OMPL2001 Result

Copyright ©1999-2002, Standard Performance Evaluation Corporation

Hewlett-Packard Company

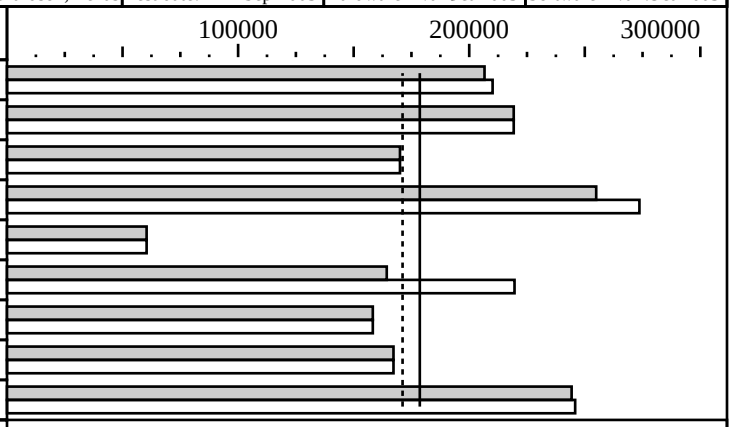
HP Integrity Superdome 32-way (1500 MHz Itanium 2)

SPECompLpeak2001 = 178617

SPECompLbase2001 = 171159

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_l	9200	712	206619	701	210117
313.swim_l	12500	912	219254	912	219254
315.mgrid_l	13500	1270	170039	1270	170039
317.applu_l	13500	847	254944	789	273645
321.equake_l	13000	3443	60411	3443	60411
325.apsi_l	10500	1022	164316	765	219601
327.gafort_l	11000	1112	158281	1112	158281
329.fma3d_l	23500	2248	167232	2248	167232
331.art_l	25000	1637	244305	1627	245838



Hardware

CPU:	Intel Itanium 2
CPU MHz:	1500
FPU:	Integrated
CPU(s) enabled:	32
CPU(s) orderable:	6 to 32 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:	128GB (256 * 512MB DIMMs)
Disk Subsystem:	root disk 1x36 SCSI 9x36GB Fibrechannel (striped)
Other Hardware:	--

Software

OpenMP Threads:	32
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 HP aC++ Compiler PHSS_29655 HP C Compiler PHSS_29656 u2comp/be/plugin library PHSS_29657
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


          mpsched -T FILL $command

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

  313.swim_l:  basepeak=true

  315.mgrid_l:  basepeak=true

  317.applu_l:  +Ofaster +DSitanium  +Oopenmp +Oinfo
    +DD64 -minshared
```

Copyright ©1999-2002, Standard Performance Evaluation Corporation

Notes/Tuning Information (Continued)

```
        ONESTEP=true
        submit =   chatr -s +id disable  +pd 256k +pi 256k $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 8 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
```