OMPL2001 Result

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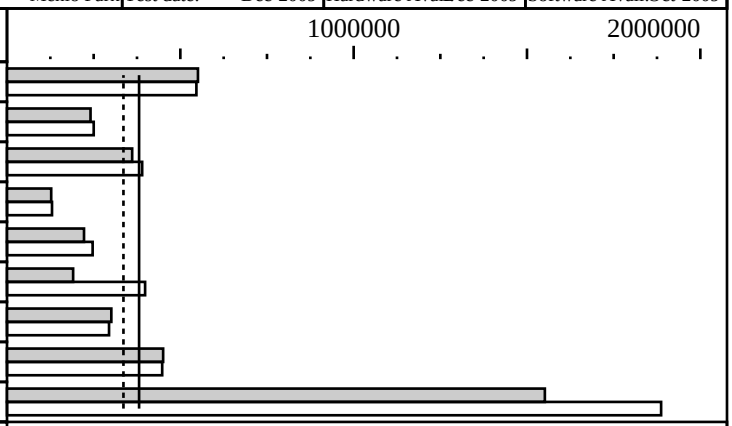
Sun Microsystems
Sun Fire X4640

SPECompLpeak2001 = 381017

SPECompLbase2001 = 335907

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	267	550840	269	546345
313.swim_l	12500	830	240944	800	250120
315.mgrid_l	13500	598	361067	554	389913
317.applu_l	13500	1694	127484	1664	129829
321.equake_l	13000	936	222156	842	247017
325.apsi_l	10500	881	190765	422	398367
327.gafort_l	11000	585	300938	598	294335
329.fma3d_l	23500	835	450403	840	447667
331.art_l	25000	258	1551508	212	1886866



Hardware

CPU:	AMD Opteron 8435
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	48 cores, 8 chips, 6 cores/chip
CPU(s) orderable:	4,8 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:	256 GB (64x4GB, DDR2-667, CL5, Reg, Dual Rank)
Disk Subsystem:	1 x SAS, 146 GB, 10K RPM
Other Hardware:	None

Software

OpenMP Threads:	48
Parallel:	OpenMP and Automatic parallel
Operating System:	Solaris 10 10/09
Compiler:	Sun Studio 12 Update 1
File System:	zfs
System State:	Multi-User

Notes/Tuning Information

```
Compiler Invocation:
  C   : cc
  F90 : f90
  F77 : f90

Base tuning:
  Fortran:  -fast -xarch=generic -xpagesize=2M -xmodel=medium -xopenmp
            -xautopar -xreduction -xipo=2 -xvector=lib -xprefetch
            -xprefetch_level=3 -m64 -lmtmalloc
  C:        -fast -m64 -xmodel=medium -fns=no -xdepend=no
            -xopenmp -lmvec
  ONESTEP=yes

Peak tuning:
  ONESTEP=yes for all peak tests.

  311.wupwise_l: -fast -xarch=generic -xpagesize=2M -xmodel=medium -xopenmp -xautopar
                 -xipo=2 -xvector=lib -xprefetch -xprefetch_level=3 -m64 -lmtmalloc
  313.swim_l:    -fast -xarch=generic -xpagesize=2M -xmodel=medium -xopenmp -xautopar
                -xipo=2 -xvector=lib -xreduction -xprefetch -xprefetch_level=3 -m64 -lmtmalloc
               SUNW_MP_PROCBIND="0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46"
                  OMP_NUM_THREADS=24
  315.mgrid_l:   -fast -xarch=generic -xpagesize=2M -xmodel=medium -xopenmp -xautopar
                 -xipo=2 -xvector=lib -xprefetch -xprefetch_level=3 -m64 -lmtmalloc
               SUNW_MP_PROCBIND="0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46"
                  OMP_NUM_THREADS=24
```

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Notes/Tuning Information (Continued)

```
    317.applu_l:   -fast -xarch=generic -xpagesize=2M -xmodel=medium -xopenmp -xautopar
                  -xipo=2 -xvector=lib -xreduction -xprefetch -xprefetch_level=3 -m64 -lmtmalloc
                   STACKSIZE=16384
   321.equake_l:  -fast -m64 -xmodel=medium -fns=no -xalias_level=layout -xdepend=no -xopenmp -lmvec
   325.apsi_l:    -fast -xpagesize_stack=1G -xmodel=medium -xopenmp -xautopar -xipo=2 -xvector=lib
                   -xprefetch -xprefetch_level=3 -m64 -lmtmalloc
    327.gafort_l:  -fast -xmodel=medium -fstore -aligncommon=8 -xipo=2 -m64 -xvector=simd
                   -xopenmp -xreduction -lmvec
    329.fma3d_l:   -fast -xreduction -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
                  SUNW_MP_PROCBIND="0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46"
                   OMP_NUM_THREADS=24

  Extra art allowed flags:
    331.art_l         : -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8

  Base and Peak User Environment:
    export OMP_NUM_THREADS=48
    export SUNW_MP_PROCBIND=TRUE
    export SUNW_MP_THR_IDLE=SPIN
    export OMP_NESTED=FALSE
    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-20100105-Studio-Solaris-X86_64.txt file in the flags directory.

  Default BIOS settings used.
```