

1. Find the values to complete the table below in the log file

| Measured Param | OSP1 | OSP2 | OSP3 |
|--|------------|------------|------------|
| CPU Utilization | 76.058% | 96.994% | 91.748% |
| Average Service Time per Thread | 21099.115 | 3086.6335 | 10978.97 |
| Average Normalized Service Time per Thread | 0.04946768 | 0.07018642 | 0.09991625 |
| Total Number of Tasks | 5 | 2 | 3 |
| Threads Summary | 14 alive | 3 alive | 6 alive |

| Measured Param | OSP4 |
|--|------------|
| CPU Utilization | 98.979996% |
| Average Service Time per Thread | 16663.87 |
| Average Normalized Service Time per Thread | 0.09238082 |
| Total Number of Tasks | 4 |
| Threads Summary | 6 alive |

2. Fill in the columns of the chart for each run. Use the observations copied in the table to answer the following questions:

a. **What changed between the three parameter files?**

The total number of tasks performed changed, as did CPU utilization % and the average service time per thread. The normalized service time does demonstrate change, but it is in the nanoseconds.

- b. **How did this affect the simulation results?** Utilizing more of the CPU performed tasks faster in the average service time field, which also resulted in time differences in the normalized service time.

3. **Make a copy of "params1.osp" and rename it as "params4.osp". Using your text editor of choice, choose a parameter used in the simulation and change it. Run the simulator using "params4.osp" and add the results to your table.**

a. **What parameter did you vary?** I changed the logfile parameter to be OSP4.log, as well as changed the MaxTasks variable to 20.

b. **What does the parameter you varied do?** I assume the parameter MaxTasks limits the maximum number of tasks the simulation is allowed to perform during the simulation. Changing this should change the maximum number of tasks, allowing the simulation to run more or less tasks during simulation.

c. **Can you determine how the resulting simulator run was affected? If so, describe how it was affected. If not, then explain why not.** The simulation ran one less task than in params1, and

utilized much more CPU power. This resulted in faster Average Service Time and Normalized Service Times per thread.