



OMPL2001 Result

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

SPECompLpeak2001 = 464239
SPECompLbase2001 = 444195

SPEC license #HPG0013 Tested by: Intel Corporation Test site: -- Test date: Feb-2012 Hardware AvailMar-2012 Software AvailAug-2011

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	249	591792	240	612642
313.swim_l	12500	728	274818	660	302991
315.mgrid_l	13500	622	347056	622	347414
317.applu_l	13500	981	220079	920	234842
321.quake_l	13000	473	439721	440	472857
325.apsi_l	10500	372	451727	371	452696
327.gafort_l	11000	401	438955	359	490273
329.fma3d_l	23500	991	379292	975	385502
331.art_l	25000	244	1638804	245	1634621

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) : 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 Environment 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 environment variables:

Large:

```
OPTIMIZE = -O2 -xAVX -ipo -openmp -mcmmodel=medium -shared-intel
COPTIMIZE = -ansi-alias
export KMP_AFFINITY=compact,0
```

Peak optimization flags and environment variables:

Large:

```
OPTIMIZE = -O3 -xAVX -ipo -openmp
export KMP_AFFINITY=compact,0
```



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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 -mcmmodel=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 -mcmmodel=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 -mcmmodel=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

```