OMPL2001 Result

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Sun Microsystems

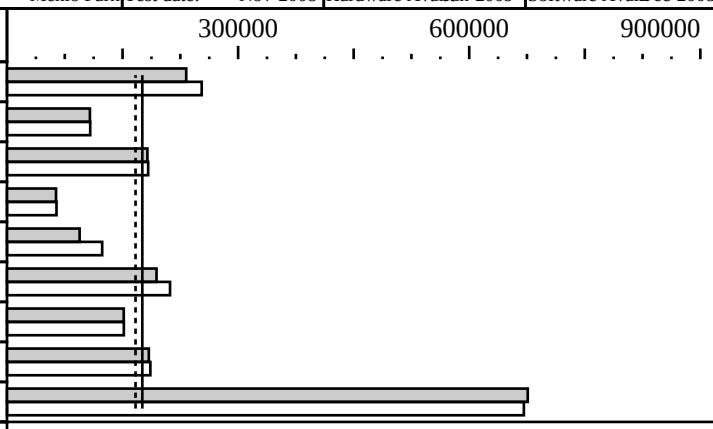
Sun Fire X4440 (AMD Opteron 8384 2.7GHz)

SPECompLpeak2001 = 175648

SPECompLbase2001 = 166853

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	633	232634	582	252732
313.swim_l	12500	1858	107638	1852	108008
315.mgrid_l	13500	1185	182247	1179	183248
317.applu_l	13500	3393	63655	3362	64257
321.equake_l	13000	2207	94259	1684	123550
325.apsi_l	10500	866	194099	794	211629
327.gafort_l	11000	1161	151545	1160	151674
329.fma3d_l	23500	2042	184100	2021	186088
331.art_l	25000	592	675978	596	670932



Hardware

CPU:	AMD Opteron 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:	64 GB (16x4GB, DDR2-667 CL5 ECC Registered)
Disk Subsystem:	2 x SAS, 72 GB,10 K RPM
Other Hardware:	None

Software

OpenMP Threads:	16
Parallel:	OpenMP and Automatic parallel
Operating System:	OpenSolaris 2008.11
Compiler:	Sun Studio Express 11/08
File System:	OS on zfs, Benchmark on ufs
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 -xpagesize=2m -xmodel=medium -xopenmp -xautopar -xipo=2 -xvector=lib -xprefetch -xprefetch_level=3 -m64 -lmtmalloc
  ONESTEP=yes

Peak tuning:
 ONESTEP=yes for all peak tests.

 311.wupwise_l   : -fast -xpagesize=2m -xmodel=medium -Qoption ube -sched_first_pass=1 -xipo=2 -xarch=amd64
                   -xprefetch_level=3 -xvector=simd -xopenmp -lmvec
 313.swim_l      :  -fast -xpagesize=2m -xmodel=medium -xopenmp -xautopar -xipo=2 -xvector=lib
                    -xprefetch -xprefetch_level=3 -m64 -lmtmalloc
 315.mgrid_l     : -fast -xmodel=medium -xopenmp -xautopar -xipo=2 -xvector=lib -xprefetch
                   -xprefetch_level=3 -m64 -lmtmalloc
 317.applu_l     : -fast -xmodel=medium -xopenmp -xautopar -xipo=2 -xvector=lib
                  -Qoption f90comp -hoist_expensive,-hoist_trivial -qoption ube -memcpy_threshold2=64
                   -xprefetch -xprefetch_level=3 -m64 -lmtmalloc
 321.equake_l    : -fast -xmodel=medium -fns=no -xalias_level=layout -xdepend=no  -xarch=amd64 -xopenmp -lmvec
 325.apsi_l      : -fast -xpagesize=2m -xmodel=medium -xopenmp -xautopar -xipo=2 -xvector=lib
                   -xprefetch -xprefetch_level=3 -m64 -lmtmalloc
 327.gafort_l    : -fast -xmodel=medium -fstore  -aligncommon=8  -Qoption ube -sched_first_pass=1 -xpagesize=2m
```

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Notes/Tuning Information (Continued)

```
                    -xipo=2 -m64  -xvector=simd -xopenmp -lmvec
329.fma3d_l     : -fast -xpagesize=2m -xmodel=medium -xopenmp -xautopar -xipo=2 -xvector=lib -xprefetch
                    -xprefetch_level=3  -m64 -lmtmalloc
331.art_l       : -fast -xpagesize=2m -xmodel=medium -xopenmp -xautopar -xipo=2 -xvector=lib -xprefetch
                    -xprefetch_level=3 -m64 -lmtmalloc
Extra art allowed flags:
  331.art_l         : -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

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.
```