**Analysis for performance based on the drop rate and actual timeout on server and client**

I have presented 2 cases. First is done for timeout rate 300ms. Second is done using 100ms. To have more accurate picture, each drop rate is calculated for 3 different values, the average is computed. The final graphics are built based on the average of valu1, value2 and value3.

**Conditions:**

1. The application is tested on my private network.

2. valu1, value2 and value3 are computed only for GET operation. I assume that PUT should not give difference.

3. Analysis are done using the same 2000byte file

**Conclusion:**

Based on graph1 and graph2, I can conclude that for bought of the cases we have linear(almost) relationship between a drop rate and the number of packets that server has to sent to complete file transfer. In my example the file that has to be transferred consists of 36 frame.

Change from 300ms to 100ms does not give significant difference. I conclude that bought of the timeouts are more or less OK meaning that neither 100m nor 300ms does not cause unnecessary packet transmission.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 300ms timeour rate | |  |  |
| DropRate | valu1 | valu2 | valu3 | average |
| 0 | 36 | 36 | 36 | 36 |
| 5 | 40 | 44 | 37 | 40 |
| 10 | 50 | 41 | 42 | 44 |
| 15 | 50 | 45 | 52 | 49 |
| 20 | 52 | 59 | 64 | 58 |
| 25 | 61 | 69 | 72 | 67 |
| 30 | 82 | 63 | 67 | 71 |
| 35 | 93 | 95 | 89 | 92 |
| 40 | 101 | 104 | 103 | 103 |
| 45 | 119 | 139 | 111 | 123 |
| 50 | 127 | 164 | 147 | 146 |

Graph 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 100ms timeout rate | |  |  |
| DropRate | valu1 | valu2 | valu3 | average |
| 0 | 36 | 36 | 36 | 36 |
| 5 | 40 | 39 | 42 | 40 |
| 10 | 48 | 43 | 45 | 45 |
| 15 | 61 | 48 | 52 | 54 |
| 20 | 60 | 52 | 54 | 55 |
| 25 | 63 | 74 | 73 | 70 |
| 30 | 78 | 73 | 74 | 75 |
| 35 | 78 | 63 | 91 | 77 |
| 40 | 120 | 111 | 100 | 110 |
| 45 | 131 | 85 | 118 | 111 |
| 50 | 177 | 138 | 154 | 156 |

Graph 2