



OMPL2001 Result

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Bull SAS
bullx B510

SPECompLpeak2001 = 525845

SPECompLbase2001 = 483192

SPEC license #HPG0015 Tested by: Bull SAS Test site: -- Test date: Aug-2012 Hardware AvailMar-2012 Software AvailApr-2012

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	219	671780	217	679881
313.swim_l	12500	658	303882	598	334423
315.mgrid_l	13500	555	388861	556	388722
317.applu_l	13500	851	253903	807	267784
321.quake_l	13000	426	488036	401	518384
325.apsi_l	10500	270	622441	262	641456
327.gafort_l	11000	362	486207	329	535636
329.fma3d_l	23500	947	397139	900	417710
331.art_l	25000	329	1214428	229	1745845

Hardware

CPU: Intel(R) Xeon(R) Processor E5-2680
 CPU MHz: 2700
 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)/core on chip
 Secondary Cache: 256KB/core (I+D) on chip
 L3 Cache: 20MB (I+D) on chip
 Other Cache: N/A
 Memory: 64 GB (8 x 8 GB 2Rx4 PC3-12800R-11, ECC)
 Disk Subsystem: 1 x 64GB SSD disk
 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 XE 12.1.4.319 for Linux Build 20120410
 Intel FORTRAN Compiler XE 12.1.4.319 for Linux Build 20120410
 GNU C Compiler 4.4.6 20110731
 File System: Linux ext4
 System State: Run level 3 (multi-user)

Notes/Tuning Information

BIOS settings notes:

Intel Hyper-Threading Technology (SMT): Enabled (default is Enabled)
 Intel Turbo Boost Technology (Turbo) : Enabled (default is Enabled)

Portability Flags:

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
```

Intel Turbo Boost Technology up to 3.50 GHz enabled

For compiler/openmp flags description please refer:

Intel-ic12.1-intel64-linux-flags-file.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:



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Notes/Tuning Information (Continued)

```
OPTIMIZE = -O3 -xAVX -ipo -openmp
export KMP_AFFINITY=compact,0
```

Peak per-benchmark optimization flags and environment variables:

311.wupwise_1

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

313.swim_1

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

315.mgrid_1

```
OPTIMIZE=-O3 -xAVX -ipo -openmp -fno-alias
```

317.aplu_1

```
OPTIMIZE=-O3 -xAVX -ipo -openmp -mcmmodel=medium -shared-intel
export KMP_AFFINITY=scatter,0
```

321.quake_1

```
export KMP_AFFINITY=compact,1
export OMP_NUM_THREADS=16
```

325.apsi_1

```
OPTIMIZE=-O2 -xAVX -ipo -openmp -no-prec-div -mcmmodel=medium -shared-intel
COPTIMIZE = -ansi_alias
export KMP_AFFINITY=compact,0
```

327.gafort_1

```
OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp -mcmmodel=medium -shared-intel
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

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