



OMP2001 Result

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Sun Microsystems
Sun Blade X6440

SPECompMpeak2001 = 35896
SPECompMbase2001 = 32843

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio	
310.wupwise_m	6000	125	47977	119	50471	
312.swim_m	6000	219	27371	219	27397	
314.mgrid_m	7300	203	35880	204	35812	
316.applu_m	4000	200	20027	197	20351	
318.galgel_m	5100	269	18972	204	24948	
320.quake_m	2600	93.8	27722	65.4	39779	
324.apsi_m	3400	76.0	44750	70.2	48404	
326.gafort_m	8700	306	28413	296	29442	
328.fma3d_m	4600	156	29463	152	30172	
330.art_m	6400	55.9	114556	55.7	114866	
332.ammp_m	7000	311	22521	271	25809	

Hardware

CPU: Quad-Core AMD Opteron(tm) Processor 8384
 CPU MHz: 2700
 FPU: Integrated
 CPU(s) enabled: 16 cores, 4 chips, 4 cores/chip
 CPU(s) orderable: 2,4 chips
 Primary Cache: 64 KB I + 64 KB D on chip per core
 Secondary Cache: 512 KB I+D on chip per core
 L3 Cache: 6 MB I+D on chip per chip
 Other Cache: None
 Memory: 32 GB (16x2GB, DDR2-667 CL5 ECC Registered)
 Disk Subsystem: Compact Flash, 16 GB for OpenSolaris
 SATA, 80 GB, 10 K RPM via NFS for SPEC OMP2001
 Other Hardware: None

Software

OpenMP Threads: 16
 Parallel: OpenMP and Automatic parallel
 Operating System: OpenSolaris 2008.05
 Compiler: Sun Studio Express 11/08
 File System: NFSv3
 (See additional details below)
 System State: Default, Multi-User

Notes/Tuning Information

Compiler Invocation:

C : cc
 F90 : f90
 F77 : f90

Base tuning:

Fortran : -fast -xopenmp -xautopar -xipo=2 -xvector=lib -xprefetch -xprefetch_level=3 -m64 -lmtmalloc
 C : -fast -xopenmp -xautopar -xipo=2 -xvector=lib -xprefetch -xprefetch_level=3 -m64 -lmtmalloc
 ONESTEP=yes

Peak tuning:

ONESTEP=yes for all peak tests.

310.wupwise_m : -fast -Qoption ube -sched_first_pass=1 -xipo=2 -xarch=amd64 -xprefetch_level=3
 -xvector=simd -xopenmp -lmvec
 312.swim_m : -fast -xmodel=medium -Qoption ube -fsimple=3 -xipo=2 -m64 -xarch=sse2a
 -xvector=simd -xopenmp -lmvec
 srcalt = omp1.32
 314.mgrid_m : -fast -xipo=2 -m64 -xprefetch -xprefetch_level=3 -xmodel=medium -xopenmp
 316.applu_m : -fast -xopenmp -xautopar -xipo=2 -xvector=lib -xprefetch -xprefetch_level=3
 -m64 -xmodel=medium -lmtmalloc
 srcalt = omp1



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Notes/Tuning Information (Continued)

```
318.galgel_m      : -O3 -xpagesize=2m -xipo=2 -goption iropt -xvector=simd -xarch=amd64 -xopenmp
                  -xlic_lib=sunperf +FDO
                  RM_SOURCES=lapak.f90
320.earthquake_m  : -fast -fns=no -xalias_level=layout -xdepend=no -xarch=amd64 -xopenmp -lmvec
                  srcalt = ompl.32
324.apsi_m        : -fast -xipo=2 -Qoption f90comp -hoist_expensive,-hoist_trivial -xarch=amd64a
                  -xprefetch_level=3 -xvector -xopenmp -lmtmalloc
                  srcalt = ompl.32
326.gafort_m      : -fast -fstore -aligncommon=8 -Qoption ube -sched_first_pass=1 -xpagesize=2m
                  -xipo=2 -xarch=amd64 -xvector=simd -xopenmp -lmvec
328.fma3d_m       : -fast -xipo=2 -m64 -xarch=sse2a -xvector=simd -xopenmp
                  srcalt = ompl.32
330.art_m         : -fast -xipo=2 -m64 -xopenmp
332.ammp_m        : -fast -xautopar -xipo=2 -xvector=simd -m64 -xpagesize_heap=2m -Wu,-fsimple=3 -xopenmp
Portability flags:
  318.galgel_m    : -e -fixed
```

Extra art allowed flags:

```
  330.art_m       : -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8
```

Base and Peak User Environment:

```
export OMP_NUM_THREADS=16
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
```

NFS for file system: Sun Fire X2100 with 1 x SATA,80 GB,10 K RPM
both client and server use onboard ethernet ports connected
to a 10/100 Ethernet switch.

For a description of Sun Studio 10 Compiler flags, portability flags
and system parameters used to generate this result, please refer to
SUN-20080827-Studio-Solaris-X86_64.txt file in the flags directory.

Default BIOS settings used.