



CFP2000 Result

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Hewlett-Packard Company
HP Integrity Superdome 64-way (1500 MHz Itanium 2)

SPECfp_rate2000 = 928
SPECfp_rate_base2000 = 846

SPEC license #: 3 Tested by: HP Richardson Test date: Aug-2003 Hardware Avail: Oct-2003 Software Avail: Sep-2003

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	64	184	645	64	160	741
171.swim	64	270	852	64	270	852
172.mgrid	64	183	731	64	178	752
173.applu	64	249	626	64	232	671
177.mesa	64	132	786	64	132	786
178.galgel	64	74.4	2894	64	54.5	3954
179.art	64	65.8	2934	64	65.8	2934
183.quake	64	189	512	64	139	695
187.facerec	64	172	818	64	159	889
188.amp	64	156	1049	64	156	1049
189.lucas	64	252	589	64	216	687
191.fma3d	64	381	409	64	328	475
200.sixtrack	64	87.0	938	64	87.0	938
301.apsi	64	333	580	64	317	608

Hardware

CPU: Intel Itanium 2
CPU MHz: 1500
FPU: Integrated
CPU(s) enabled: 64 cores, 64 chips, 1 core/chip
CPU(s) orderable: 6 to 64 by 2
Parallel: no
Primary Cache: 16KBI + 16KBD (on chip) per CPU
Secondary Cache: 256KB (on chip) per CPU
L3 Cache: 6.0MB (on chip) per CPU
Other Cache: N/A
Memory: 256GB (512 * 512MB DIMMs)
Disk Subsystem: 4x36GB 10K rpm SCSI (striped)
Other Hardware: N/A

Software

Operating System: HPUX11i-TCOE B.11.23
Compiler: HP C/ANSI C Compiler B.11.23
HP Fortran90 Compiler B.11.23
File System: vxfs
System State: Multi-user

Notes/Tuning Information

C compiler invoked as:
/opt/ansic/bin/cc -AOe

Portability Flags
178.galgel: +source=fixed

Base Flags
f90 : +Oprofile=collect:all/+Oprofile=use +Ofast +O3 -minshared
C : +Oprofile=collect:all/+Oprofile=use +Ofaster -exec

Peak Flags:

168.wupwise : +Ofast +Onoptrs_to_globals -minshared +O4 +Oinline_budget=50000
171.swim : basepeak=true
172.mgrid : +Ofast +O3 -minshared +DSblended +DD64
173.applu : +Ofast +O3 -minshared
177.mesa : basepeak=true



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Notes/Tuning Information (Continued)

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178.galgel      : +Ofast +Onoptrs_to_globals -minshared +O3 +Oloop_unroll=2 +DD64
                 RM_SOURCES = lapak.f90
                 LIBS = -llapack
179.art         : basepeak=true
183.earthquake  : +Oprofile=collect:all/+Oprofile=use +Ofaster +Onorecovery
                 +Onoptrs_to_globals +Otype_safety=strong -exec -Wl,-aarchive_shared
                 LIBS = -Bprotected /opt/langtools/lib/hpux32/effmem.o
187.facerec    : +Ofast +Onoptrs_to_globals -minshared +O3 +Oloop_unroll=2
188.ammpp      : basepeak=true
189.lucas      : +Ofast +Onoptrs_to_globals -minshared +O3 +Oinline_budget=100
191.fma3d      : +Ofast +Onoptrs_to_globals -minshared +O3
200.sixtrack   : basepeak=true
301.apsi       : +Ofast +Onoptrs_to_globals -minshared +O3

```

Kernel Tunables:

```

dbc_max_pct=20
dbc_min_pct=20
maxdsiz=3221225472
maxssiz=401604608
maxdsiz_64bit=4396972769279
maxssiz_64bit=1073741824
vps_pagesize=4096
vps_ceiling=16384

```

Other notes:

System was configured with 1/2 of memory interleaved and 1/2 of memory local to each cell

System configured as a single partition with 16 cells and 4 processors per cell

Processes were assigned to localities using the HP-UX mpsched utility

Filesystem used for SPEC runs mounted tmplog