OMPL2001 Result

Copyright 1999-2008, Standard Performance Evaluation Corporation

IBM Corporation

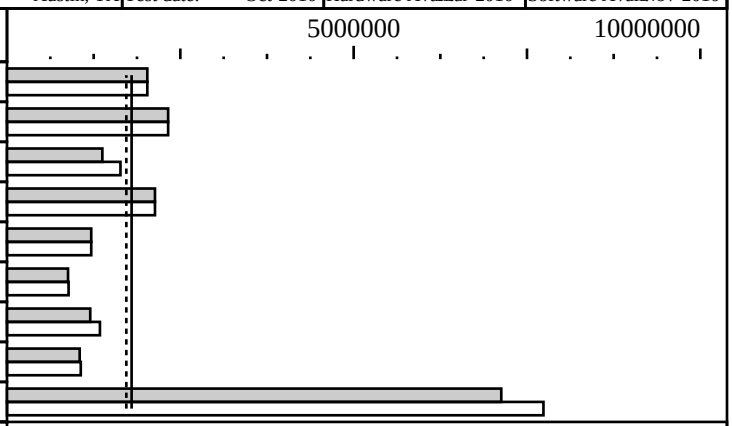
IBM Power 780 (3.86 GHz, 64 core, RedHat)

SPECompLpeak2001 = 1797211

SPECompLbase2001 = 1721106

SPEC license #: HPG0005 | Tested by: IBM | Test site: Austin, TX | Test date: Oct-2010 | Hardware Avail: Mar-2010 | Software Avail: Nov-2010

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	72.7	2023843	72.7	2023843
313.swim_l	12500	86.1	2324093	86.1	2324093
315.mgrid_l	13500	157	1375331	132	1636416
317.applu_l	13500	101	2134212	101	2134212
321.equake_l	13000	171	1214853	171	1214853
325.apsi_l	10500	191	880440	189	888240
327.gafort_l	11000	147	1200683	131	1340418
329.fma3d_l	23500	359	1048368	353	1064014
331.art_l	25000	56.1	7128988	51.7	7737269



Hardware

CPU:	POWER7
CPU MHz:	3860
FPU:	Integrated
CPU(s) enabled:	64 cores, 8 chips, 8 cores/chip, 4 threads/core
CPU(s) orderable:	8,16,24,32,48,64 cores
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
L3 Cache:	4 MB I+D on chip per core
Other Cache:	None
Memory:	512 GB (64x8 GB) DDR3 1066 MHz
Disk Subsystem:	1 x 146.8 GB SAS SFF 15K RPM
Other Hardware:	None

Software

OpenMP Threads:	256
Parallel:	OpenMP
Operating System:	Red Hat Enterprise Linux Server release 6.0 (ppc64) Kernel 2.6.32-71.el6.ppc64
Compiler:	IBM XL C/C++ for Linux, V11.1 Updated with the Nov2010 PTF IBM XL Fortran for Linux, V13.1 Updated with the Nov2010 PTF
File System:	ext3
System State:	Run level 3 (multi-user)

Notes/Tuning Information

```
Portability Flags & Environment Variables
  -qfixed used in: 311.wupwise_l, 313.swim_l, 315.mgrid_l, 317.applu_l, 325.apsi_l
  -qsuffix=f=f90 used in:  327.gafort_l, 329.fma3d_l

Base Flags
  C:       -q64 -O5 -qsmp=omp
  FORTRAN: -q64 -O5 -qsmp=omp

Base & Peak User Environment:
    OMP_NUM_THREADS = 128
    OMP_DYNAMIC=FALSE
   XLSMPOPTS=SPINS=0:YIELDS=0:STACK=8000000:STARTPROC=0:PROCS=0,1,4,5,8,9,12,13,16,17,20,21,24,25,28,29,
                                                            32,33,36,37,40,41,44,45,48,49,52,53,56,57,60,61,
                                                            64,65,68,69,72,73,76,77,80,81,84,85,88,89,92,93,
                                                          96,97,100,101,104,105,108,109,112,113,116,117,120,121,124,125,
                                                        128,129,132,133,136,137,140,141,144,145,148,149,152,153,156,157,
                                                        160,161,164,165,168,169,172,173,176,177,180,181,184,185,188,189,
                                                        192,193,196,197,200,201,204,205,208,209,212,213,216,217,220,221,
                                                        224,225,228,229,232,233,236,237,240,241,244,245,248,249,252,253
    XLFRTEOPTS=intrinthds=1

 Peak Flags
   -q64 used in all cases
   -qsmp=omp used in all cases
```

Copyright 1999-2008, Standard Performance Evaluation Corporation

Notes/Tuning Information (Continued)

```
    311.wupwise_l:  basepeak=1
    313.swim_l:     basepeak=1
    315.mgrid_l:    -O4
                    XLSMPOPTS=SPINS=0:YIELDS=0:STACK=8000000:STARTPROC=0:STRIDE=4
                    OMP_NUM_THREADS = 64
    317.applu_l:    basepeak=1
    321.equake_l:   basepeak=1
    325.apsi_l:     -O3
    327.gafort_l:   -O5 -qhot=arraypad -Q
                    XLSMPOPTS=SPINS=0:YIELDS=0:STACK=8000000:STARTPROC=0:STRIDE=1
                    OMP_NUM_THREADS = 256
    329.fma3d_l:    -O4
    331.art_l:      -O5 -qhot=arraypad
                    XLSMPOPTS=SPINS=0:YIELDS=0:STACK=8000000:STARTPROC=0:STRIDE=1
                    OMP_NUM_THREADS = 256

C:              IBM XL C for Linux invoked as xlc_r
Fortran 90:     IBM XL Fortran for Linux invoked as xlf90_r

Use flags-description file IBM-20100816-Linux.txt

ulimit -s (stack) set to 1048576.

Intelligent Energy Optimization enabled, up to 3.94 GHz
```