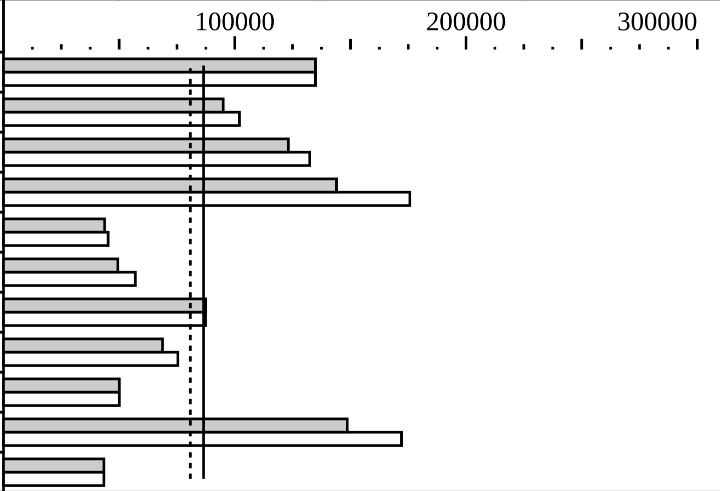
OMPM2001 Result

IBM Corporation
IBM System p 570 (4.7 GHz, 16 core)

SPECompMpeak2001 =	86524
SPECompMbase2001 =	80769

SPEC license #:HPG0005	Tested by: IBM	Test site: Austin, TX	Test date: May-2007	Hardware Avail:Jun-2007	Software Avail:Jun-2007

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	44.5	134916	44.5	134916
312.swim_m	6000	63.2	94979	58.8	102009
314.mgrid_m	7300	59.3	123136	55.1	132417
316.applu_m	4000	27.8	143979	22.8	175722
318.galgel_m	5100	117	43733	113	45239
320.equake_m	2600	52.6	49432	45.6	57003
324.apsi_m	3400	38.9	87484	38.9	87398
326.gafort_m	8700	126	68781	115	75390
328.fma3d_m	4600	91.9	50074	91.9	50074
330.art_m	6400	43.1	148610	37.2	172090
332.ammp_m	7000	161	43394	161	43394



Hardware

CPU:	POWER6
CPU MHz:	4700
FPU:	Integrated
CPU(s) enabled:	16 cores, 8 chips, 2 cores/chip, 2 threads/core
CPU(s) orderable:	2,4,8,12,16 cores
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per core
L3 Cache:	32 MB I+D off chip per chip
Other Cache:	None
Memory:	128 GB (64x2 GB) DDR2 667 MHz
Disk Subsystem:	2x73 GB 2x146 GB SAS 15K RPM
Other Hardware:	None

Software

OpenMP Threads:	32
Parallel:	OpenMP
Operating System:	IBM AIX 5L V5.3
Compiler:	XL C/C++ Enterprise Edition Version 9.0 for AIX XL Fortran Enterprise Edition Version 11.1 for AIX
File System:	AIX/JFS2
System State:	Multi-user

Notes/Tuning Information

```
 Portability Flags Variables
  -qfixed used in: 310.wupwise_m, 312.swim_m, 314.mgrid_m, 316.applu_m, 324.apsi_m
  -qfixed=80 used in: 318.galgel_m
  -qsuffix=f=f90 used in: 318.galgel_m, 326.gafort_m, 328.fma3d_m

Base Flags
  FORTRAN: -O5 -qsmp=omp -qsuppress=cmpmsg -qipa=partition=large -qmaxmem=-1
           -bmaxdata:0x80000000 -btextpsize:64K -bdatapsize:64K
  C:       -O5 -q64 -qsmp=omp -qipa=partition=large -qmaxmem=-1
           -btextpsize:64K -bdatapsize:64K
  ALL:     ENV_XLSMPOPTS=SPINS=0:YIELDS=0:STACK=8000000:SCHEDULE=STATIC:STARTPROC=0:STRIDE=1
           ENV_OMP_NUM_THREADS=32

Base & Peak User Environment:
  OMP_DYNAMIC=FALSE
  MALLOCOPTIONS=multiheap
  MEMORY_AFFINITY=MCM
  XLFRTEOPTS=intrinthds=1


 Peak sources:
    SPEC OMPL2001 source for 32bit systems modified for SPEC OMPM2001 used
    with 312.swim_m, 316.applu_m, 320.equake_m, 326.gafort_m.
```

Notes/Tuning Information (Continued)

```
Peak Flags:
  310.wupwise_m:    basepeak=1
  312.swim_m:       -O4 -q64 -bdatapsize:64K
        -qsmp=omp -qsuppress=cmpmsg -qipa=partition=large -qmaxmem=-1
       ENV_XLSMPOPTS=SPINS=0:YIELDS=0:STACK=8000000:SCHEDULE=STATIC:STARTPROC=0:STRIDE=1
        ENV_OMP_NUM_THREADS=32
  314.mgrid_m:      -O4 -q64 -btextpsize:64K
                    -bdatapsize:64K -bstackpsize:64K
        -qsmp=omp -qsuppress=cmpmsg -qipa=partition=large -qmaxmem=-1
       ENV_XLSMPOPTS=SPINS=0:YIELDS=0:STACK=8000000:SCHEDULE=STATIC:STARTPROC=0:STRIDE=1
        ENV_OMP_NUM_THREADS=32
  316.applu_m:      -O4 -q64 -bdatapsize:64K -qpdf1/pdf2
        -qsmp=omp -qsuppress=cmpmsg
       ENV_XLSMPOPTS=SPINS=0:YIELDS=0:STACK=8000000:SCHEDULE=STATIC:STARTPROC=1:STRIDE=1
        ENV_OMP_NUM_THREADS=31
  318.galgel_m:     -O5 -bmaxdata:0x20000000 -btextpsize:64K
                    -bdatapsize:64K -bstackpsize:64K
        -qsmp=omp -qsuppress=cmpmsg
       ENV_XLSMPOPTS=SPINS=0:YIELDS=0:STACK=8000000:SCHEDULE=STATIC:STARTPROC=0:STRIDE=1
        ENV_OMP_NUM_THREADS=32
  320.equake_m:     -O5 -q64 -qhot=arraypad -Q -qpdf1/pdf2
                    -btextpsize:64K -bdatapsize:64K
        -qsmp=omp -qipa=partition=large -qmaxmem=-1
       ENV_XLSMPOPTS=SPINS=0:YIELDS=0:STACK=8000000:SCHEDULE=STATIC:STARTPROC=1:STRIDE=1
        ENV_OMP_NUM_THREADS=31
  324.apsi_m:       -O5 -bmaxdata:0x80000000
                    -btextpsize:64K -bdatapsize:64K
        -qsmp=omp -qsuppress=cmpmsg -qipa=partition=large -qmaxmem=-1
       ENV_XLSMPOPTS=SPINS=0:YIELDS=0:STACK=8000000:SCHEDULE=STATIC:STARTPROC=1:STRIDE=1
        ENV_OMP_NUM_THREADS=31
  326.gafort_m:     -O4 -qpdf1/pdf2
                    -bmaxdata:0x80000000
        -qsmp=omp -qsuppress=cmpmsg -qipa=partition=large -qmaxmem=-1
       ENV_XLSMPOPTS=SPINS=0:YIELDS=0:STACK=8000000:SCHEDULE=STATIC:STARTPROC=0:STRIDE=1
        ENV_OMP_NUM_THREADS=32
  328.fma3d_m:      basepeak=1
  330.art_m:        -O5 -q64 -qpdf1/pdf2
                    -DINTS_PER_CACHELINE=2 -DDBLS_PER_CACHELINE=2
                    -btextpsize:64K -bdatapsize:64K
        -qsmp=omp -qipa=partition=large -qmaxmem=-1
       ENV_XLSMPOPTS=SPINS=0:YIELDS=0:STACK=8000000:SCHEDULE=STATIC:STARTPROC=0:STRIDE=1
        ENV_OMP_NUM_THREADS=32
  332.ammp_m:       basepeak=1

 The installed OS level is AIX 5L for POWER version 5.3
     with the 5300-06 Technology Level

 C:              IBM XL C for AIX invoked as xlc_r
 Fortran:        IBM XL Fortran for AIX invoked as xlf_r

 ulimits set to unlimited.
 User system privileges (capabilities) are set as follows:
     chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER

 The following config-file entry was used to assign each benchmark process to a core:
```

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Notes/Tuning Information (Continued)

```
          submit = bindprocessor $$ $SPECUSERNUM; $command
     The "bindprocessor" AIX command binds a process to a CPU core.

     Use flags-description file IBM-20070606-AIX.txt
```