OMPM2001 Result

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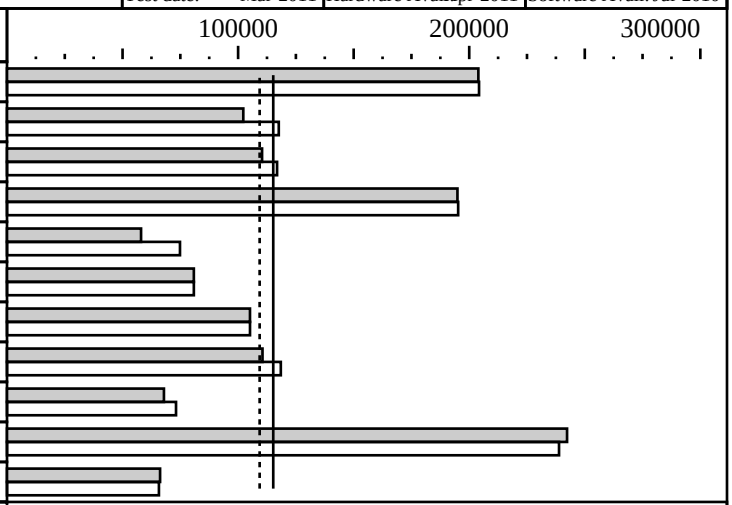
Quanta
Quanta QSSC-S4R Server System

SPECompMpeak2001 = 115203

SPECompMbase2001 = 109320

SPEC license #: HPG0013 | Tested by: Intel Corporation | Test site: -- | Test date: Mar-2011 | Hardware Avail: Apr-2011 | Software Avail: Jul-2010

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	29.4	203956	29.4	204248
312.swim_m	6000	58.7	102243	51.0	117594
314.mgrid_m	7300	66.1	110366	62.5	116860
316.applu_m	4000	20.5	194905	20.5	195216
318.galgel_m	5100	87.9	58007	68.1	74848
320.equake_m	2600	32.2	80845	32.2	80848
324.apsi_m	3400	32.3	105138	32.3	105148
326.gafort_m	8700	78.7	110552	73.4	118476
328.fma3d_m	4600	67.7	67905	62.9	73137
330.art_m	6400	26.4	242333	26.8	238858
332.ammp_m	7000	106	66236	106	65737



Hardware

CPU:	Intel(R) Xeon(R) Processor E7-8837
CPU MHz:	2660
FPU:	Integrated
CPU(s) enabled:	32 cores, 4 chips, 8 cores/chip 1 thread/core
CPU(s) orderable:	1,2,3,4
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
L3 Cache:	24 MB I+D on chip per chip
Other Cache:	N/A
Memory:	256 GB (64 x 4 GB DDR3 - 1066 RDIMM)
Disk Subsystem:	Intel RS2BL080 300 GB SATA HDD 10kRPM
Other Hardware:	

Software

OpenMP Threads:	32
Parallel:	OpenMP
Operating System:	Red Hat Enterprise Linux Server release 6.0 (Santiago), kernel 2.6.32-71
Compiler:	Intel C/C++ Compiler 11.1.059 for Linux Intel FORTRAN Compiler 11.1.059 for Linux GNU C Compiler 4.4.4 20100726
File System:	ext3
System State:	Default

Notes/Tuning Information

```
================================================================================
BIOS settings notes:
  Intel Turbo Boost Technology (Turbo)  : Enabled (Max 2.8 GHz)

================================================================================
Extra Flags:
  318.galgel_m: -FI -132
  330.art_m: -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8
  all: -gcc-name=/usr/bin/gcc

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

For compiler/openmp flags description please refer:
Intel-ic11.1-intel64-linux-flags-file-Mar-15-2011.html

Base optimization flags and environment variables:
```

Notes/Tuning Information (Continued)

```
================================================================================
Medium:
  OPTIMIZE  = -O3 -xSSE4.2 -ipo -openmp
  COPTIMIZE  = -ansi-alias
  export KMP_AFFINITY=compact,0

Peak optimization flags and environment variables:
================================================================================
Medium:
  OPTIMIZE  = -O3 -xSSE4.2 -ipo -openmp -rcd
  export KMP_AFFINITY=compact,0

Peak per-benchmark optimization flags and environment variables:
================================================================================
312.swim_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp -opt-streaming-stores always -align -rcd
  srcalt = ompl.32

================================================================================
314.mgrid_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp -fno-alias -rcd

================================================================================
318.galgel_m
  FOPTIMIZE=-mkl
  RM_SOURCES=lapak.f90

================================================================================
324.appsi_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp

================================================================================
326.gafort_m
  srcalt = ompl.32
  export KMP_AFFINITY=scatter,0

================================================================================
328.fma3d_m
  FOPTIMIZE=-no-prec-sqrt -fp-model fast=2
  srcalt = ompl.32

================================================================================
330.art_m
  COPTIMIZE=-ansi-alias

================================================================================
332.ammp_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp
```