OMPL2001 Result

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IBM

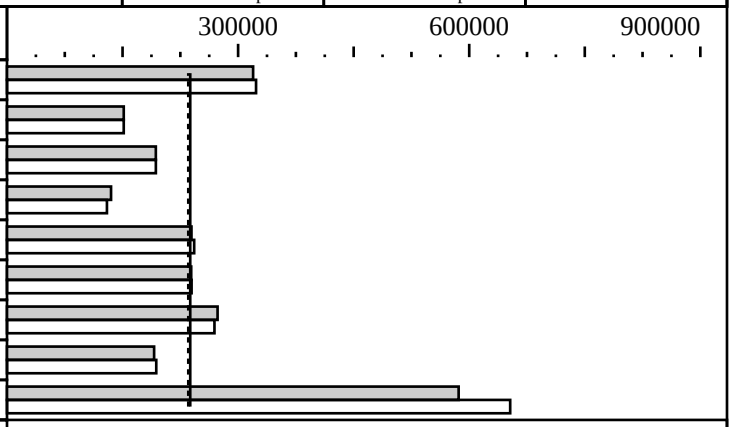
IBM HS22 Blade servers (Intel Xeon X5570, 2.93 GHz)

SPECompLpeak2001 = 237854

SPECompLbase2001 = 235331

SPEC license #: HPG3440A | Tested by: Indiana University | Test site: -- | Test date: Apr-2009 | Hardware Avail: Apr-2009 | Software Avail: Jan-2009

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	461	319474	455	323292
313.swim_l	12500	1320	151547	1320	151537
315.mgrid_l	13500	1118	193198	1118	193234
317.applu_l	13500	1599	135060	1665	129735
321.equake_l	13000	869	239456	856	242970
325.apsi_l	10500	703	239119	701	239601
327.gafort_l	11000	644	273343	654	269297
329.fma3d_l	23500	1969	190967	1941	193750
331.art_l	25000	682	586260	612	653173



Hardware

CPU:	Intel Xeon X5570
CPU MHz:	2934
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip (HT on)
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:	8 MB I+D on chip per chip
Other Cache:	None
Memory:	24 GB (6*4GB DDR3-1333 RDIMMs)
Disk Subsystem:	Raid 1 2x41 GB IBM drives, ext3
Other Hardware:	None

Software

OpenMP Threads:	16
Parallel:	OpenMP
Operating System:	RHEL5.3 (x86_64) 2.6.18-128.1.6.el5 Kernel 2.6.18-128.1.6.el5
Compiler:	Intel C/C++ Compiler 11.0.074 Intel Fortran Compiler 11.0.074
File System:	ext3
System State:	Multi-user, run level 3

Notes/Tuning Information

```
   ulimit -s unlimited
    Removes limits on the maximum size of the automatically-
    extended stack region of the current process and each
    process it creates.
Compiler flags for base level optimization
    COPTIMIZE : -O3 -xhost -ipo -no-prec-div -unroll-loops0 -openmp
    FOPTIMIZE : -O3 -xhost -ipo -no-prec-div -unroll-loops0 -openmp
    F77OPTIMIZE : -O3 -xhost -ipo -no-prec-div -unroll-loops0 -openmp
Environment:
    KMP_AFFINITY=disabled
     controls the binding of OpenMP threads to the physical processing units
    KMP_SCHEDULE=static,balanced
     used to fine tune the load balancing of parallel loops that are
     statically scheduled under OpenMP with no chunk size specification
    KMP_BLOCKTIME=infinite
     Sets the time, in milliseconds, that a thread should wait,
     after completing the execution of a parallel region, before sleeping.
    KMP_LIBRARY=throughput
     Selects the OpenMP run-time library
    KMP_STACKSIZE=31m
     Sets the number of bytes to allocate for each parallel thread to use as
     to use as its provate stack
    OMP_NESTED=TRUE
     Enables (TRUE) or  disables  (FALSE)  nested  parallelism.
    OMP_DYNAMIC=FALSE
     Enables (true) or disables (false) the dynamic adjustment of the number of threads.
```

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Notes/Tuning Information (Continued)

```
    OMP_NUM_THREADS=16
     Sets  the maximum number of threads to use for OpenMP* parallel
Hyperthreading and turbo mode enabled.
318.galgel_m portability flags:
    FFLAGS=-fixed -extend-source 132
Flags for peak level optimization
     regions if no other value is specified in the  program  itself.
311.wupwise_l peak flags:
    fdo_pre0       = rm -rf ./*.dyn
    PASS1_FFLAGS   = -prof-gen
    PASS2_FFLAGS   = -prof-use
    PASS1_LDFLAGS  = -prof-gen
    PASS2_LDFLAGS  = -prof-use
313.swim_l peak flags:
    fdo_pre0       = rm -rf ./*.dyn
    PASS1_FFLAGS   = -prof-gen
    PASS2_FFLAGS   = -prof-use
    PASS1_LDFLAGS  = -prof-gen
    PASS2_LDFLAGS  = -prof-use
317.applu_l peak flags:
    COPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp -mcmodel large -shared-intel
    FOPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp -mcmodel large -shared-intel
    F77OPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp -mcmodel large -shared-intel
321.equake_l peak flags:
    ENV_OMP_NUM_THREADS=8
    srcalt:ompl.32
325.apsi_l peak flags:
    COPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp -mcmodel large -shared-intel
    FOPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp -mcmodel large -shared-intel
    F77OPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp -mcmodel large -shared-intel
329.fma3d_l peak flags:
    srcalt:ompl.32
    fdo_pre0       = rm -rf ./*.dyn
    PASS1_FFLAGS   = -prof-gen
    PASS2_FFLAGS   = -prof-use
    PASS1_LDFLAGS  = -prof-gen
    PASS2_LDFLAGS  = -prof-use
331.art_l peak flags:
    COPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp -mcmodel large -shared-intel
    FOPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp -mcmodel large -shared-intel
    F77OPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp -mcmodel large -shared-intel
For a description of the flags used, please see
Indiana-ic11.0-intel64-linux-flags-file-20090428.html in the flags directory
```