OMPM2001 Result

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IBM

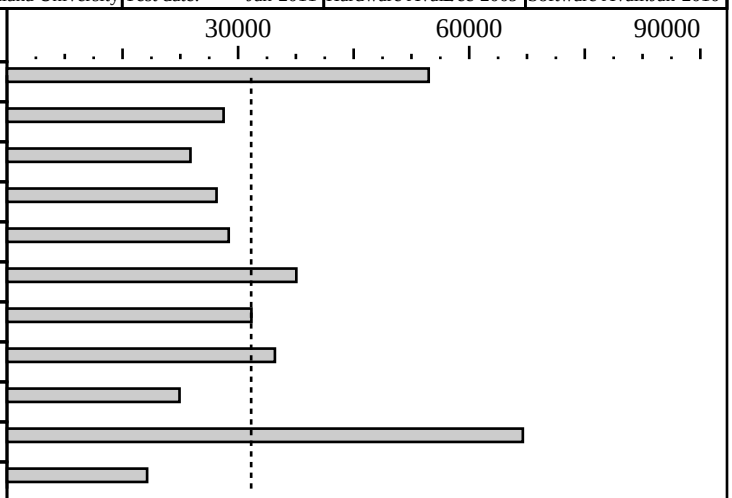
IBM System x iDP dx360 M2 (VirtualBox virtual machine)

SPECompMpeak2001 = --

SPECompMbase2001 = 31695

SPEC license #: HPG3440A | Tested by: Indiana University | Test site: Indiana University | Test date: Jan-2011 | Hardware Avail: Dec-2009 | Software Avail: Jan-2010

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	110	54740		
312.swim_m	6000	213	28117		
314.mgrid_m	7300	307	23815		
316.applu_m	4000	147	27201		
318.galgel_m	5100	177	28781		
320.equake_m	2600	69.2	37558		
324.apsi_m	3400	107	31728		
326.gafort_m	8700	250	34776		
328.fma3d_m	4600	205	22394		
330.art_m	6400	95.6	66960		
332.ammp_m	7000	385	18188		



Hardware

CPU:	Intel Xeon E5570
CPU MHz:	2934
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip (HT off)
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); 16 GB VirtualBox allocated
Disk Subsystem:	Single 500GB SATA hosting a 8 GB VDI image
Other Hardware:	None

Software

OpenMP Threads:	8
Parallel:	--
Operating System:	RHEL5.5 (x86_64) Kernel 2.6.18-194.26.1.el5 VirtualBox Kernel 2.6.18-194.26.1.el5 VirtualBox Version 3.2.12_68302_rhel5
Compiler:	Intel C/C++ Compiler 11.1.072 Intel Fortran Compiler 11.1.072
File System:	ext3; VirtualBox ext3
System State:	Multi-user, run level 3

Notes/Tuning Information

```
VM Configuration details:
    1 VM for OMP2001 with 8 VCPUS
    Only one VM per node
    Host and guest OS installed using default parameters
    VirtualBox installed using default parameters
Intel Turbo Boost Technology (Turbo)  : Disabled
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 -xSSE3 -ipo -no-prec-div -unroll-loops0 -openmp
    FOPTIMIZE : -O3 -xSSE3 -ipo -no-prec-div -unroll-loops0 -openmp
    F77OPTIMIZE : -O3 -xSSE3 -ipo -no-prec-div -unroll-loops0 -openmp
Environment:
    KMP_AFFINITY=enabled
     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.
```

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Notes/Tuning Information (Continued)

```
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
 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=8
 Sets  the maximum number of threads to use for OpenMP* parallel
 regions if no other value is specified in the  program  itself.
```