



OMPL2001 Result

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Hewlett-Packard Company
AlphaServer GS1280 7/1300

SPECompLpeak2001 = 232904

SPECompLbase2001 = 200419

SPEC license #HPG0009 | Tested by: Hewlett-Packard Company | Test site: Marlborough, MA | Test date: Aug-2004 | Hardware Avail: Aug-2004 | Software Avail: Jul-2004

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio	
311.wupwise_1	9200	800	184035	453	324622	
313.swim_1	12500	393	508733	277	720908	
315.mgrid_1	13500	586	368391	578	373392	
317.applu_1	13500	1403	153931	1309	165067	
321.quake_1	13000	2728	76240	2064	100797	
325.apsi_1	10500	1355	123961	1388	121019	
327.gafort_1	11000	943	186651	878	200394	
329.fma3d_1	23500	2428	154891	2367	158841	
331.art_1	25000	1112	359669	1111	360053	

Hardware

CPU: Alpha 21364
 CPU MHz: 1300
 FPU: Integrated
 CPU(s) enabled: 32 cores, 32 chips, 1 core/chip
 CPU(s) orderable: 2 to 64
 Primary Cache: 64KB(I)+64KB(D) on chip
 Secondary Cache: 1.75MB on chip per core
 L3 Cache: None
 Other Cache: None
 Memory: 2GB per core; 256MB RIMMs; 64GB total
 Disk Subsystem: 36GB Ultra 160 10KRPM
 Other Hardware: None

Software

OpenMP Threads: 32
 Parallel: OpenMP
 Operating System: Tru64 UNIX V5.1B-1 + PK4
 Compiler: HP Fortran V5.5A-3548-48D88
 Compaq C V6.5-011-48C5K
 File System: UFS
 System State: Multi-user

Notes/Tuning Information

MP_STACK_SIZE=10000000
 4Mb pages used (sysconfigtab)
 no processor sets used

Tuning pseudo-switches:
 +BPD - Big page disable
 See the flags description or the configuration file
 for more details.

Base:
 Fortran: f90 -arch ev7 -fast -omp -O5
 C: cc -arch ev7 -fast -omp -O4
 alternate source purduel for 331.art_1

Peak:
 All use -arch host -omp ONESTEP
 Individual benchmark tuning:
 311.wupwise_1: f90 -arch host -omp -call_shared
 -inline all -unroll 12 -align commons
 +BPD
 313.swim_1: f90 -arch host -omp -fast -O5
 +BPD
 PTHREAD_CONFIG=feature=def-scs,d4-scs
 315.mgrid_1: f90 -arch host -omp -O5 -transform_loops
 -tune ev7 -unroll 8



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Notes/Tuning Information (Continued)

```
+BPD
PTHREAD_CONFIG=feature=def-scs,d4-scs

317.applu_1: f90 -arch host -omp -fast -O5 -unroll 14
PTHREAD_CONFIG=feature=def-scs,d4-scs

321.equake_1: cc -arch host -omp -fast -call_shared
             -O4 -ldensemalloc -assume restricted_pointers
             -inline speed -unroll 13
+BPD
PTHREAD_CONFIG=feature=def-scs,d4-scs

325.apsi_1: f90 -arch host -omp -O5 -transform_loops
            -unroll 8
PTHREAD_CONFIG=feature=def-scs,d4-scs

327.gafort_1: f90 -arch host -omp -fast -O5
             -arch ev67 -tune ev67

329.fma3d_1: f90 -arch host -omp -fast -O4
             -transform_loops
+BPD
PTHREAD_CONFIG=feature=def-scs,d4-scs

331.art_1: cc -arch host -omp -assume whole_program
           -ldensemalloc -call_shared
           -assume restricted_pointers -fast -O4 -unroll 16
           -inline none
+BPD
alternate source purduel
```

Information on UNIX V5.1B Patches can be found at
<http://ftpl.service.digital.com/public/unix/v5.1/>