



OMPL2001 Result

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Hewlett-Packard Company
AlphaServer GS1280 7/1300

SPECompLpeak2001 = 376173

SPECompLbase2001 = 330239

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	437	336838	280	525576
313.swim_1	12500	225	890169	172	1160432
315.mgrid_1	13500	370	583747	340	635698
317.applu_1	13500	590	366290	621	347618
321.quake_1	13000	2359	88170	1604	129685
325.apsi_1	10500	799	210362	810	207344
327.gafort_1	11000	628	280390	555	317340
329.fma3d_1	23500	1866	201524	1916	196197
331.art_1	25000	575	695233	598	668474

Hardware		Software	
CPU:	Alpha 21364	OpenMP Threads:	64
CPU MHz:	1300	Parallel:	OpenMP
FPU:	Integrated	Operating System:	Tru64 UNIX V5.1B-1 + PK4
CPU(s) enabled:	64 cores, 64 chips, 1 core/chip	Compiler:	HP Fortran V5.5A-3548-48D88
CPU(s) orderable:	2 to 64		Compaq C V6.5-011-48C5K
Primary Cache:	64KB(I)+64KB(D) on chip	File System:	UFS
Secondary Cache:	1.75MB on chip per core	System State:	Multi-user
L3 Cache:	None		
Other Cache:	None		
Memory:	2GB per core; 256MB RIMMs; 128GB total		
Disk Subsystem:	36GB Ultra 160 10KRPM		
Other Hardware:	None		

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/>