



# OMPL2001 Result

Copyright 1999-2008, Standard Performance Evaluation Corporation

Cisco  
C220 M3

SPECompLpeak2001 = 549613  
SPECompLbase2001 = 527122

SPEC license #HPG9019 Tested by: Cisco Test site: San Jose Test date: Feb-2012 Hardware AvailApr-2012 Software AvailDec-2011

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	213	690726	210	702597
313.swim_l	12500	635	315187	579	345357
315.mgrid_l	13500	528	409202	495	435975
317.applu_l	13500	824	262158	836	258409
321.quake_l	13000	409	508751	382	544936
325.apsi_l	10500	249	673358	249	673358
327.gafort_l	11000	350	502602	315	559136
329.fma3d_l	23500	893	420977	851	441654
331.art_l	25000	216	1856053	217	1847476

### 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: Red Hat EL 6.2, 2.6.32-220.el6.x86\_64  
 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)

### 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

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:

Large:

```
OPTIMIZE=-O2 -xAVX -ipo -openmp -no-prec-div -mcmmodel=medium -shared-intel
COPTIMIZE = -ansi_alias
```

```
export KMP_AFFINITY=compact,0
```

Peak optimization flags and environment variables:

Large:

```
OPTIMIZE=-O2 -xAVX -ipo -openmp -mcmmodel=medium -shared-intel
COPTIMIZE = -ansi_alias
```

```
export KMP_AFFINITY=compact,1
```

Peak per-benchmark optimization flags and environment variables:

Standard Performance Evaluation Corporation

info@spec.org

<http://www.spec.org>



# OMPL2001 Result

Copyright 1999-2008, Standard Performance Evaluation Corporation

Cisco  
C220 M3

SPECompLpeak2001 = 549613

SPECompLbase2001 = 527122

SPEC license #HPG9019 Tested by: Cisco Test site: San Jose Test date: Feb-2012 Hardware Avail Apr-2012 Software Avail Dec-2011

## Notes/Tuning Information (Continued)

311.wupwise\_1

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

313.swim\_1

srcalt = ompl.32

OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp -opt-streaming-stores always -align

export KMP\_AFFINITY=compact,1

export OMP\_NUM\_THREADS=16

315.mgrid\_1

OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp -fno-alias

export KMP\_AFFINITY=compact,1

export OMP\_NUM\_THREADS=16

317.applu\_1

OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp -fno-alias

export KMP\_AFFINITY=compact,1

export OMP\_NUM\_THREADS=16

321.equake\_1

export KMP\_AFFINITY=compact,1

export OMP\_NUM\_THREADS=16

325.apsi\_1=peak=default=default:

basepeak=yes

327.gafort\_1

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

export KMP\_AFFINITY=scatter,0

329.fma3d\_1

FOPTIMIZE=-no-prec-sqrt -fp-model fast=2

EXTRA\_LIBS=-L\$(SPECLIB) -lhoard

export KMP\_AFFINITY=compact,1

331.art\_1