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

SPECompMpeak2001 = 44792
SPECompMbase2001 = 43657

Hardware
- CPU: Intel Xeon X5570
- CPU MHz: 2934
- FPU: Integrated
- CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip (HT on)
- 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
- Memory: 24 GB (6*4GB DDR3-1333 RDIMMs)
- Disk Subsystem: Shared Memory filesystem 12 GB, tmpfs
- 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: tmpfs
- 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 : -03 -xhost -ipo -no-prec-div -unroll-loops0 -openmp
  FOPTIMIZE : -03 -xhost -ipo -no-prec-div -unroll-loops0 -openmp
  F77OPTIMIZE : -03 -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 private stack
  OMP_NESTED=TRUE
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Notes/Tuning Information (Continued)

Enables (TRUE) or disables (FALSE) nested parallelism.
OMP_DYNAMIC=FALSE
Enables (true) or disables (false) the dynamic adjustment of the number of threads.
OMP_NUM_THREADS=16
Sets the maximum number of threads to use for OpenMP* parallel regions if no other value is specified in the program itself.
Hyperthreading and turbo mode enabled.

318.galgel_m portability flags:
FFLAGS=-fixed -extend-source 132

Flags for peak level optimization
310.wupwise_m peak flags:
fdo_pre0 = rm -rf ./*.dyn
PASS1_FFLAGS = -prof-gen
PASS2_FFLAGS = -prof-use
PASS1_LDFLAGS = -prof-gen
PASS2_LDFLAGS = -prof-use

312.swim_m peak flags:
fdo_pre0 = rm -rf ./*.dyn
PASS1_FFLAGS = -prof-gen
PASS2_FFLAGS = -prof-use
PASS1_LDFLAGS = -prof-gen
PASS2_LDFLAGS = -prof-use

316.applu_m peak flags:
COPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp
FOPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp
F77OPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp

318.galgel_m peak flags:
ENV_OMP_NUM_THREADS=8

320.eqquake_m peak flags:
ENV_OMP_NUM_THREADS=8
srcalt:ompl.32

324.apsi_m peak flags:
COPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp
FOPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp
F77OPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp

328.fma3d_m peak flags:
srcalt:ompl.32

330.art_mpeak flags:
COPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp
FOPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp
F77OPTIMIZE = -O2 -xhost -ipo -no-prec-div -openmp

332.ammp_m peak flags:
COPTIMIZE = -O2 -xhost -openmp
FOPTIMIZE = -O2 -xhost -openmp
F77OPTIMIZE = -O2 -xhost -openmp

For a description of the flags used, please see
Indiana-ic11.0-intel64-linux-flags-file-20090428.html in the flags directory