



OMPL2001 Result

Copyright 1999-2008, Standard Performance Evaluation Corporation

SGI
SGI UV 2000 (Intel Xeon E5-4650 2.7GHz)

SPECompLpeak2001 = 2993987
SPECompLbase2001 = 2606987

SPEC license #HPG0014 Tested by: SGI Test site: SGI Test date: May-2012 Hardware AvailJun-2012 Software AvailMay-2012

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	28.7	5126706	28.7	5126706
313.swim_l	12500	39.8	5029309	39.8	5029309
315.mgrid_l	13500	119	1808386	88.2	2449672
317.applu_l	13500	102	2110676	87.3	2475120
321.quake_l	13000	214	970091	189	1098520
325.apsi_l	10500	83.5	2013165	83.5	2013165
327.gafort_l	11000	106	1660884	79.6	2210044
329.fma3d_l	23500	130	2899788	115	3275880
331.art_l	25000	66.6	6008866	51.8	7722921

Hardware

CPU: Intel(R) Xeon(R) Processor E5-4650
 CPU MHz: 2700
 FPU: Integrated
 CPU(s) enabled: 512 cores, 64 chips, 8 cores/chip
 CPU(s) orderable: 4-256 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 20 MB I+D on chip per chip
 Other Cache: N/A
 Memory: 2 TB (256 x 8 GB 2Rx4 PC3-12800R-11, ECC)
 Disk Subsystem: 1 x 300 GB SAS-2 (Seagate Savvio 15K.3)
 Other Hardware: Routed topology

Software

OpenMP Threads: 512
 Parallel: OpenMP
 Operating System: SUSE Linux Enterprise Server 11 SP2, Kernel 3.0.13-0.27.1-uv #1 SMP
 Compiler: Intel(R) C++ Composer XE 2011, version 12.1.3.293, Build 20120212
 Intel(R) Fortran Composer XE 2011, version 12.1.3.293, Build 20120212
 GNU C Compiler 4.3.4
 File System: xfs
 System State: Multi-user, run level 3

Notes/Tuning Information

BIOS settings notes:

Intel Turbo Boost Technology (Turbo) : Disabled
 Hyper-Threading Technology : Enabled (not used)

OS notes:

Kernel is generally available as 3.0.26-0.7.6.4317.0.PTF-default

Extra Flags:

331.art_l: -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8

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 unlimited
export KMP_AFFINITY=scatter,1
export OMP_NUM_THREADS=512
```

For compiler/openmp flags description please refer:
 SGI-Linux-Intel12.1-intel64.html



OMPL2001 Result

Copyright 1999-2008, Standard Performance Evaluation Corporation

SGI

SGI UV 2000 (Intel Xeon E5-4650 2.7GHz)

SPECompLpeak2001 = 2993987

SPECompLbase2001 = 2606987

SPEC license #HPG0014 Tested by: SGI Test site: SGI Test date: May-2012 Hardware AvailJun-2012 Software AvailMay-2012

Notes/Tuning Information (Continued)

Base optimization flags and environment variables:

Large:

OPTIMIZE = -O3 -xSSE4.2 -ipol -openmp -mcmmodel=medium -shared-intel
COPTIMIZE = -ansi-alias

Peak per-benchmark optimization flags and environment variables:

311.wupwise_l
basepeak=1

313.swim_m
basepeak=1

315.mgrid_l
OPTIMIZE=-O3 -xSSE4.2 -ipol -openmp -rcd
export OMP_NUM_THREADS=256

317.applu_l
OPTIMIZE=-O3 -xAVX -ipol -openmp -rcd -mcmmodel=medium -shared-intel
export OMP_NUM_THREADS=416

321.quake_l
OPTIMIZE=-O3 -xAVX -ipol -openmp -mcmmodel=medium -shared-intel
export OMP_NUM_THREADS=256

325.apsi_l
basepeak=1

327.gafort_l
OPTIMIZE=-O3 -xSSE4.2 -ipol -openmp -rcd -mcmmodel=medium -shared-intel
export KMP_AFFINITY=scatter,0
export OMP_NUM_THREADS=448

329.fma3d_l
OPTIMIZE=-O3 -xAVX -ipol -openmp -rcd
export KMP_AFFINITY=scatter,0

331.art_l
OPTIMIZE = -O3 -xSSE4.2 -ipol -openmp -rcd
export OMP_NUM_THREADS=256