



OMPL2001 Result

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Sun Microsystems
Sun Fire X2250

SPECompLpeak2001 = 81510
SPECompLbase2001 = 80909

SPEC license #HPG0010 | Tested by: Sun Microsystems | Test site: Menlo Park | Test date: Apr-2009 | Hardware Avail: Apr-2009 | Software Avail: Nov-2008

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	1652	89123	1629	90342
313.swim_l	12500	4645	43058	4547	43989
315.mgrid_l	13500	3052	70765	3009	71788
317.applu_l	13500	4691	46045	4629	46667
321.quake_l	13000	3816	54504	3791	54866
325.apsi_l	10500	1492	112599	1570	107040
327.gafort_l	11000	1744	100935	1774	99196
329.fma3d_l	23500	3793	99121	3800	98956
331.art_l	25000	2067	193539	1933	206927

Hardware

CPU: Intel Xeon X5482
CPU MHz: 3200
FPU: Integrated
CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
CPU(s) orderable: 1,2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 12 MB I+D on chip per chip, 6 MB shared / 2 cores
L3 Cache: None
Other Cache: None
Memory: 16 GB (4x4GB Dual-rank PC2-6400 CL5-5-5 FB-DIMMs)
Disk Subsystem: 1 x 250 GB SATA 7200 RPM
Other Hardware: None

Software

OpenMP Threads: 8
Parallel: OpenMP and Automatic parallel
Operating System: OpenSolaris 2008.05
Compiler: Sun Studio Express 11/08
File System: zfs
System State: Multi-User

Notes/Tuning Information

Compiler Invocation:

C : cc
F90 : f90
F77 : f90

Base tuning:

Fortran : -fast -xpagesize=2M -xmodel=medium -xopenmp
-xautopar -xipo=2 -xvector=lib -xprefetch -xprefetch_level=3
-m64 -lmtmalloc
C : -fast -m64 -xmodel=medium -fns=no -xalias_level=layout
-xdepend=no -xopenmp -lmvec
ONESTEP=yes

Peak tuning:

ONESTEP=yes for all peak tests.

311.wupwise_l : -fast -xpagesize=2M -xmodel=medium -xopenmp -xautopar
-xipo=2 -xvector=lib -xprefetch -xprefetch_level=3
-m64 -lmtmalloc
313.swim_l : -fast -xpagesize=2M -xmodel=medium -xopenmp
-xautopar -xipo=2 -xvector=lib -xprefetch
-xprefetch_level=3 -m64 -lmtmalloc
315.mgrid_l : -fast -xpagesize=2M -xmodel=medium -xopenmp -xautopar
-xipo=2 -xvector=lib -xprefetch -xprefetch_level=3
-m64 -lmtmalloc
317.applu_l : -fast -xmodel=medium -xopenmp -xautopar -xipo=2



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Notes/Tuning Information (Continued)

```
-xvector=lib -xprefetch -xprefetch_level=3 -m64 -lmtmalloc
321.equake_1 : -fast -xmodel=medium -fns=no -xalias_level=layout
              -m64 -xdepend=no -xopenmp -lmvec
325.apsi_1   : -fast -xpagesize=2M -xmodel=medium -xopenmp -xautopar
              -xipo=2 -xvector=lib -xprefetch -xprefetch_level=3
              -m64 -lmtmalloc
327.gafort_1 : -fast -xpagesize=2M -xmodel=medium -xopenmp -xautopar
              -xipo=2 -xvector=lib -xprefetch -xprefetch_level=3
              -m64 -lmtmalloc
329.fma3d_1 : -fast -xpagesize=2M -xmodel=medium -xopenmp -xautopar
              -xipo=2 -xvector=lib -xprefetch -xprefetch_level=3
              -m64 -lmtmalloc
331.art_1   : -fast -xpagesize=2M -xmodel=medium -xopenmp -xautopar
              -xipo=2 -xvector=lib -xprefetch -xprefetch_level=3
              -m64 -lmtmalloc
```

Extra art allowed flags:

```
331.art_1 : -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8
```

Base and Peak User Environment:

```
export OMP_NUM_THREADS=8
export SUNW_MP_PROCBIND=TRUE
export SUNW_MP_THR_IDLE=SPIN
export OMP_NESTED=FALSE
export STACKSIZE=16384
export OMP_DYNAMIC=TRUE
ulimit -s unlimited
```

For a description of Sun Studio 12 Update 1 Compiler flags, portability flags and system parameters used to generate this result, please refer to SUN-20090504-Studio-Solaris-X86_64.txt file in the flags directory.

Default BIOS settings used HWP on, ASP on