



# OMPL2001 Result

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Cisco Systems, Inc.  
Cisco UCS B200 M2

SPECompLpeak2001 = 286521  
SPECompLbase2001 = 278603

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	382	385158	380	387205
313.swim_l	12500	1276	156795	1097	182327
315.mgrid_l	13500	1070	201930	1072	201401
317.applu_l	13500	1716	125867	1716	125852
321.quake_l	13000	849	245047	815	255132
325.apsi_l	10500	502	334648	502	334774
327.gafort_l	11000	526	334293	500	351973
329.fma3d_l	23500	1351	278414	1344	279753
331.art_l	25000	463	863246	463	864742

### Hardware

CPU: Intel(R) Xeon(R) Processor X5680  
 CPU MHz: 3333  
 FPU: Integrated  
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core  
 CPU(s) orderable: 1,2  
 Primary Cache: 32KB(I)+32KB(D)/core on chip  
 Secondary Cache: 256KB/core (I+D) on chip  
 L3 Cache: 12 MB (I+D) on chip per chip  
 Other Cache: None  
 Memory: 48 GB (RDIMM 12x4 GB 1333 MHz)  
 Disk Subsystem: 146 GB SAS, 10K RPM  
 Other Hardware: None

### Software

OpenMP Threads: 24  
 Parallel: OpenMP  
 Operating System: Red Hat EL 5.4, kernel 2.6.18-164  
 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 (Default is Enabled)  
 Intel Turbo Boost Technology (Turbo) : Enabled (Max 3.60GHz)

### 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 -ipol -openmp  
 COPTIMIZE = -ansi-alias



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## Notes/Tuning Information (Continued)

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

Peak optimization flags and environment variables:

Large:

```
OPTIMIZE = -O3 -xSSE4.2 -ipol -openmp
export KMP_AFFINITY=compact,1
```

Peak per-benchmark optimization flags and environment variables:

```
311.wupwise_1
export KMP_AFFINITY=scatter,1
```

```
313.swim_m
OPTIMIZE=-O3 -xSSE4.2 -ipol -openmp -opt-streaming-stores always -align -rcd
PORTABILITY = -mcmodel=medium -shared-intel
export OMP_NUM_THREADS=12
```

```
315.mgrid_1
export KMP_AFFINITY=scatter,1
```

```
317.applu_1
PORTABILITY = -mcmodel=medium -shared-intel
export KMP_AFFINITY=scatter,1
```

```
321.quake_1
export OMP_NUM_THREADS=12
```

```
325.appsi_1
OPTIMIZE=-O3 -xSSE4.2 -ipol -openmp
```

```
327.gafort_1
PORTABILITY = -mcmodel=medium -shared-intel
export KMP_AFFINITY=scatter,0
```

```
329.fma3d_1
FOPTIMIZE=-no-prec-sqrt -fp-model fast=2
```

```
331.art_1
COPTIMIZE=-ansi-alias
```