OMPL2001 Result

Oracle Corporation

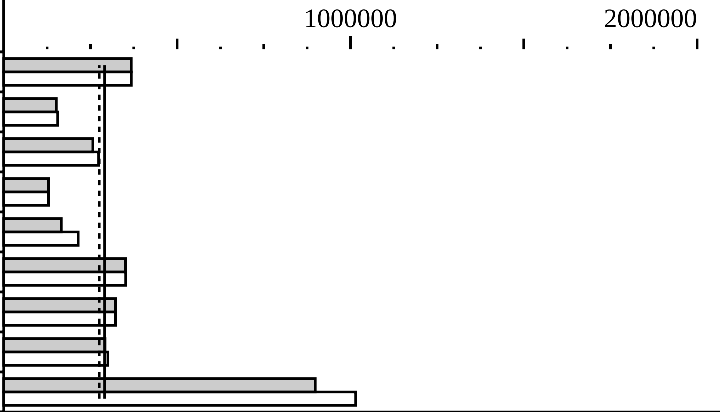
Sun Blade X6270 M2 (Intel Xeon X5680 3.33GHz)

SPECompLpeak2001 = 291062

SPECompLbase2001 = 275373

SPEC license #: HPG0010	Tested by: Oracle Corporation	Test site: Menlo Park	Test date: Jun-2010	Hardware Avail: Jun-2010	Software Avail: Oct-2009

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	400	367787	400	367898
313.swim_l	12500	1319	151580	1285	155604
315.mgrid_l	13500	840	257028	789	273715
317.applu_l	13500	1676	128906	1676	128906
321.equake_l	13000	1253	165951	969	214654
325.apsi_l	10500	478	351138	478	351772
327.gafort_l	11000	546	322168	546	322302
329.fma3d_l	23500	1287	292230	1252	300420
331.art_l	25000	445	898544	394	1015213



Hardware

CPU:	Intel Xeon X5680
CPU MHz:	3333
FPU:	Integrated
CPU(s) enabled:	12 cores, 2 chips, 6 cores/chip, 2 threads/core
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
L3 Cache:	12 MB I+D on chip per chip
Other Cache:	None
Memory:	48 GB (12 x 4 GB DDR3-1333 CL9, 2 Rank, ECC)
Disk Subsystem:	1 x 300 GB, SAS, 10000 RPM
Other Hardware:	None

Software

OpenMP Threads:	24
Parallel:	OpenMP and Automatic parallel
Operating System:	Oracle Solaris 10 10/09
Compiler:	Oracle Solaris Studio 12 Update 1
File System:	zfs
System State:	Multi-User

Notes/Tuning Information

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

Feedback Directed Optimization:
  For those benchmarks which use feedback directed optimization,
  the following are set and labeled below with the +FDO designation.
  FDO:  PASS1= -xprofile=collect:./feedback
        PASS2= -xprofile=use:./feedback
        fdo_pre0:  rm -rf ./feedback.profile ./SunWS_cache

Base tuning:
  Fortran :  -fast -xtarget=nehalem -xarch=generic -xipo=2 -xopenmp
             -xpagesize=2M -xmodel=medium -xautopar -xvector=lib -m64
             -lmtmalloc +FDO
  C       :  -fast -m64 -xmodel=medium -fns=no -xdepend=no -m64
             -xopenmp -lmvec +FDO
  ONESTEP=yes

Peak tuning:
 ONESTEP=yes for all peak tests.

 311.wupwise_l: -fast -xtarget=nehalem -xarch=generic -xipo=2
                -xopenmp -xpagesize=2M -xmodel=medium -xautopar
                -xvector=lib -m64 -lmtmalloc +FDO
```

Notes/Tuning Information (Continued)

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 313.swim_l  :  -fast -xtarget=nehalem -xpagesize=2M -xmodel=medium
                -xopenmp -xautopar -xipo=2 -xvector=lib
                -xprefetch -xprefetch_level=3 -m64 -lmtmalloc +FDO
                SUNW_MP_PROCBIND=0 1 2 3 4 5 6 7 8 9 10 11
                OMP_NUM_THREADS=12

 315.mgrid_l : -fast  -xtarget=nehalem -xarch=generic  -xpagesize=2M
               -xmodel=medium -xopenmp -xautopar -xipo=2 -xvector=lib
               -xprefetch -xprefetch_level=3 -m64 -lmtmalloc +FDO
               SUNW_MP_PROCBIND=0 1 2 3 4 5 6 7 8 9 10 11
               OMP_NUM_THREADS=12

 317.applu_l : basepeak=yes

 321.equake_l: -fast -xmodel=medium -fns=no -xalias_level=layout
               -m64 -xdepend=no -xopenmp -lmvec +FDO
               SUNW_MP_PROCBIND=0 1 2 3 4 5 6 7 8 9 10 11
               OMP_NUM_THREADS=12

 325.apsi_l  : -fast -xtarget=nehalem -xpagesize=2M -xmodel=medium
               -xopenmp -xautopar -xipo=2 -xvector=lib
               -xprefetch -xprefetch_level=3 -m64 -lmtmalloc +FDO

 327.gafort_l: -fast -xtarget=nehalem -xmodel=medium -fstore
               -xpagesize=2M -xipo=2 -m64 -xvector=simd
               -xopenmp -lmvec +FDO

 329.fma3d_l : -fast -xtarget=nehalem -xpagesize=2M -xmodel=medium
               -xopenmp -xautopar -xipo=2 -xvector=lib -xprefetch
               -xprefetch_level=3  -m64 -lmtmalloc

 331.art_l   : -fast -xtarget=nehalem -xpagesize=2M -xmodel=medium
               -xopenmp -xautopar -xipo=2 -xvector=lib -xprefetch
               -xprefetch_level=3 -m64 -lmtmalloc
               SUNW_MP_PROCBIND=0 1 2 3 4 5 6 7 8 9 10 11
               OMP_NUM_THREADS=12

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

Base and Peak User Environment:
  export OMP_NUM_THREADS=24
  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

/etc/system parameters:
  tune_t_fsflushr=10
  autoup=900
  zfs:zfs_arc_max = 0x10000000
  lpg_alloc_prefer=1
```

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Notes/Tuning Information (Continued)

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For a description of Oracle Solaris Studio 12 Update 1 flags, portability
flags and system parameters used to generate this result, please refer to
Oracle-20100708-Studio-Solaris-x86.txt file in the flags directory.

Changes applied to Default BIOS settings :
   Intel C-State was disabled (default:enabled)
   Data Reuse Optimization was disabled (default:enabled)
   Intel Turbo Boost technology enabled, maximum 3.60 GHz(default)
   Intel Hyper-Threading technology enabled (default)
```