OMPL2001 Result

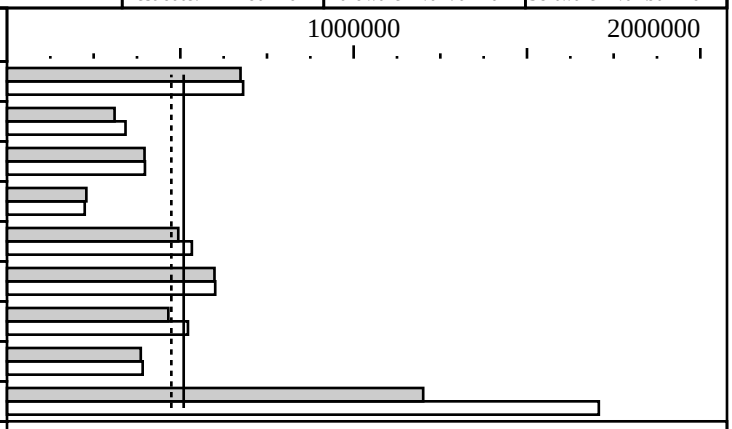
Huawei
Huawei RH2288 V2

SPECompLpeak2001 = 509660

SPECompLbase2001 = 474107

SPEC license #:HPG0024 | Tested by: Huawei | Test site: -- | Test date: Jul-2012 | Hardware Avail:Mar-2012 | Software Avail:Jun-2012

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	219	673623	216	681116
313.swim_l	12500	645	310310	585	341879
315.mgrid_l	13500	544	396733	543	397909
317.applu_l	13500	944	228917	963	224195
321.equake_l	13000	421	494061	390	533227
325.apsi_l	10500	281	598499	280	600635
327.gafort_l	11000	378	465387	337	521985
329.fma3d_l	23500	974	385886	961	391356
331.art_l	25000	333	1200548	234	1707149



Hardware

CPU:	Intel(R) Xeon(R) Processor E5-2670
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	16 cores, 2 chips, 8 cores/chip, 2 threads/core
CPU(s) orderable:	1,2
Primary Cache:	32KB(I)+32KB(D) per core on chip
Secondary Cache:	256KB per core (I+D) on chip
L3 Cache:	20MB (I+D) per chip on chip
Other Cache:	N/A
Memory:	148 GB (ECC DDR3 RDIMM 16x8-GB 1600 MHz)
Disk Subsystem:	1 x 300 GB SAS, 10K RPM
Other Hardware:	

Software

OpenMP Threads:	32
Parallel:	OpenMP
Operating System:	Red Hat EL 6.2, 2.6.32-220.el6.x86_64
Compiler:	Intel C/C++ Compiler 12.1.5 20120612 for Linux Intel FORTRAN Compiler 12.1.5 20120612 for Linux GNU C Compiler 4.4.5 20110214
File System:	Linux ext4
System State:	Default

Notes/Tuning Information

```
    BIOS settings notes:
        Intel Hyper-Threading Technology (SMT): Enabled (default is Disabled)
        Intel Turbo Boost Technology (Turbo)  : Enabled (Max 3.3GHz)
    Extra Flags:
        331.art_l: -DINTS_PER_CACHELINE=32 -DDBLS_PER_CACHELINE=16
        all: -gcc-name=/usr/bin/gcc
General Notes and environment variables
export KMP_LIBRARY=turnaround
export KMP_STACKSIZE=31M
export KMP_BLOCKTIME=infinite
export OMP_DYNAMIC=FALSE
ONESTEP=yes
For compiler/openmp flags description please refer:
Intel-ic12.1-intel64-linux-flags-file-Feb-22-2012.html
Base optimization flags and environment variables:
================================================================================
Large:
  OPTIMIZE  = -O2 -xAVX -ipo -openmp -mcmodel=medium -shared-intel
  COPTIMIZE  = -ansi-alias
  export KMP_AFFINITY=compact,0

Peak optimization flags and environment variables:
================================================================================
Large:
  OPTIMIZE  = -O3 -xAVX -ipo -openmp
  export KMP_AFFINITY=compact,0
```

Notes/Tuning Information (Continued)

```
Peak per-benchmark optimization flags and environment variables:
  OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp
==============================================================================
311.wupwise_l

==============================================================================
313.swim_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp -opt-streaming-stores always -align -mcmodel=medium -shared-intel
  export OMP_NUM_THREADS=16
  export KMP_AFFINITY=compact,1

==============================================================================
315.mgrid_l
  OPTIMIZE=-O3 -xAVX -ipo -openmp -fno-alias

==============================================================================
317.applu_l
  OPTIMIZE=-O3 -xAVX -ipo -openmp -mcmodel=medium -shared-intel
  export KMP_AFFINITY=scatter,0

==============================================================================
321.equake_l
  export OMP_NUM_THREADS=16
  export KMP_AFFINITY=compact,1

==============================================================================
325.appsi_l
  OPTIMIZE=-O2 -xAVX -ipo -openmp

==============================================================================
327.gafort_l
  OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp -mcmodel=medium -shared-intel
  export KMP_AFFINITY=scatter,0

==============================================================================
329.fma3d_l
  FOPTIMIZE=-no-prec-sqrt -fp-model fast=2

==============================================================================
331.art_l
  OPTIMIZE=-O2 -xSSE4.2 -ipo -openmp
  COPTIMIZE=-ansi-alias
```