OMPM2001 Result

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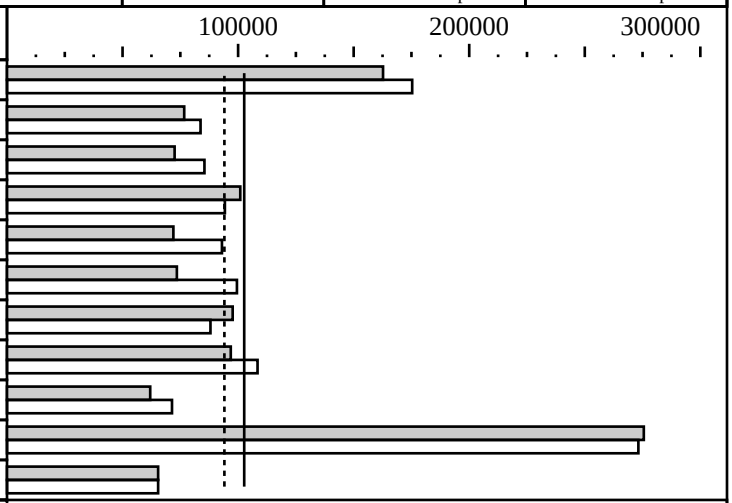
Cisco
C240 M3

SPECompMpeak2001 = 102641

SPECompMbase2001 = 94065

SPEC license #HPG9019 | Tested by: Cisco | Test site: San Jose | Test date: Feb-2012 | Hardware Avail: Apr-2012 | Software Avail: Apr-2012

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	36.9	162712	34.2	175322
312.swim_m	6000	78.2	76677	71.6	83746
314.mgrid_m	7300	101	72525	85.4	85435
316.applu_m	4000	39.6	100937	42.4	94279
318.galgel_m	5100	70.8	71994	54.8	93003
320.equake_m	2600	35.4	73499	26.1	99490
324.apsi_m	3400	34.8	97647	38.6	88037
326.gafort_m	8700	89.9	96824	80.3	108409
328.fma3d_m	4600	74.2	61965	64.4	71394
330.art_m	6400	23.2	275543	23.4	273193
332.ammp_m	7000	107	65393	107	65393



Hardware

CPU:	Intel(R) Xeon(R) Processor E5-2690
CPU MHz:	2900
FPU:	Integrated
CPU(s) enabled:	16 cores, 2 chips, 8 cores/chip, 2 thread/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:	128 GB (DDR3 RDIMM 16x8-GB 1600 MHz)
Disk Subsystem:	LSI MR9266-8i (scsi) 299GB
Other Hardware:	

Software

OpenMP Threads:	32
Parallel:	OpenMP
Operating System:	SUSE Linux Enterprise Server 11 (x86_64) 3.0.8-0.11-default
Compiler:	Intel C/C++ Compiler 12.0.2 for Linux Intel FORTRAN Compiler 12.0.2 for Linux GNU C Compiler 4.4.6
File System:	Linux ext4
System State:	Default

Notes/Tuning Information

```
    BIOS settings notes:
        Intel Hyper-Threading Technology (SMT): Enabled (default is Enabled)
       Intel Turbo Boost Technology (Turbo)  : Enabled (default is Enabled) (Max 3.8GHz)
    Portability Flags:
        318.galgel_m: -FI -132
    Extra Flags:
        330.art_m: -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
ulimit -s unlimited
For compiler/openmp flags description please refer:
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.20120329.html
Base optimization flags and environment variables:
============================================================
Medium:
  OPTIMIZE  = -O2 -xAVX -ipo -openmp -no-prec-div
  COPTIMIZE  = -ansi-alias
  export KMP_AFFINITY=compact,0
```

Notes/Tuning Information (Continued)

```
Peak optimization flags and environment variables:
Medium:
OPTIMIZE  = -O2 -xAVX -ipo -openmp
COPTIMIZE = -ansi_alias
export KMP_AFFINITY=compact,0
Peak per-benchamrk optimization flags and environment variables:

310.wupwise_m
OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp

312.swim_m
OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp -opt-streaming-stores always -align
srcalt = ompl.32
export KMP_AFFINITY=compact,1
export OMP_NUM_THREADS=16

314.mgrid_m
OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp -fno-alias
export KMP_AFFINITY=compact,1
export OMP_NUM_THREADS=16

316.applu_m
OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp -fno-alias
export KMP_AFFINITY=compact,1
export OMP_NUM_THREADS=16

318.galgel_m
FOPTIMIZE=-mkl
RM_SOURCES=lapak.f90
export KMP_AFFINITY=compact,1
export OMP_NUM_THREADS=16
320.equake_m
export KMP_AFFINITY=compact,1
export OMP_NUM_THREADS=16

324.appsi_m
OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp

326.gafort_m
OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp
srcalt = ompl.32
export KMP_AFFINITY=scatter,0

328.fma3d_m
FOPTIMIZE=-no-prec-sqrt -fp-model fast=2
srcalt = ompl.32
export ENV_KMP_AFFINITY=compact,1
330.art_m

332.ammp_m
basepeak=yes
```