OMPL2001 Result

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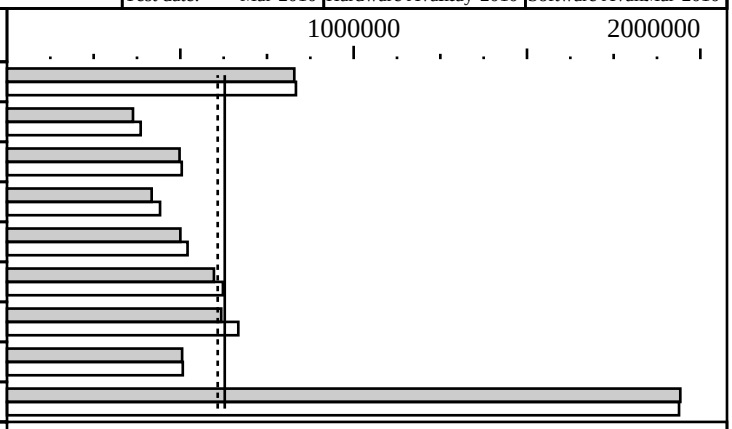
CISCO Systems, Inc.
Cisco UCS C460 M1

SPECompLpeak2001 = 628126

SPECompLbase2001 = 607818

SPEC license #HPG9019 | Tested by: Cisco Systems, Inc. | Test site: -- | Test date: Mar-2010 | Hardware Avail: May-2010 | Software Avail: Mar-2010

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	178	828730	177	833475
313.swim_l	12500	550	363439	519	385629
315.mgrid_l	13500	434	497739	429	504072
317.applu_l	13500	518	417290	489	441508
321.equake_l	13000	416	500083	399	520846
325.apsi_l	10500	281	596926	270	622877
327.gafort_l	11000	285	617983	264	667213
329.fma3d_l	23500	744	505165	742	507071
331.art_l	25000	206	1942237	206	1938569



Hardware

CPU:	Intel(R) Xeon(R) Processor X7560
CPU MHz:	2260
FPU:	Integrated
CPU(s) enabled:	32 cores, 4 chips, 8 cores/chip 2 threads/core
CPU(s) orderable:	1,2,3,4
Primary Cache:	32KB I + 32KB D on chip per core
Secondary Cache:	256KB I+D on chip per core per chip
L3 Cache:	24MB I+D on chip per chip
Other Cache:	N/A
Memory:	512 GB (RDIMM 64x8 GB 1066 MHz)
Disk Subsystem:	146 GB SAS, 10K RPM
Other Hardware:	None

Software

OpenMP Threads:	64
Parallel:	OpenMP
Operating System:	Red Hat EL 5.3, kernel 2.6.18-128
Compiler:	Intel C/C++ Compiler 11.1.059 for Linux Intel FORTRAN Compiler 11.1.059 for Linux GNU C Compiler 4.1.2 20070115
File System:	Linux ext3
System State:	Multi-user, run level 3

Notes/Tuning Information

```
================================================================================
BIOS settings notes:
  Intel Hyper-Threading Technology (SMT): Enabled
  Intel Turbo Boost Technology (Turbo)  : Enabled (Max 2.66 GHz)

================================================================================
Extra Flags:
  331.art_l: -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8 -D_OPENMP
  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
  ulimit -s 64000

For compiler/openMP flags description please refer:
Intel-ic11.1-intel64-linux-flags-file-Feb-25-2010.html

Base optimization flags and environment variables:
================================================================================
Large:
  OPTIMIZE  = -O3 -xSSE4.2 -ipo1 -openmp
```

Notes/Tuning Information (Continued)

```
    COPTIMIZE  = -ansi-alias
    PORTABILITY = -mcmodel=medium -shared-intel
    export KMP_AFFINITY=scatter,1

  Peak optimization flags and environment variables:
  ================================================================================
  Large:
    OPTIMIZE  = -O3 -xSSE4.2 -ipo1 -openmp -rcd
    export KMP_AFFINITY=compact,1

  Peak per-benchmark optimization flags and environment variables:
  ================================================================================
  311.wupwise_l
    export KMP_AFFINITY=scatter,1

  ================================================================================
  313.swim_m
    OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp -opt-streaming-stores always -align -rcd
    PORTABILITY = -mcmodel=medium -shared-intel
    export KMP_AFFINITY=scatter,1
    export OMP_NUM_THREADS=32

  ================================================================================
  315.mgrid_l
    OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp -fno-alias -rcd

  ================================================================================
  317.applu_l
    PORTABILITY = -mcmodel=medium -shared-intel
    export KMP_AFFINITY=scatter,0

  ================================================================================
  321.equake_l
    export KMP_AFFINITY=scatter,1
    export OMP_NUM_THREADS=32

  ================================================================================
  325.appsi_l
    OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp
    export KMP_AFFINITY=scatter,0

  ================================================================================
  327.gafort_l
    PORTABILITY = -mcmodel=medium -shared-intel
    export KMP_AFFINITY=scatter,0

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

  ================================================================================
  331.art_l
    COPTIMIZE=-ansi-alias
```