OMPM2001 Result

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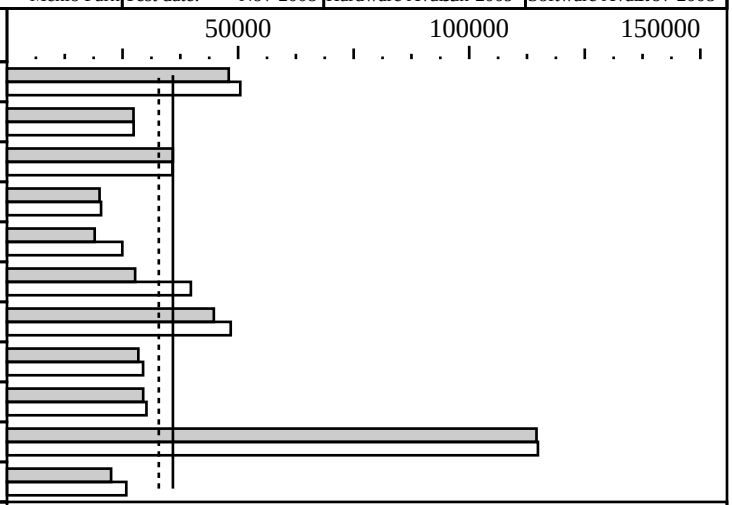
Sun Microsystems
Sun Blade X6440

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.equake_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 = ompl.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 = ompl
```

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Notes/Tuning Information (Continued)

```
318.galgel_m    : -O3 -xpagesize=2m -xipo=2 -qoption iropt  -xvector=simd -xarch=amd64 -xopenmp
                  -xlic_lib=sunperf +FDO
                  RM_SOURCES=lapak.f90
320.equake_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
Portablility 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.
```