



OMPL2001 Result

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Hewlett-Packard Company
HP Integrity Superdome 16-way (1500 MHz Itanium 2)

SPECompLpeak2001 = 92725
SPECompLbase2001 = 92418

SPEC license #HPG2116 | Tested by: Hewlett-Packard Company | Test site: Richardson, Texas | Test date: Sep-2003 | Hardware Avail: Oct-2003 | Software Avail: Oct-2003

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_1	9200	1346	109350	1306	112668
313.swim_1	12500	1726	115851	1726	115851
315.mgrid_1	13500	2147	100618	2147	100618
317.applu_1	13500	2514	85908	2514	85908
321.quake_1	13000	4539	45829	4539	45829
325.apsi_1	10500	1767	95059	1767	95059
327.gafort_1	11000	1970	89326	1970	89326
329.fma3d_1	23500	4101	91683	4101	91683
331.art_1	25000	3177	125886	3177	125886

Hardware		Software	
CPU:	Intel Itanium 2	OpenMP Threads:	16
CPU MHz:	1500	Parallel:	OpenMP
FPU:	Integrated	Operating System:	HPUX11i-TCOE B.11.23
CPU(s) enabled:	16	Compiler:	HP C/ANSI C Compiler B.11.23
CPU(s) orderable:	6 to 16 by 2		HP aC++ Compiler B.11.23
Primary Cache:	L1 Inst/Data: 16 KB, associativity = 4		HP Fortran 90 Compiler B.11.23
Secondary Cache:	L2 Unified: 256 KB, associativity = 8		HP LIBF90 PHSS_29620
L3 Cache:	L3 Unified: 6144 KB, associativity = 24		HP F90 Compiler PHSS_29663
Other Cache:	None		HP aC++ Compiler PHSS_29655
Memory:	64GB (128 * 512MB DIMMs)		HP C Compiler PHSS_29656
Disk Subsystem:	root disk 1x36 SCSI		u2comp/be/plugin library PHSS_29657
	9x36GB Fibrechannel (striped)	File System:	vxfs
Other Hardware:	--	System State:	Multi-user

Notes/Tuning Information

User environment:

```
MP_IDLE_THREADS_WAIT=-1
OMP_FIRST_USE=0
```

Base:

```
F90 +Ofaster +DSitanium2 +Oopenmp
+Oinfo +DD64 -minshared
cc +Ofaster +Oopenmp +DD64 +Oinfo +DSitanium2
-minshared -AOe +Ofltacc=default
submit = chatr -s +id disable +pd 64k +pi 64k $commandexe; \
_M_ARENA_OPTS=64:32 _M_SBA_OPTS=16348:150:256 \
mpsched -T FILL $command
```

Peak:

```
311.wupwise_1: +Ofaster +O3 +DSitanium2 +Oopenmp
+Oinfo +DD64 -minshared +cat -Wl,+pd64k -Wl,+pi64k
ONESTEP = true

313.swim_1: basepeak=true

315.mgrid_1: basepeak=true

317.applu_1: basepeak=true
```



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Notes/Tuning Information (Continued)

321.equake_1: basepeak=true

325.apsi_1: basepeak=true

327.gafort_1: basepeak=true

329.fma3d_1: basepeak=true

331.art_1: basepeak=true

Alternate Sources:

ifdef version of art
from SPEC Web site omp12001-fabs-20030401.tar.gz
used for Base and Peak 331.art_1

Kernel Paramters (/stand/system):

maxdsiz 0xc0000000
maxdsiz_64bit 0x3fffbfffffff
maxssiz 0x17f00000
maxssiz_64bit 0x40000000
maxtsiz 0x40000000
maxtsiz_64bit 0x40000000
vps_pagesize 4096
vps_ceiling 16384
dbc_min_pct 20
dbc_max_pct 20
swapmem_on 0

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 4 cells and 4 processors per cell

Threads were assigned to cpus using the FILL strategy from the HP-UX mpsched utility

Memory tuning is documented in man page malloc(3C)

_M_ARENA_OPTS=64:32
64 malloc arenas, 32 4k pages expansion
_M_SBA_OPTS=16348:150:256
16384 maxfast size, 150 small blocks, 256 grain size