All the crossed texts are for my information.

We can see from the following results that RL is better than SC in all the cases, and closely approximates the optimal latency all the times. We also notice that RL is sometimes better than Optimal when the time frame is very small; it can be because of the randomness. Therefore, once the time frame is increased we can see that RL approximates Optimal latency with a close bound.

As for the values of SC, we can see pretty high values compared to RL or optimal latency.

~~[7\_26.docx~~

~~Inter-arrival rate=Uniform (g\_arrivalmean-20, g\_arrivalmean+20);~~

~~ServiceTime=Uniform (param-30, param+30)]~~

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| G\_arrivalmean | Number of requests in a time frame | Average Latency for SC | Average latency for RL | Optimal Latency | Remarks |
| 200 | 5 | 170.83 | 18.91 | 29.64 |  |
| 200 | 10 | 170.83 | 31.94 | 29.68 |  |
| 200 | 100 | 170.83 | 36.91 | 29.61 |  |
| 100 | 100 | 142.93 | 39.54 | 29.61 |  |
| 100 | 50 | 142.93 | 33.4 | 29.63 |  |
| 100 | 10 | 142.93 | 31.53 | 29.69 |  |
| 100 | 8 | 142.93 | 29.8 | 29.65 |  |
| 100 | 9 | 142.93 | 30.84 | 29.65 |  |

~~Inter-arrival rate: Exponential(g\_arrivalmean)~~

~~Basic service time= Exponential(g\_aMultifpleThreadInteferPara[g\_servthreadNum - 1][0])~~

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| G\_arrivalmean | Number of requests in a time frame | Average Latency for SC | Average latency for RL | Average Latency for SC | Remarks |
| 200 | 9 | 170.83 | 28.73 | 29.66 |  |
|  |  |  |  |  |  |
| 70,80,90,100,150,200, 400,500,1000,2000 | 50 | 109.514 | 53.23 | 43.94 |  |
| 70,80,90,100,150,200, 400,500,1000,2000 | 35 | 109.514 | 86.81 | 43.81 |  |
| 70,80,90,100,150,200, 400,500,1000,2000 | 100 | 109.514 |  |  | Didn’t converge, (unstable region) |
| 100,150,200,250,260,270,290,295,300,500 | 100 | 96.8 | 76.6 | 38.88 |  |
| 100,150,200,250,260,270,290,295,300,500 | 20 | 96.8 | 46.08 | 39.0225 | 1000 time frame |
| 100,150,200,250,260,270,290,295,300,500 | 10 | 96.8 | 61.4434 | 38.549 | 1000 time frame |
| 100,150,200,250,260,270,290,295,300,500 | 5 | 96.8 | 31.85 | 38.07 |  |
| 100,150,200,250,260,270,290,295,300,500 | 20 | 96.8 | 37.62 | 38.88 | 5000 time frames |
| 100,150,200,250,260,270,290,295,300,500 | 50 | 96.8 | 44.99 | 38.99 | 5000 time frames |
| 100,150,200,250,260,270,290,295,300,500 | 30 | 96.8 |  |  | 5000 time frames |
| 100,150,200,250,260,270,290,295,300,500 | 100 | 96.8 |  |  | 5000 time frames |

~~7\_24~~

~~inter-arrival rate= uniform(arrival rate-20, arrival rate+20).~~

~~Service Time= Exponential(basic Service Time)~~

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| G\_arrivalmean | Number of time frames | Number of requests in a time frame | Average latency for SC | Average latency for RL | Optimal Latency |
| 200 | 1000 | 5 | 170.83 | 21.54 | 33.515 |
| 200 | 1000 | 10 | 170.83 | 37.61 | 33.66 |
| 200 | 1000 | 1000 | 170.83 | 44.54 | 33.97 |
| 100 | 1000 | 5 | 142.93 | 18.99 | 30.29 |
| 100 | 1000 | 20 | 142.93 | 27.0154 | 30.88 |
| 100 | 1000 | 35 | 142.93 | 35.3 | 30.807 |
| 75 | 1000 | 35 | 156.88 | 38.57 | 32.83 |
| 75 | 1000 | 100 | 156.88 | 48.83 | 32.76 |
| 70,80,90,100,150,200, 400,500,1000,2000 | 1000 | 5 | 109.514 | 24.91 | 32.82 |
| 70,80,90,100,150,200, 400,500,1000,2000 | 1000 | 10 | 109.514 | 48.28 | 33.18 |
| 70,80,90,100,150,200, 400,500,1000,2000 | 5000 | 10 | 109.514 | 37.87 | 33.54 |
| 70,80,90,100,150,200, 400,500,1000,2000 | 5000 | 5 | 109.514 | 19.9 | 33.48 |