OMPL2001 Result

Hewlett-Packard Company

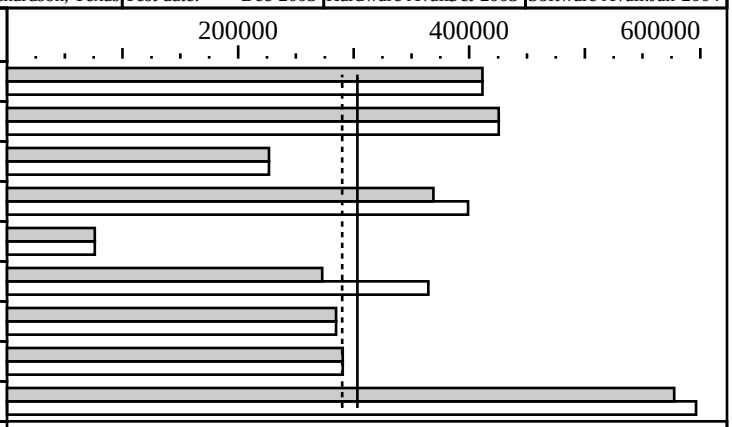
HP Integrity Superdome 64-way (1500 MHz Itanium 2)

SPECompLpeak2001 = 303161

SPECompLbase2001 = 289967

SPEC license #:HPG2116 | Tested by: Hewlett-Packard Company | Test site: Richardson, Texas | Test date: Dec-2003 | Hardware Avail:Oct-2003 | Software Avail:Jan-2004

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	358	411437	358	411437
313.swim_l	12500	470	425590	470	425590
315.mgrid_l	13500	953	226699	953	226699
317.applu_l	13500	585	369069	541	398926
321.equake_l	13000	2738	75965	2738	75965
325.apsi_l	10500	616	272725	461	364508
327.gafort_l	11000	618	284664	618	284664
329.fma3d_l	23500	1294	290562	1294	290562
331.art_l	25000	693	577270	671	596390



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 C.05.55 HP aC++ Compiler C.05.55 HP Fortran 90 Compiler B.11.23.03 HP LIBF90 PHSS_29620 HP F90 Compiler PHSS_29663 HPUX OS Patch PHKL_30089
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
  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_l: basepeak=true

  313.swim_l:  basepeak=true

  315.mgrid_l:  basepeak=true

  317.applu_l:  +Ofaster +DSitanium2  +Oopenmp +Oinfo
    +DD64 -minshared
    ONESTEP=true
    submit = chatr -s +id enable $commandexe;
        _M_ARENA_OPTS=64:32 mpsched -T FILL $command
```

Notes/Tuning Information (Continued)

```
      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:
     None

    Kernel Paramters (/stand/system):
       maxdsiz          0xc0000000
       maxdsiz_64bit    0x3ffbfffffff
       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 partiton 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
```