OMPM2001 Result

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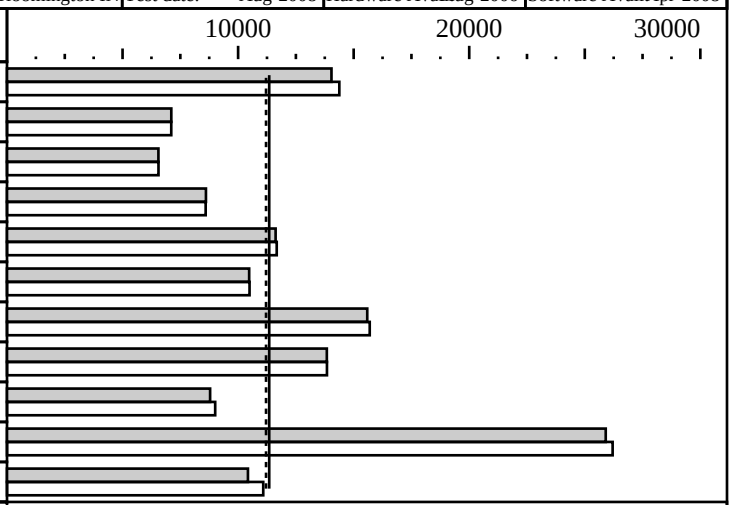
IBM
HS21 Blade servers

SPECompMpeak2001 = 11346

SPECompMbase2001 = 11209

SPEC license #:	HPG3440A	Tested by:	Indiana University	Test site:	Bloomington IN	Test date:	Aug-2008	Hardware Avail:	Aug-2006	Software Avail:	Apr-2008

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	427	14040	417	14379
312.swim_m	6000	844	7109	844	7107
314.mgrid_m	7300	1114	6552	1114	6555
316.applu_m	4000	465	8608	465	8596
318.galgel_m	5100	439	11623	437	11671
320.equake_m	2600	248	10478	248	10495
324.apsi_m	3400	218	15588	217	15695
326.gafort_m	8700	629	13839	628	13844
328.fma3d_m	4600	523	8788	511	9008
330.art_m	6400	247	25907	244	26205
332.ammp_m	7000	671	10426	631	11087



Hardware

CPU:	Intel Xeon 5335
CPU MHz:	2000
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	1,2
Primary Cache:	32KB(I)+32KB(D)/core on chip
Secondary Cache:	8192KB/chip (I+D) on chip, 4 MB shared / 2 cores
L3 Cache:	NA
Other Cache:	NA
Memory:	8192MB total, 8x1GB 667MHz DDR2 ECC
Disk Subsystem:	250TB GPFS external 36GB SAS 340TB Lustre external
Other Hardware:	NA

Software

OpenMP Threads:	8
Parallel:	OpenMP
Operating System:	RHEL4 (2.6.9_67.0.4.EL_lustre.1.6.4.3custom)
Compiler:	Intel 10.1.013 build 20080112
File System:	GPFS
System State:	Multi User

Notes/Tuning Information

```
Environment:
   KMP_STACKSIZE=31m
    Sets the number of bytes to allocate for each parallel thread to use as its private stack.
   OMP_NESTED=TRUE
    Enables (TRUE) or  disables  (FALSE)  nested  parallelism.
   OMP_NUM_THREADS=8
    Sets  the maximum number of threads to use for OpenMP* parallel
    regions if no other value is specified in the  program  itself.
   ulimit -s unlimited
    Removes limits on the maximum size of the automatically-
    extended stack region of the current process and each
    process it creates.
All Environment variables set externally by run script
Compiler flags for base level optimisation
    COPTIMIZE : -O3 -xT -ipo -no-prec-div -unroll-loops0 -openmp
    FOPTIMIZE : -O3 -xT -ipo -no-prec-div -unroll-loops0 -openmp
    F77OPTIMIZE : -O3 -xT -ipo -no-prec-div -unroll-loops0 -openmp
Compiler flags for peak level optimisation
    310.wupwise_m : -O2 -ipo -openmp
    312.swim_m      : basepeak=yes
    314.mgrid_m       : basepeak=yes
```

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Notes/Tuning Information (Continued)

```
 316.applu_m       : -O2 -xT -ipo -no-prec-div -openmp
 318.galgel_m       : basepeak=yes
 320.equake_m       : basepeak=yes
 324.apsi_m       : -O2 -xT -ipo -no-prec-div -openmp
 326.gafort_m       : basepeak=yes
 328.fma3d_m       : -O3 -xT -ipo -openmp
 330.art_m       : -O2 -xT -ipo -no-prec-div -openmp
 332.ammp_m       : -O2 -xT -openmp
Flag file: Indiana-ic10.1-intel64-linux-flags-file-20080819.html
```