OMPL2001 Result

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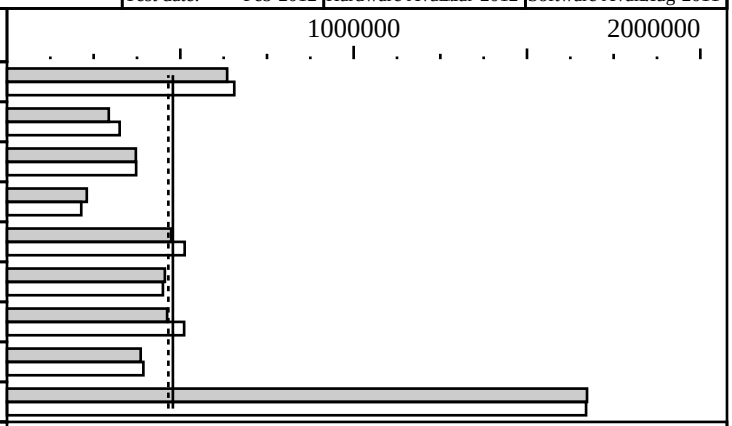
Intel Corporation
Intel(R) G29051-202 (Endeavor Node)

SPECompLpeak2001 = 478523

SPECompLbase2001 = 465460

SPEC license #1	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	232	635061	225	655590
313.swim_l	12500	681	293604	615	324991
315.mgrid_l	13500	581	371690	580	372510
317.applu_l	13500	939	230150	1009	214176
321.equake_l	13000	439	473694	406	512551
325.apsi_l	10500	369	455381	374	449752
327.gafort_l	11000	381	461924	344	510933
329.fma3d_l	23500	975	385652	956	393383
331.art_l	25000	239	1673138	239	1670396



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-11, ECC)
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)  : Enabled (Max 3.3GHz)
    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
```