Feb 27,2020 20:32:34:448 CLIENT_ID: 76 SEND: "UPDATE" KEY-> 79 VALUE-> 119

Server log: Feb 27,2020 20:32:34:458 SERVER_ID: 20 -> CLIENT_ID: 68 SEND: "GET" KEY-> -2 VALUE-> -60

Server log: Feb 27,2020 20:32:34:458 CLIENT_ID: 69 -> SERVER_ID: 23 RECEIVE: "DELETE" KEY-> -111
Client log: Feb 27,2020 20:32:34:460 SERVER_ID: 20 -> CLIENT_ID: 68 RESPONSE: "GET" SUCESS KEY-> -2 VALUE-> -60
```

#### UPDATE

```
Client log: Feb 27,2020 20:32:34:436 CLIENT_ID: 75 SEND: "UPDATE" KEY-> -2 VALUE-> 33 Server log: Feb 27,2020 20:32:34:446 SERVER_ID: 19 -> CLIENT_ID: 67 SEND: "GET" KEY-> 66 VALUE-> 31
Server log: Feb 27,2020 20:32:34:448 CLIENT_ID: 68 -> SERVER_ID: 20 RECEIVE: "GET" KEY-> -2 Client log: Feb 27,2020 20:32:34:448 SERVER_ID: 19 -> CLIENT_ID: 67 RESPONSE: "GET" SUCESS KEY-> 66 VALUE-> 31
Client log: Feb 27,2020 20:32:34:448 CLIENT_ID: 76 SEND: "UPDATE" KEY-> 79 VALUE-> 119
Server log: Feb 27,2020 20:32:34:458 SERVER_ID: 20 -> CLIENT_ID: 68 SEND: "GET" KEY-> -2 VALUE-> -60
Server log: Feb 27,2020 20:32:34:458 CLIENT_ID: 69 -> SERVER_ID: 23 RECEIVE: "DELETE" KEY-> -111
Client log: Feb 27,2020 20:32:34:460 SERVER_ID: 20 -> CLIENT_ID: 68 RESPONSE: "GET" SUCESS KEY-> -2 VALUE-> -60
Client log: Feb 27,2020 20:32:34:461 CLIENT_ID: 77 SEND: "PUT" KEY-> -72 VALUE-> -42
Server log: Feb 27,2020 20:32:34:512 SERVER_ID: 23 -> CLIENT_ID: 69 SEND: "DELETE" KEY-> -111
Server log: Feb 27,2020 20:32:34:512 CLIENT_ID: 70 -> SERVER_ID: 22 RECEIVE: "DELETE" KEY-> -80
Client log: Feb 27,2020 20:32:34:513 SERVER_ID: 23 -> CLIENT_ID: 69 RESPONSE: "DELETE" SUCESS KEY-> -111
Client log: Feb 27,2020 20:32:34:513 CLIENT_ID: 78 SEND: "UPDATE" KEY-> -2 VALUE-> -92
Server log: Feb 27,2020 20:32:34:565 SERVER_ID: 22 -> CLIENT_ID: 70 SEND: "DELETE" KEY-> -80
Server log: Feb 27,2020 20:32:34:565 CLIENT_ID: 71 -> SERVER_ID: 25 RECEIVE: "DELETE" KEY-> 66 Client log: Feb 27,2020 20:32:34:566 SERVER_ID: 22 -> CLIENT_ID: 70 RESPONSE: "DELETE" SUCESS KEY-> -80
Client log: Feb 27,2020 20:32:34:567 CLIENT_ID: 79 SEND: "PUT" KEY-> -26 VALUE-> -8
Server log: Feb 27,2020 20:32:34:617 SERVER_ID: 25 -> CLIENT_ID: 71 SEND: "DELETE" KEY-> 66
Server log: Feb 27,2020 20:32:34:617 CLIENT_ID: 72 -> SERVER_ID: 13 RECEIVE: "PUT" KEY-> 123 VALUE-> -117
Client log: Feb 27,2020 20:32:34:618 SERVER_ID: 25 -> CLIENT_ID: 71 RESPONSE: "DELETE" SUCESS KEY-> 66
Client log: Feb 27,2020 20:32:34:618 CLIENT_ID: 80 SEND: "GET" KEY-> -2
Server log: Feb 27,2020 20:32:34:669 SERVER_ID: 13 -> CLIENT_ID: 72 SEND: "PUT" KEY-> 123 VALUE-> -117
Server log: Feb 27,2020 20:32:34:669 CLIENT_ID: 73 -> SERVER_ID: 16 RECEIVE: "PUT" KEY-> 51 VALUE-> 88
Client log: Feb 27,2020 20:32:34:670 SERVER_ID: 13 -> CLIENT_ID: 72 RESPONSE: "PUT" SUCESS KEY-> 123 VALUE-> -117
Client log: Feb 27,2020 20:32:34:670 CLIENT_ID: 81 SEND: "DELETE" KEY-> 85
Server log: Feb 27,2020 20:32:34:723 SERVER_ID: 16 -> CLIENT_ID: 73 SEND: "PUT" KEY-> 51 VALUE-> 88
Server log: Feb 27,2020 20:32:34:723 CLIENT_ID: 74 -> SERVER_ID: 24 RECEIVE: "PUT" KEY-> 117 VALUE-> 84
Client log: Feb 27,2020 20:32:34:724 SERVER_ID: 16 -> CLIENT_ID: 73 RESPONSE: "PUT" SUCESS KEY-> 51 VALUE-> 88
Client log: Feb 27,2020 20:32:34:725 CLIENT_ID: 82 SEND: "DELETE" KEY-> -75
Server log: Feb 27,2020 20:32:34:776 SERVER_ID: 24 -> CLIENT_ID: 74 SEND: "PUT" KEY-> 117 VALUE-> 84
Server log: Feb 27,2020 20:32:34:777 CLIENT_ID: 75 -> SERVER_ID: 17 RECEIVE: "UPDATE" KEY-> -2
Client log: Feb 27,2020 20:32:34:777 SERVER_ID: 24 -> CLIENT_ID: 74 RESPONSE: "PUT" SUCESS KEY-> 117 VALUE-> 84
Client log: Feb 27,2020 20:32:34:789 CLIENT_ID: 83 SEND: "UPDATE" KEY-> -24 VALUE-> -116
Server log: Feb 27,2020 20:32:34:831 SERVER_ID: 17 -> CLIENT_ID: 75 SEND: "UPDATE" KEY-> -2 VALUE-> 33
Server log: Feb 27,2020 20:32:34:831 CLIENT_ID: 76 -> SERVER_ID: 21 RECEIVE: "UPDATE" KEY-> 79
Client log: Feb 27,2020 20:32:34:832 SERVER_ID: 17 -> CLIENT_ID: 75 RESPONSE: "UPDATE" SUCESS KEY-> -2 VALUE-> 33
```

### DELTE

#### PUT FAIL

```
Server log: Feb 27,2020 20:32:36:382 CLIENT_ID: 109 -> SERVER_ID: 17 RECEIVE: "PUT" KEY-> -72 VALUE-> -19
Client log: Feb 27,2020 20:32:36:382 SERVER_ID: 19 -> CLIENT_ID: 108 RESPONSE: "GET" SUCESS KEY-> -96 VALUE-> -23
Client log: Feb 27,2020 20:32:36:383 CLIENT_ID: 117 SEND: "PUT" KEY-> -113 VALUE-> 118
Server log: Feb 27,2020 20:32:36:435 SERVER_ID: 17 -> CLIENT_ID: 109 Throw Exception: "PUT" FAIL KEY-> -72 ALREADY EXISTS
Server log: Feb 27,2020 20:32:36:435 CLIENT_ID: 110 -> SERVER_ID: 23 RECEIVE: "GET" KEY-> 116
Client log: Feb 27,2020 20:32:36:435 Server Throw Exception -> CLIENT_ID: 109 RESPONSE: "PUT" FAIL KEY-> -72 ALREADY EXISTS
```

### **GET FAIL**

```
Server log: Feb 27,2020 20:35:11:098 CLIENT_ID: 189 -> SERVER_ID: 102 RECEIVE: "DELETE" KEY-> 49
Server log: Feb 27,2020 20:35:11:098 CLIENT_ID: 190 -> SERVER_ID: 31 RECEIVE: "GET" KEY-> 59
Client log: Feb 27,2020 20:35:11:099 SERVER_ID: 53 -> CLIENT_ID: 179 RESPONSE: "DELETE" SUCESS KEY-> 64
Client log: Feb 27,2020 20:35:11:099 SERVER_ID: 48 -> CLIENT_ID: 176 RESPONSE: "PUT" SUCESS KEY-> 125 VALUE-> 65
Client log: Feb 27,2020 20:35:11:099 CLIENT_ID: 1031 SEND: "UPDATE" KEY-> -119 VALUE-> -65
Client log: Feb 27,2020 20:35:11:099 SERVER_ID: 96 -> CLIENT_ID: 177 RESPONSE: "UPDATE" SUCESS KEY-> 83 VALUE-> -40 Client log: Feb 27,2020 20:35:11:099 CLIENT_ID: 1032 SEND: "GET" KEY-> -73
Client log: Feb 27,2020 20:35:11:099 SERVER_ID: 44 -> CLIENT_ID: 180 RESPONSE: "UPDATE" SUCESS KEY-> 78 VALUE-> 34
Client log: Feb 27,2020 20:35:11:099 CLIENT_ID: 1033 SEND: "PUT" KEY-> -28 VALUE-> -63 Client log: Feb 27,2020 20:35:11:100 CLIENT_ID: 1034 SEND: "GET" KEY-> -111
Server log: Feb 27,2020 20:35:11:108 SERVER_ID: 29 -> CLIENT_ID: 182 SEND: "DELETE" KEY-> 4
Server log: Feb 27,2020 20:35:11:108 SERVER_ID: 49 -> CLIENT_ID: 181 SEND: "UPDATE" KEY-> -115 VALUE-> 66
Server log: Feb 27,2020 20:35:11:108 CLIENT_ID: 192 -> SERVER_ID: 51 RECEIVE: "UPDATE" KEY-> 108
Server log: Feb 27,2020 20:35:11:108 CLIENT_ID: 191 -> SERVER_ID: 55 RECEIVE: "PUT" KEY-> -116 VALUE-> 16
Client log: Feb 27,2020 20:35:11:108 SERVER_ID: 29 -> CLIENT_ID: 182 RESPONSE: "DELETE" SUCESS KEY-> 4
Client log: Feb 27,2020 20:35:11:108 SERVER_ID: 49 -> CLIENT_ID: 181 RESPONSE: "UPDATE" SUCESS KEY-> -115 VALUE-> 66
Server log: Feb 27,2020 20:35:11:108 SERVER_ID: 31 -> CLIENT_ID: 190 Throw Exception: "GET" FAIL KEY-> 59 NOT FOUND
Client log: Feb 27,2020 20:35:11:108 CLIENT_ID: 1035 SEND: "UPDATE" KEY-> 125 VALUE-> 112
Server log: Feb 27,2020 20:35:11:108 CLIENT_ID: 193 -> SERVER_ID: 95 RECEIVE: "GET" KEY-> -65
Client log: Feb 27,2020 20:35:11:109 CLIENT_ID: 1036 SEND: "GET" KEY-> -29
Server log: Feb 27,2020 20:35:11:109 SERVER_ID: 22 -> CLIENT_ID: 183 SEND: "PUT" KEY-> 10 VALUE-> -24
Client log: Feb 27,2020 20:35:11:109 CLIENT_ID: 1037 SEND: "GET" KEY-> -95
Client log: Feb 27,2020 20:35:11:109 Server Throw Exception -> CLIENT_ID: 190 RESPONSE: "GET" FAIL KEY-> 59 NOT FOUND
Server log: Feb 27,2020 20:35:11:109 CLIENT_ID: 194 -> SERVER_ID: 21 RECEIVE: "UPDATE" KEY-> 114
```

# **UPDATE DELETE FAIL**

```
Client log: Feb 27,2020 20:35:08:544 CLIENT_ID: 452 SEND: "UPDATE" KEY-> 52 VALUE-> 26
Client log: Feb 27,2020 20:35:08:544 SERVER_ID: 31 -> CLIENT_ID: 37 RESPONSE: "PUT" SUCESS KEY-> -112 VALUE-> -97
Client log: Feb 27,2020 20:35:08:545 SERVER_ID: 30 -> CLIENT_ID: 86 RESPONSE: "PUT" SUCESS KEY-> 90 VALUE-> 43
Client log: Feb 27,2020 20:35:08:545 SERVER_ID: 30 -> CLIENT_ID: 86 RESPONSE: "PUT" SUCESS KEY-> 90 VALUE-> 43
Client log: Feb 27,2020 20:35:08:545 CLIENT_ID: 454 SEND: "PUT" KEY-> 0 VALUE-> 16
Client log: Feb 27,2020 20:35:08:545 SERVER_ID: 26 -> CLIENT_ID: 223 RESPONSE: "PUT" SUCESS KEY-> 45 VALUE-> -31
Client log: Feb 27,2020 20:35:08:545 CLIENT_ID: 455 SEND: "UPDATE" KEY-> 5 VALUE-> -79
Client log: Feb 27,2020 20:35:08:546 SERVER_ID: 43 -> CLIENT_ID: 70 RESPONSE: "PUT" SUCESS KEY-> -58 VALUE-> -115
Client log: Feb 27,2020 20:35:08:546 CLIENT_ID: 456 SEND: "DELETE" KEY-> 52
Server log: Feb 27,2020 20:35:08:907 CLIENT_ID: 200 -> SERVER_ID: 32 RECEIVE: "DELETE" KEY-> 52
Server log: Feb 27,2020 20:35:08:907 CLIENT_ID: 198 -> SERVER_ID: 31 RECEIVE: "DELETE" KEY-> 52
Server log: Feb 27,2020 20:35:08:907 CLIENT_ID: 196 -> SERVER_ID: 35 RECEIVE: "PUT" KEY-> 0 VALUE-> 16
Server log: Feb 27,2020 20:35:08:907 SERVER_ID: 46 -> CLIENT_ID: 178 RESPONSE: "DELETE" SUCESS KEY-> 86
Client log: Feb 27,2020 20:35:08:907 SERVER_ID: 46 -> CLIENT_ID: 178 RESPONSE: "DELETE" SUCESS KEY-> 86
Client log: Feb 27,2020 20:35:08:907 SERVER_ID: 51 SEND: "UPDATE" KEY-> 102 VALUE-> -85
```

```
Server log: Feb 27,2020 20:35:08:957 SERVER_ID: 55 -> CLIENT_ID: 192 Throw Exception: "PUT" FAIL KEY-> -98 ALREADY EXISTS
Server log: Feb 27,2020 20:35:08:957 SERVER_ID: 36 -> CLIENT_ID: 193 SEND: "DELETE" KEY-> -51
Server log: Feb 27,2020 20:35:08:957 SERVER_ID: 32 -> CLIENT_ID: 200 SEND: "DELETE" KEY-> 52
Server log: Feb 27,2020 20:35:08:957 SERVER_ID: 43 -> CLIENT_ID: 195 SEND: "PUT" KEY-> -85 VALUE-> -39 Server log: Feb 27,2020 20:35:08:957 SERVER_ID: 40 -> CLIENT_ID: 194 SEND: "PUT" KEY-> 74 VALUE-> -65
Server log: Feb 27,2020 20:35:08:957 SERVER_ID: 35 -> CLIENT_ID: 196 Throw Exception: "UPDATE" FAIL KEY-> 52 NOT FOUND Server log: Feb 27,2020 20:35:08:957 SERVER_ID: 21 -> CLIENT_ID: 191 SEND: "PUT" KEY-> -51 VALUE-> 86
Server log: Feb 27,2020 20:35:08:958 CLIENT_ID: 202 -> SERVER_ID: 26 RECEIVE: "PUT" KEY-> -69 VALUE-> 118
Server log: Feb 27,2020 20:35:08:958 CLIENT_ID: 197 -> SERVER_ID: 20 RECEIVE: "PUT" KEY-> -115 VALUE-> -35
Server log: Feb 27,2020 20:35:08:958 CLIENT_ID: 199 -> SERVER_ID: 42 RECEIVE: "UPDATE" KEY-> 5
Server log: Feb 27,2020 20:35:08:958 SERVER_ID: 31 -> CLIENT_ID: 198 SEND: "PUT" KEY-> 0 VALUE-> 16
Server log: Feb 27,2020 20:35:08:958 CLIENT_ID: 203 -> SERVER_ID: 37 RECEIVE: "DELETE" KEY-> -112
Server log: Feb 27,2020 20:35:08:958 CLIENT_ID: 205 -> SERVER_ID: 23 RECEIVE: "GET" KEY-> 112
Server log: Feb 27,2020 20:35:08:958 CLIENT_ID: 206 -> SERVER_ID: 33 RECEIVE: "GET" KEY-> -40
Server log: Feb 27,2020 20:35:08:958 CLIENT_ID: 204 -> SERVER_ID: 38 RECEIVE: "UPDATE" KEY-> -58
Server log: Feb 27,2020 20:35:08:958 CLIENT_ID: 207 -> SERVER_ID: 22 RECEIVE: "DELETE" KEY-> -58
Server log: Feb 27,2020 20:35:08:958 CLIENT_ID: 208 -> SERVER_ID: 54 RECEIVE: "UPDATE" KEY-> 50
Client log: Feb 27,2020 20:35:08:960 Server Throw Exception -> CLIENT_ID: 196 RESPONSE: "UPDATE" FAIL KEY-> 52 NOT FOUND Client log: Feb 27,2020 20:35:08:960 Server Throw Exception -> CLIENT_ID: 192 RESPONSE: "PUT" FAIL KEY-> -98 ALREADY EXISTS
Client log: Feb 27,2020 20:35:08:960 CLIENT_ID: 531 SEND: "UPDATE" KEY-> -53 VALUE-> -80
Client log: Feb 27,2020 20:35:08:960 SERVER_ID: 32 -> CLIENT_ID: 200 RESPONSE: "DELETE" SUCESS KEY-> 52
Client log: Feb 27.2020 20:35:08:960 CLIENT TD: 532 SEND: "DELETE" KEY-> -78
```