OMPL2001 Result

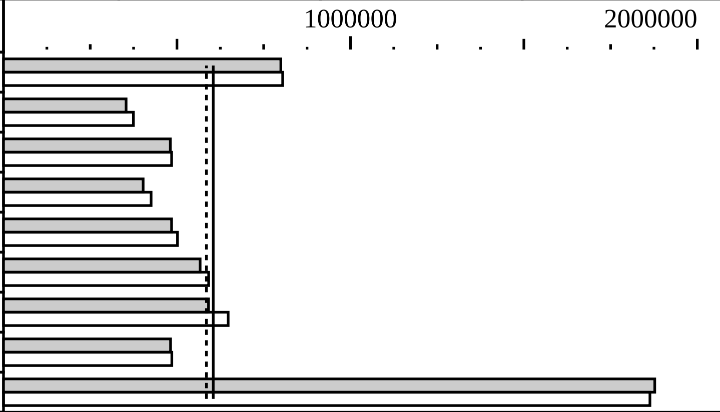
Quanta
Quanta QSSC-S4R Server System

SPECompLpeak2001 = 604593

SPECompLbase2001 = 585004

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	184	799458	183	804776
313.swim_l	12500	566	353387	534	374493
315.mgrid_l	13500	449	480920	446	484625
317.applu_l	13500	537	402537	508	425478
321.equake_l	13000	429	484519	415	501533
325.apsi_l	10500	296	566790	284	591428
327.gafort_l	11000	298	590987	272	647616
329.fma3d_l	23500	781	481569	775	485225
331.art_l	25000	213	1877290	215	1863391



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 Disabled

========================================================================
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)