**[Oracle](http://lib.csdn.net/base/oracle)[数据库](http://lib.csdn.net/base/mysql)中平均事务响应时间的计算公式**

**注： 该计算公式取自：白鳝 <<oracle 优化日记>>，p316页**

Top 5 Timed Events

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Event** | **Waits** | **Time(s)** | **Avg Wait(ms)** | **% Total Call Time** | **Wait Class** |
| direct path read | 327,284 | 15,555 | 48 | 86.4 | User I/O |
| CPU time |  | 1,093 |  | 6.1 |  |
| db file sequential read | 283,101 | 509 | 2 | 2.8 | User I/O |
| db file scattered read | 99,520 | 180 | 2 | 1.0 | User I/O |
| enq: TX - row lock contention | 274 | 133 | 485 | .7 | Application |

### Wait Events

* s - second
* cs - centisecond - 100th of a second
* ms - millisecond - 1000th of a second
* us - microsecond - 1000000th of a second
* ordered by wait time desc, waits desc (idle events last)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Event** | **Waits** | **%Time -outs** | **Total Wait Time (s)** | **Avg wait (ms)** | **Waits /txn** |
| direct path read | 327,284 | 0.00 | 15,555 | 48 | 32.66 |
| db file sequential read | 283,101 | 0.00 | 509 | 2 | 28.25 |
| db file scattered read | 99,520 | 0.00 | 180 | 2 | 9.93 |
| enq: TX - row lock contention | 274 | 98.91 | 133 | 485 | 0.03 |
| log file sync | 6,791 | 0.00 | 93 | 14 | 0.68 |
| control file sequential read | 16,168 | 0.00 | 91 | 6 | 1.61 |
| log file parallel write | 7,816 | 0.00 | 82 | 10 | 0.78 |
| name-service call wait | 1,199 | 0.42 | 68 | 57 | 0.12 |

1. 以"direct path read"这个等待事件为例子来计算：
3. A---"direct path read" 的  Total Wait Time（以ms来计算）为15555\*1000=15555000ms
5. B---"direct path read" 的   Waits 为327284
7. C---"direct path read" 的   Waits /txn   为32.66
9. D---"direct path read" 的   % Total Call Time 为 86.4%=0.864

12. 平均事务响应时间=A/B\*C/D=15555000/327284\*32.66/0.864=1796.584626 ms