OMPL2001 Result

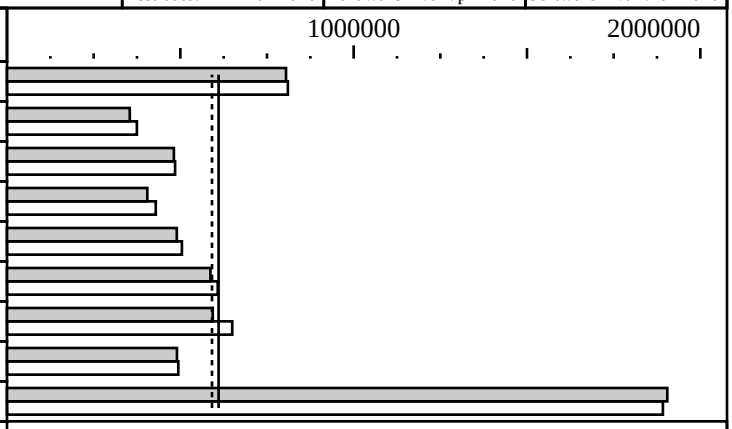
Quanta
Quanta QSSC-S4R Server System

SPECompLpeak2001 = 610386

SPECompLbase2001 = 591375

SPEC license #HPG0013 | Tested by: Intel Corporation | Test site: -- | Test date: Mar-2010 | Hardware Avail: Apr-2010 | Software Avail: Mar-2010

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	183	804869	182	810235
313.swim_l	12500	565	354157	534	374636
315.mgrid_l	13500	449	481397	445	484864
317.applu_l	13500	534	404713	503	429084
321.equake_l	13000	425	489837	412	504517
325.apsi_l	10500	286	586773	276	607789
327.gafort_l	11000	297	593441	271	649649
329.fma3d_l	23500	767	490315	761	494113
331.art_l	25000	210	1904688	211	1892021



Hardware

CPU:	Intel(R) Xeon(R) Processor X7560
CPU MHz:	2260
FPU:	Integrated
CPU(s) enabled:	32 cores, 4 chips, 8 cores/chip 2 threads/core
CPU(s) orderable:	1,2,3,4
Primary Cache:	32KB I + 32KB D on chip per core
Secondary Cache:	256KB I+D on chip per core
L3 Cache:	24MB I+D on chip per chip
Other Cache:	N/A
Memory:	256 GB (64 x 4GB DDR3 - 1066 Dual Rank RDIMMs)
Disk Subsystem:	Seagate 500 GB ST300655SS
Other Hardware:	

Software

OpenMP Threads:	64
Parallel:	OpenMP
Operating System:	Red Hat EL 5.3, kernel 2.6.18-128
Compiler:	Intel C/C++ Compiler 11.1.059 for Linux Intel FORTRAN Compiler 11.1.059 for Linux GNU C Compiler 4.1.2 20070115
File System:	Linux ext3
System State:	Default

Notes/Tuning Information

```
================================================================================
BIOS settings notes:
  Intel Hyper-Threading Technology (SMT): Enabled
  Intel Turbo Boost Technology up to 2.66 GHz

================================================================================
Extra Flags:
  331.art_l: -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8 -D_OPENMP
  all: -gcc-name=/usr/bin/gcc

================================================================================
General Notes and Enviroment variables
  export KMP_LIBRARY=turnaround
  export KMP_STACKSIZE=31M
  export KMP_BLOCKTIME=infinite
  export OMP_DYNAMIC=FALSE
  export OMP_NUM_THREADS=64
  ONESTEP=yes
  ulimit -s 64000

For compiler/openmp flags description please refer:
Intel-ic11.1-intel64-linux-flags-file-Feb-25-2010.html

Base optimization flags and enviroment variables:
================================================================================
Large:
```

Notes/Tuning Information (Continued)

```
    OPTIMIZE  = -O3 -xSSE4.2 -ipo1 -openmp
    COPTIMIZE  = -ansi-alias
    PORTABILITY = -mcmodel=medium -shared-intel
    export KMP_AFFINITY=scatter,1

  Peak optimization flags and enviroment variables:
  ================================================================================
  Large:
    OPTIMIZE  = -O3 -xSSE4.2 -ipo1 -openmp -rcd
    export KMP_AFFINITY=compact,1

  Peak per-benchmark optimization flags and enviroment variables:
  ================================================================================
  311.wupwise_l
    export KMP_AFFINITY=scatter,1

  ================================================================================
  313.swim_m
    OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp -opt-streaming-stores always -align -rcd
    PORTABILITY = -mcmodel=medium -shared-intel
    export KMP_AFFINITY=scatter,1
    export OMP_NUM_THREADS=32

  ================================================================================
  315.mgrid_l
    OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp -fno-alias -rcd

  ================================================================================
  317.applu_l
    PORTABILITY = -mcmodel=medium -shared-intel
    export KMP_AFFINITY=scatter,0

  ================================================================================
  321.equake_l
    export KMP_AFFINITY=scatter,1
    export OMP_NUM_THREADS=32

  ================================================================================
  325.appsi_l
    OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp
    export KMP_AFFINITY=scatter,0

  ================================================================================
  327.gafort_l
    PORTABILITY = -mcmodel=medium -shared-intel
    export KMP_AFFINITY=scatter,0

  ================================================================================
  329.fma3d_l
    FOPTIMIZE=-no-prec-sqrt -fp-model fast=2

  ================================================================================
  331.art_l
    COPTIMIZE=-ansi-alias
```

Notes/Tuning Information (Continued)