OMPL2001 Result

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Hewlett-Packard Company

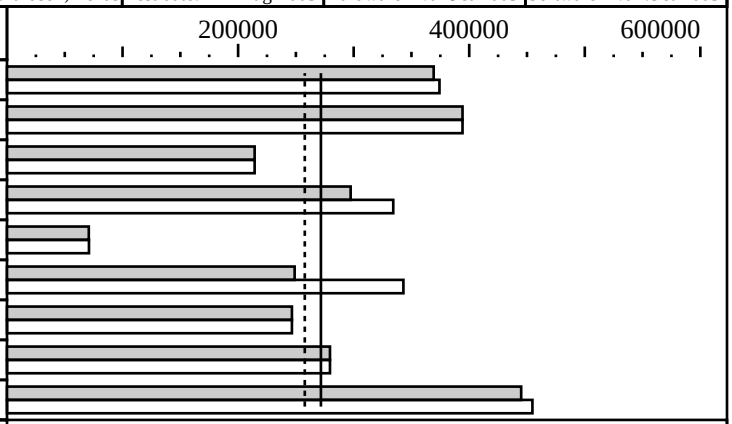
HP Integrity Superdome 64-way (1500 MHz Itanium 2)

SPECompLpeak2001 = 271659

SPECompLbase2001 = 257702

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	399	369245	393	374257
313.swim_l	12500	507	394202	507	394202
315.mgrid_l	13500	1008	214301	1008	214301
317.applu_l	13500	726	297382	646	334258
321.equake_l	13000	2938	70791	2932	70931
325.apsi_l	10500	675	248920	490	343044
327.gafort_l	11000	714	246571	714	246571
329.fma3d_l	23500	1345	279499	1345	279499
331.art_l	25000	899	444961	880	454692



Hardware

CPU:	Intel Itanium 2
CPU MHz:	1500
FPU:	Integrated
CPU(s) enabled:	64
CPU(s) orderable:	6 to 64 by 2
Primary Cache:	L1 Inst/Data: 16 KB, associativity = 4
Secondary Cache:	L2 Unified: 256 KB, associativity = 8
L3 Cache:	L3 Unified: 6144 KB, associativity = 24
Other Cache:	None
Memory:	256GB (512 * 512MB DIMMs)
Disk Subsystem:	root disk 1x36 SCSI 9x36GB Fibrechannel (striped)
Other Hardware:	--

Software

OpenMP Threads:	64
Parallel:	OpenMP
Operating System:	HPUX11i-TCOE B.11.23
Compiler:	HP C/ANSI C Compiler B.11.23 HP aC++ Compiler B.11.23 HP Fortran 90 Compiler B.11.23 HP LIBF90 PHSS_29620 HP F90 Compiler PHSS_29663
File System:	vxfs
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
```

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Notes/Tuning Information (Continued)

```
        +DD64 -minshared
        ONESTEP=true
        submit = chatr -s +id enable $commandexe;
            _M_ARENA_OPTS=64:32 mpsched -T FILL $command

      321.equake_l:  basepeak=true

      325.apsi_l: +Ofaster +DSitanium2 +Oopenmp +Oinfo +DD64 -minshared
          submit = chatr -s +id disable  +pd 256k +pi 256k $commandexe;  _
          M_ARENA_OPTS=64:32 mpsched -T FILL $command

      327.gafort_l: basepeak=true

      329.fma3d_l: basepeak=true

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

   Alternate Sources:
     ifdef version of art
     from SPEC Web site  ompl2001-fabs-20030401.tar.gz
       used for Base and Peak 331.art_l


    Kernel Paramters (/stand/system):
       maxdsiz         0xc0000000
       maxdsiz_64bit   0x3ffbffffff
       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 16 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
```