Performance Evaluation

The script to run the performance evaluation is PerfTest.java.

Steps:

Modify the variables :

In property file

start – number for start of ‘for ‘loop

stop- number for end of ‘for ‘loop

NumberOfSystem – number of servers in the system

In Peer.java

numberOfServer= number of servers in the system( in the hashCode() method)

Test environment

VM

OS : Linux

Cores used : 4

Files required : Perf.java , Utility.java, ServerOperate.java

Total number of Servers in the network : 8

|  |  |  |  |
| --- | --- | --- | --- |
| No. of Clients running concurrent operations | Put per operation time in ms | Get per operation time in ms | Delete per operation time in ms |
| 1 | 32.2 | 38.2 | 31.1 |
| 2 | 35.7 | 39.4 | 33.7 |
| 3 | 39.1 | 40.0 | 34.9 |
| 4 | 40.4 | 41.2 | 35.1 |
| 5 | 40.7 | 41.3 | 36.2 |
| 6 | 41.4 | 41.7 | 36.5 |
| 7 | 43.0 | 41.8 | 37.1 |
| 8 | 43.5 | 42.5 | 37.3 |

Sample Ouput

property file chosen is /home/vthangap/workspace/prop.properties

enter the 100 to start client service of peer please ensure after all servers on the distributed network are up

100

connected to 192.168.2.11:7901

connected to distributed network

enter 1 to get a value ,2 to put a value ,3 to delete a key ,4 to exit

2

no of operations -100

response time for the put in ms 3935

Observations

* As the number of peers are concurrently performing operations the response time increases
* When the number of cores in the test system is higher the performance is better
* Ping operation in the test system is 0.8 ms , the average per operation in the distributed hash table timing is 39 ms