**OMPM2001 Result**

**HP**

HP Proliant DL580 G7 Server Series, Intel Xeon L7555, 1.87 GHz

**SPECompMpeak2001 = --**

**SPECompMbase2001 = 80989**

**Hardware**

- CPU: Intel Xeon L7555
- CPU MHz: 1866
- FPU: Integrated
- CPU(s) enabled: 32 cores, 4 chips, 8 cores/chip (HT on)
- CPU(s) orderable: 1-4 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: 24 MB I+D on chip per chip
- Other Cache: None
- Memory: 512 GB (64 x 8 GB 2Rx4 PC3-10600R, ECC, running at 1066 MHz and CL9)
- Disk Subsystem: Two 500 GB 7200 RPM 2.5" SAS hard drives, in RAID 1 mirror
- Other Hardware: None

**Software**

- OpenMP Threads: 32
- Parallel: OpenMP
- Operating System: RHEL6.0 (x86_64) 2.6.32-71.14.1.el6
  - Kernel 2.6.32-71.14.1.el6
- Compiler:
  - Intel(R) C/C++ Composer XE 2011 for Linux, version 12.0.2, Build 20110112
  - Intel(R) Fortran Composer XE 2011 for Linux, version 12.0.2, Build 20110612
- File System: NFSv3 (IBM N5500 NAS) over Gb ethernet
- System State: Multi-user, run level 3

**Notes/Tuning Information**

- **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 -xSSE4.1 -no-prec-div -openmp -ipo
  - FOPTIMIZE : -O3 -xSSE4.1 -no-prec-div -openmp -ipo
  - F77OPTIMIZE : -O3 -xSSE4.1 -no-prec-div -openmp -ipo
- **Environment:**
  - KMP_AFFINITY=compact,1
  - 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 its private stack
  - OMP_NESTED=TRUE

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Notes/Tuning Information (Continued)

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=32

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

Portability Flags:
318галгел_m=default=default=default:
FFLAGS=-fixed -extend-source 132

BIOS settings notes:
Intel Hyper-Threading Technology (SMT): Enabled
Intel Turbo Boost Technology (Turbo) : Enabled (Max 2.533GHz)

For compiler/openmp flags description please refer:
Intel-ic12.0-intel64-linux-flags-file.html