OMPL2001 Result

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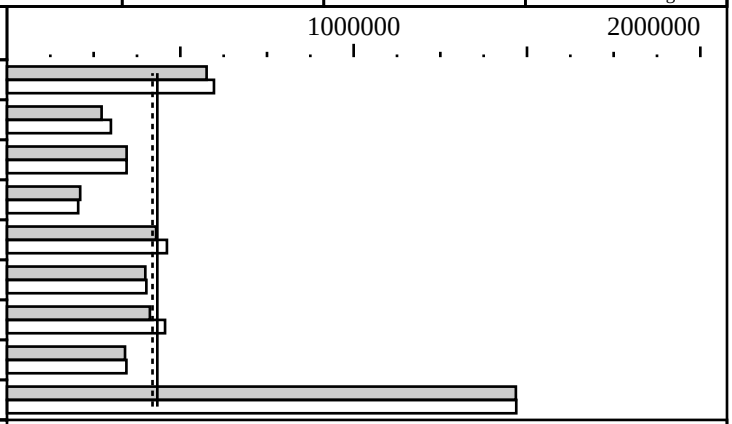
Intel Corporation
Intel(R) G29051-202 (Endeavor Node)

SPECompLpeak2001 = 433653

SPECompLbase2001 = 419770

SPEC license #:HPG0013 | Tested by: Intel Corporation | Test site: -- | Test date: Feb-2012 | Hardware Avail: Mar-2012 | Software Avail: Aug-2011

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	256	575791	247	597018
313.swim_l	12500	733	272889	667	299744
315.mgrid_l	13500	626	345075	626	344980
317.applu_l	13500	1023	211114	1052	205339
321.equake_l	13000	484	430167	451	461330
325.apsi_l	10500	421	398994	418	402003
327.gafort_l	11000	427	412170	386	455915
329.fma3d_l	23500	1104	340444	1092	344446
331.art_l	25000	273	1467889	272	1469020



Hardware

CPU:	Intel(R) Xeon(R) Processor E5-2670
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	16 cores, 2 chips, 8 cores/chip, 2 threads/core
CPU(s) orderable:	1,2
Primary Cache:	32KB(I)+32KB(D) per core on chip
Secondary Cache:	256KB per core (I+D) on chip
L3 Cache:	20MB (I+D) per chip on chip
Other Cache:	N/A
Memory:	64 GB (8 x 8 GB 2Rx4 PC3-12800R, ECC, running at 1333MHz and CL9)
Disk Subsystem:	1x600GB SSD SEAGATE ST9600205SS
Other Hardware:	

Software

OpenMP Threads:	32
Parallel:	OpenMP
Operating System:	Red Hat EL 6.1, kernel 2.6.32-131
Compiler:	Intel C++ Composer XE 2011 for Linux, Version 12.0.5.220 Build 20110719 Intel C++ Composer XE 2011 for Linux, Version 12.0.5.220 Build 20110719 Intel Fortran Composer XE 2011 for Linux, Version 12.0.5.220 Build 20110719 GNU C Compiler 4.4.6-3 20110731
File System:	Linux ext3
System State:	Default

Notes/Tuning Information

```
    BIOS settings notes:
        Intel Hyper-Threading Technology (SMT): Enabled (default is Disabled)
        Intel Turbo Boost Technology (Turbo)  : Disabled
    Extra Flags:
        331.art_l: -DINTS_PER_CACHELINE=32 -DDBLS_PER_CACHELINE=16
        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
ONESTEP=yes
For compiler/openmp flags description please refer:
Intel-ic12.0-intel64-linux-flags-file-Feb-22-2012.html
Base optimization flags and enviroment variables:
================================================================================
Large:
  OPTIMIZE  = -O2 -xAVX -ipo -openmp -mcmodel=medium -shared-intel
  COPTIMIZE  = -ansi-alias
  export KMP_AFFINITY=compact,0

Peak optimization flags and enviroment variables:
================================================================================
Large:
  OPTIMIZE  = -O3 -xAVX -ipo -openmp
  export KMP_AFFINITY=compact,0
```

Notes/Tuning Information (Continued)

```
Peak per-benchmark optimization flags and enviroment variables:
  OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp
==============================================================================
311.wupwise_l
  OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp

==============================================================================
313.swim_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp -opt-streaming-stores always -align -mcmodel=medium -shared-intel
  export OMP_NUM_THREADS=16
  export KMP_AFFINITY=compact,1

==============================================================================
315.mgrid_l
  OPTIMIZE=-O3 -xAVX -ipo -openmp -fno-alias

==============================================================================
317.applu_l
  OPTIMIZE=-O3 -xAVX -ipo -openmp -mcmodel=medium -shared-intel
  export KMP_AFFINITY=scatter,0

==============================================================================
321.equake_l
  export OMP_NUM_THREADS=16
  export KMP_AFFINITY=compact,1

==============================================================================
325.appsi_l
  OPTIMIZE=-O2 -xAVX -ipo -openmp

==============================================================================
327.gafort_l
  OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp -mcmodel=medium -shared-intel
  export KMP_AFFINITY=scatter,0

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

==============================================================================
331.art_l
  OPTIMIZE=-O2 -xSSE4.2 -ipo -openmp
  COPTIMIZE=-ansi-alias
```