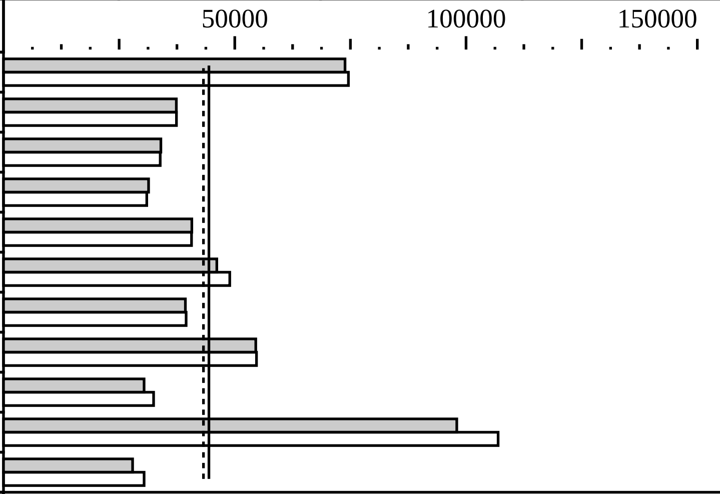
OMPM2001 Result

IBM
IBM System x (r) iDataPlex (tm) dx360 M2

SPECompMpeak2001 =	44411
SPECompMbase2001 =	43231

SPEC license #: HPG3440A	Tested by: Indiana University	Test site: --	Test date: Feb-2010	Hardware Avail: Dec-2009	Software Avail: Jan-2010

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	81.3	73835	80.5	74571
312.swim_m	6000	161	37366	160	37392
314.mgrid_m	7300	215	34024	215	33882
316.applu_m	4000	128	31365	129	30974
318.galgel_m	5100	125	40715	125	40651
320.equake_m	2600	56.4	46116	53.2	48918
324.apsi_m	3400	86.5	39323	86.1	39483
326.gafort_m	8700	160	54542	159	54698
328.fma3d_m	4600	151	30393	142	32450
330.art_m	6400	65.3	97998	59.8	106934
332.ammp_m	7000	251	27911	230	30396



Hardware

CPU:	Intel Xeon X5570
CPU MHz:	2934
FPU:	Integrated
CPU(s) enabled:	CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core
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:	No physical hard drives used
Other Hardware:	None

Software

OpenMP Threads:	16
Parallel:	OpenMP
Operating System:	RHEL5.3 (x86_64) 2.6.18-164.11.1.el5 Kernel 2.6.18-164.11.1.el5
Compiler:	Intel C/C++ Compiler 11.1.059 Intel Fortran Compiler 11.1.059
File System:	Linux tmpfs, 12 GB
System State:	Multi-user, run level 3

Notes/Tuning Information

```
Intel Hyper-Threading Technology (SMT): Enabled
Intel Turbo Boost Technology up to 3.33 GHz
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 -xSSE4.2 -ipo -no-prec-div -unroll-loops0 -openmp
    FOPTIMIZE : -O3 -xSSE4.2 -ipo -no-prec-div -unroll-loops0 -openmp
    F77OPTIMIZE : -O3 -xSSE4.2 -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
```

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Notes/Tuning Information (Continued)

```
         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.
        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.
    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 -xSSE4.2 -ipo -no-prec-div -openmp
        FOPTIMIZE = -O2 -xSSE4.2 -ipo -no-prec-div -openmp
        F77OPTIMIZE = -O2 -xSSE4.2 -ipo -no-prec-div -openmp
    318.galgel_m peak flags:
        ENV_OMP_NUM_THREADS=8
    320.equake_m peak flags:
        ENV_OMP_NUM_THREADS=8
        srcalt:ompl.32
    324.apsi_m peak flags:
        COPTIMIZE = -O2 -xSSE4.2 -ipo -no-prec-div -openmp
        FOPTIMIZE = -O2 -xSSE4.2 -ipo -no-prec-div -openmp
        F77OPTIMIZE = -O2 -xSSE4.2 -ipo -no-prec-div -openmp
    328.fma3d_m 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
    330.art_mpeak flags:
        COPTIMIZE = -O2 -xSSE4.2 -ipo -no-prec-div -openmp
        FOPTIMIZE = -O2 -xSSE4.2 -ipo -no-prec-div -openmp
        F77OPTIMIZE = -O2 -xSSE4.2 -ipo -no-prec-div -openmp
    332.ammp_m peak flags:
        COPTIMIZE = -O2 -xSSE4.2 -openmp
        FOPTIMIZE = -O2 -xSSE4.2 -openmp
        F77OPTIMIZE = -O2 -xSSE4.2 -openmp
    For a description of the flags used, please see
    Intel-ic11.1-intel64-linux-flags-file.html in the flags directory
    The benchmark suite was installed and run on a RAM based
    filesystem. No physical hard drives were used. The linux
    default tmpfs file system type was used.
```