**SCHEDULER BENCHMARKING**

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Considering the fact that a meaningful benchmark can be tricky, I concerned my measurements to before and after an optimization so as to see the effects.

**TEST 1**

**NR\_SCHED\_QUEUES=42**

**USER\_QUANTUM=950**

**BALANCE\_TIMEOUT =10**

For the **I/O bound process**, my **System-Time was** significantly high with an average of **100.7366** and in-par with **Real-Time** at an average of **101.8396**. The **User-Time** on the other-hand was significantly lower at an average of **0.5629.**

The **CPU bound process** incurred little or no system-time with an average of **0.0032, Real-time and User-Time** consistent at **209.3182** and **209.3148** respectively.

**TEST 2**

**NR\_SCHED\_QUEUES=22**

**USER\_QUANTUM=1200**

**BALANCE\_TIMEOUT =15**

With the **NR\_SCHED\_QUEUES** time reduced by half with **USER\_QUANTUM and BALANCE\_TIMEOUT** increased**,** the **I/O bound process** did not display any significant change in time; **System-Time was** at an average of **100.7366** and in-par with **Real-Time** at an average of **101.1083**. The **User-Time** on the other-hand was significantly lower at an average of **0.5881.**

The **CPU bound process** of **0.0048** a-bit slightly higher than the previous test**, Real-time and User-Time** consistent at **209.6797** and **209.7344** respectively.

**TEST 3**

**NR\_SCHED\_QUEUES=32**

**USER\_QUANTUM=100**

**BALANCE\_TIMEOUT =2**

Significantly lower **USER\_QUANTUM and BALANCE\_TIMEOUT** when compared to the first two test and **NR\_SCHED\_QUEUES** set at an average of the previous two **,**  the **I/O bound process** displayed little significant change in time; **System-Time was** at an average of **100.9015** and slightly lower to **Real-Time** at an average of **101.7028**. The **User-Time** on the other-hand displayed no visible reduction in time at an average of **0.548.**

The **CPU bound process** displayed a higher **System-Time** average of **0.0064** than the previous tests**, Real-time and User-Time** at **209.3946** and **209.4864** respectively.

**TEST 4**

**NR\_SCHED\_QUEUES=12**

**USER\_QUANTUM=1100**

**BALANCE\_TIMEOUT =5**

This test displayed significant variance in process time. The **NR\_SCHED\_QUEUES** lower than all other test, the **I/O bound process** displayed significant change in time; **System-Time was** at an average of **115.3381** and **Real-Time** at an average of **114.3646**. The **User-Time** on the other-hand displayed no visible reduction in time at an average of **0.5465.**

The **CPU bound process** though not significantly impacted overall did display a lower **System-Time** average of **0.0016, Real-time and User-Time** at **209.4229** and **209.4212** respectively.

**TEST 5**

**NR\_SCHED\_QUEUES=50**

**USER\_QUANTUM=1400**

**BALANCE\_TIMEOUT =19**

This test encompassed the highest time setting for all changed variables, **NR\_SCHED\_QUEUES, USER\_QUANTUM and BALANCE\_TIMEOUT**, the **I/O bound process** time was consistent with the first three test; **System-Time was** at an average of **101.2814** and **Real-Time** at an average of **100.4396**. The **User-Time** on the other-hand displayed no visible reduction in time at an average of **0.4668.**

The **CPU bound process** though displayed the highest **System-Time** of all tests at average of **0.0082, Real-time and User-Time** at **209.8514** and **209.843** respectively.