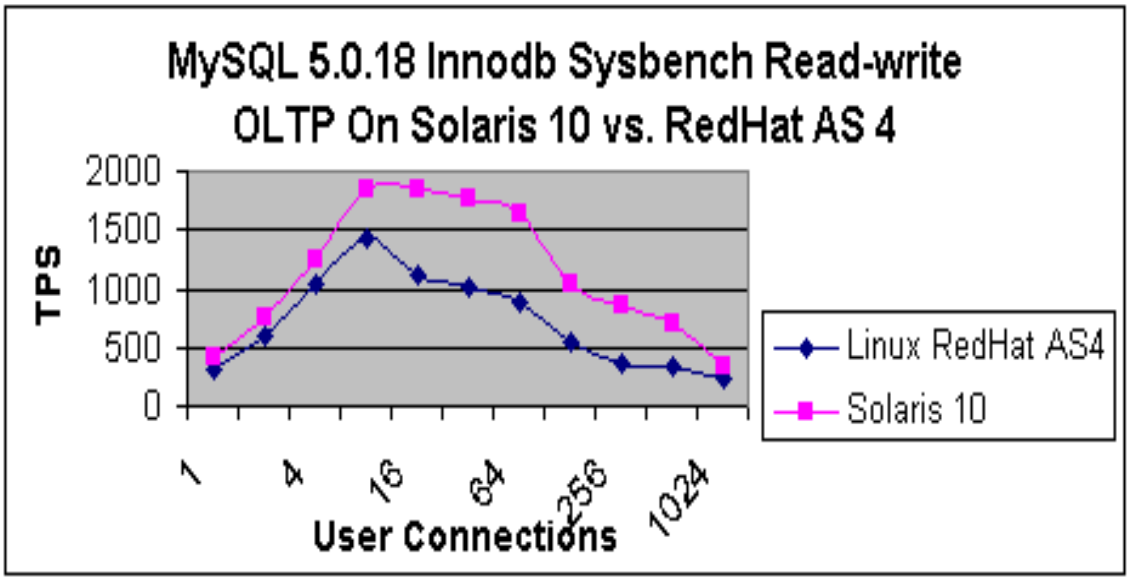
MySQL Innodb SysBench OLTP Benchmark Test

SysBench is a modular, cross-platform and multi-threaded benchmark tool for evaluating OS parameters that are important for a system running a database under intensive load. Among other features it allows to stress database server performance based on the on-line transaction processing workload.

Testing was conducted at Sun Microsystem facilities in Newark, California in April, 2006.

Read/Write test

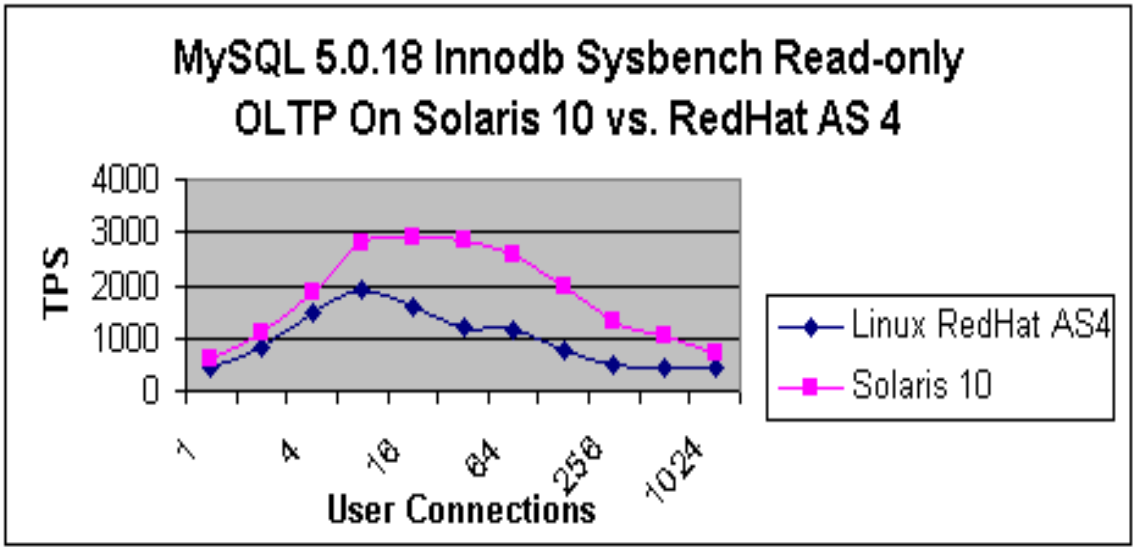
System: Sun Fire(TM) V40z, 4x AMD Opteron (TM) Model 875 CPUs
CPU speed: 2192 MHz
Memory:16 GB
MySQL: 5.0.18, 1M-Row table



# of Threads	RHEL4 AS	# of Threads	Solaris 10	% Delta
1	324.66	1	422.09	30.01
2	598.18	2	755.14	26.24
4	1051.06	4	1253.79	19.29
8	1415.76	8	1840.99	30.04
16	1126.85	16	1840.9	63.37
32	1022.34	32	1763	72.45
64	874.72	64	1623.55	85.61
128	538.01	128	1027.02	90.89
256	364.06	256	845.84	132.34
512	326.37	512	690.07	111.44
1024	237.89	1024	347.09	45.9
			Average	64.32

Read-Only test

System: Sun Fire(TM) V40z, 4x AMD Opteron (TM) Model 875 CPUs
CPU speed: 2192 MHz
Memory:16 GB
MySQL: 5.0.18, 1M-Row table



# of Threads	AS	# of Threads	Solaris10	% Delta
1	433.28	1	597.56	37.92
2	811.65	2	1105.57	36.21
4	1469.44	4	1884.62	28.25
8	1895.07	8	2814.54	48.52
16	1562.09	16	2900.22	85.66
32	1183.07	32	2831.01	139.29
64	1135.54	64	2595.95	128.61
128	771.37	128	1954.72	153.41
256	506.77	256	1289.04	154.36
512	465.09	512	1057.18	127.31
1024	433.28	1024	729.75	68.42
			Average	91.63

Conclusions

1. MySQL 5.0.18 Innodb's peak performance in the SysBench read/write test on Sun Fire V40z server, running Solaris 10 OS with 8 concurrent user connections (CUC), beats the performance of the same platform, executing RedHat Enterprise Linux 4 AS OS with 8 CUC, by 30%.

2. MySQL 5.0.18 Innodb's peak performance in the SysBench read-only test on Sun Fire V40z server, running Solaris 10 OS with 16 CUC, tops the performance of the same platform, executing RedHat Enterprise Linux 4 AS OS with 8 CUC, by 53%.

MySQL options used for testing

```
# The MySQL server
[mysqld]
port  = 3306
socket = /tmp/mysql.sock
skip-locking
max-connections = 3500
set-variable    = key_buffer=1600M
#user = mysql
transaction_isolation = REPEATABLE-READ
innodb_data_file_path = ibdata1:100M:autoextend
innodb_buffer_pool_size = 1G
innodb_additional_mem_pool_size = 20M
innodb_log_file_size = 1900M
innodb_log_buffer_size = 8M
innodb_flush_log_at_trx_commit = 2
innodb_lock_wait_timeout = 300
innodb_locks_unsafe_for_binlog = 1
innodb_max_dirty_pages_pct = 90
innodb_thread_concurrency = 10
#innodb_commit_concurrency = 20
[isamchk]
set-variable    = key_buffer=12M
```

Started MySQL DB server by using the command: mysqld_safe --skip-grant-tables --skip-concurrent-insert