OMPL2001 Result

IBM Corporation

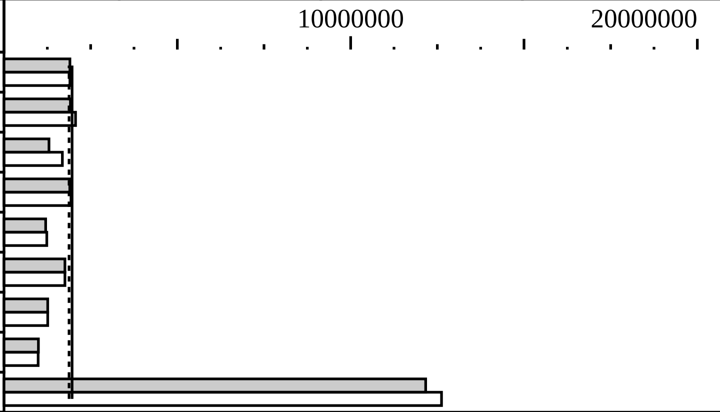
IBM Power 770 (3.8 GHz, 64 core, RHEL)

SPECompLpeak2001 = 1964055

SPECompLbase2001 = 1876580

SPEC license #: HPG0005	Tested by: IBM Corporation	Test site: Austin, TX	Test date: Sep-2012	Hardware Avail: Oct-2012	Software Avail: Dec-2012

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	77.4	1901706	77.4	1901706
313.swim_l	12500	104	1915718	96.9	2063758
315.mgrid_l	13500	166	1297618	128	1683742
317.applu_l	13500	114	1897718	112	1933663
321.equake_l	13000	173	1201853	168	1234538
325.apsi_l	10500	95.6	1757488	95.6	1757488
327.gafort_l	11000	140	1261308	140	1261308
329.fma3d_l	23500	379	992686	382	985401
331.art_l	25000	32.91	2163904	31.71	2620999



Hardware

CPU:	POWER7+
CPU MHz:	3808
FPU:	Integrated
CPU(s) enabled:	64 cores, 16 chips, 4 cores/chip. 4 threads/core
CPU(s) orderable:	16,32,48,64 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:	10 MB I+D on chip per core
Other Cache:	None
Memory:	1 TB (64 x 16 GB) DDR3 1066 MHz
Disk Subsystem:	12x146.8 GB SAS SFF 15K RPM
Other Hardware:	None

Software

OpenMP Threads:	128
Parallel:	OpenMP
Operating System:	Red Hat Enterprise Linux Server 6.3 (2.6.32-279.el6.ppc64)
Compiler:	IBM XL C/C++ for Linux, V12.1 Version: 12.01.0000.0002 IBM XL Fortran for Linux, V14.1 Version: 14.01.0000.0002
File System:	ext4
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 -qhot=arraypad -qsmp=omp
  FORTRAN: -q64 -O5 -qhot=arraypad -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


 Peak Flags
   -q64 used in all cases
```

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Notes/Tuning Information (Continued)

```
   -qsmp=omp used in all cases

   311.wupwise_l:  basepeak = 1
   313.swim_l:     -O3 -qhot=arraypad
   315.mgrid_l:    -O5 -qpdf1/pdf2
                   XLSMPOPTS=SPINS=0:YIELDS=0:STACK=8000000:STARTPROC=0:STRIDE=4
                   OMP_NUM_THREADS = 64
   317.applu_l:    -O3 -qpdf1/pdf2
   321.equake_l:   -O5 -qhot=arraypad -qpdf1/pdf2
                   XLSMPOPTS=SPINS=0:YIELDS=0:STACK=8000000:STARTPROC=0:STRIDE=4
                   OMP_NUM_THREADS = 64
   325.apsi_l:     basepeak = 1
   327.gafort_l:   basepeak = 1
   329.fma3d_l:    -O4 -qhot=arraypad
   331.art_l:      -O5 -Q -qpdf1/pdf2


C:              IBM XL C for Linux invoked as xlc_r
Fortran 90:     IBM XL Fortran for Linux invoked as xlf90_r
kernel release 2.6.32-279.el6.ppc64.

Use flags-description file IBM-20121004-Linux.txt
ulimit -s (stack) set to 1048576.


Large pages reserved as follows by root user:
echo 12000 > /proc/sys/vm/nr_hugepages

System configured with libhugetlbfs library for application access to large pages
Intelligent Energy Optimization enabled, up to 4312 MHz
Service processor memory mirroring property disabled.
The following environment varibles were set before the runspec command:
   export HUGETLB_MORECORE=yes
   export HUGETLB_VERBOSE=0
   export HUGETLB_ELFMAP=RW
   export HUGETLB_SHM=yes
```