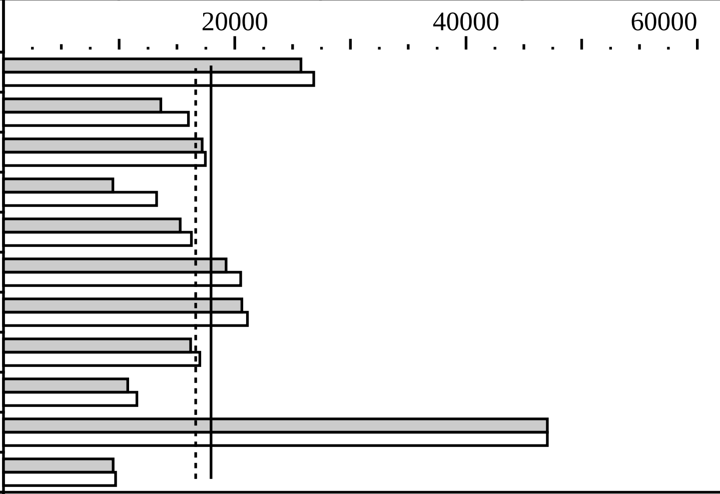
OMPM2001 Result

Hewlett-Packard Company
ProLiant DL585 (AMD Opteron (TM) 880)

SPECompMpeak2001 = 17948
SPECompMbase2001 = 16621

SPEC license #: HPG0001	Tested by: Hewlett-Packard Company	Test site: Austin, Texas	Test date: Oct-2005	Hardware Avail: Sep-2005	Software Avail: Oct-2005

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	233	25723	224	26830
312.swim_m	6000	441	13606	375	15992
314.mgrid_m	7300	425	17181	418	17457
316.applu_m	4000	423	9460	302	13241
318.galgel_m	5100	334	15281	314	16249
320.equake_m	2600	135	19249	127	20513
324.apsi_m	3400	165	20613	161	21095
326.gafort_m	8700	538	16183	512	16978
328.fma3d_m	4600	428	10744	399	11536
330.art_m	6400	136	47031	136	47031
332.ammp_m	7000	738	9482	722	9694



Hardware

CPU:	AMD Opteron (TM) 880
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	8 cores, 4 chips, 2 cores/chip
CPU(s) orderable:	1,2,4
Primary Cache:	64KBI + 64KBD on chip
Secondary Cache:	1024KB (I+D) on chip
L3 Cache:	None
Other Cache:	None
Memory:	16x1GB, PC3200 CL3 DDR SDRAM ECC Registered
Disk Subsystem:	SCSI, 36GB, 15K RPM
Other Hardware:	None

Software

OpenMP Threads:	8
Parallel:	OpenMP
Operating System:	RedHat Enterprise Linux, Advanced Server version 4 (2)
Compiler:	PathScale EKO Compiler Suite, Release 2.2.1
File System:	ext3
System State:	Multi-User

Notes/Tuning Information

```
Environemnt Settings:
 export PSC_OMP_AFFINITY=TRUE
 export PSC_OMP_AFFINITY_MAP=0,1,2,3,4,5,6,7
 export PSC_OMP_STATIC_FAIR=TRUE
 export PSC_OMP_THREAD_SPIN=1000000000
 export OMP_DYNAMIC=FALSE
 export OMP_NUM_THREADS=8
 ONESTEP=yes for base and peak
 ulimit -s unlimited

Machine Configuration
 DL585 BIOS version 4.12 A01 - 8/26/2005
 chkconfig --levels 12345 cpuspeed off

Baseline optimization flags:
 COPTIMIZE = -mp -Ofast
 FOPTIMIZE = -mp -Ofast -OPT:early_mp=on -mcmodel=medium

Peak optimization flags:
   310.wupwise_m: -mp -Ofast -msse3 -LNO:prefetch_ahead=5:prefetch=3
                  -OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3
                  -IPA:linear=on:plimit=50000:callee_limit=5000
```

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Notes/Tuning Information (Continued)

```
         -INLINE:aggressive=on
    312.swim_m: -mp -O3 -OPT:Ofast -m3dnow -mcmodel=medium -LNO:simd=0
    314.mgrid_m: -mp -Ofast -CG:gcm=off:cflow=off -LNO:fusion=2:prefetch=0
         -msse3 -OPT:early_mp=on:unroll_times_max=8:unroll_size=256:ro=3
         -mcmodel=medium
    316.applu_m: -mp -Ofast -mcmodel=medium -CG:local_fwd_sched=on
         -LNO:fusion=2:fission=2:full_unroll_size=10000:prefetch=3
         -TENV:X=3
       use_submit_for_speed=1
         submit= numactl --interleave=0,1,2,3 $command
    318.galgel_m: -mp -Ofast -OPT:early_mp=on -OPT:fast_complex=on +ACML
     RM_SOURCES=lapak.f90
     -L<acml2.7.0-install-dir>/pathscale64_mp/lib -lacml
     -I<acml2.7.0-install-dir>/pathscale64_mp/include
    320.equake_m: -Ofast -mp -OPT:alias=disjoint
    324.apsi_m: -mp -O3 -OPT:Ofast -TENV:x=4 -LNO:fusion=2:prefetch=0
    326.gafort_m: -Ofast -OPT:early_mp=on -mp -LNO:vintr=0
    328.fma3d_m: -mp -O2 -ipa -CG:load_exe=1 -OPT:Ofast:IEEE_arith=3:ro=3
         -WOPT:mem_opnds=on:retype_expr=on -IPA:pu_reorder=1
    330.art_m: basepeak=yes
    332.ammp_m: -mp -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
         -fno-math-errno -TENV:X=4 -LNO:prefetch=0
       use_submit_for_speed=1
          submit= PSC_OMP_GUIDED_CHUNK_MAX=700 $command

    Portability Flags:
        318.galgel_m: -fixedform -extend_source

    Extra Flags:
        330.art_m: -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8

 Alternate Source:
       330.art_m         : Required srcalt purdue1 used for base and peak
       310.wupwise_m     : Approved srcalt ompl.32 used for peak
       312.swim_m        : Approved srcalt ompl.32 used for peak
       314.mgrid_m       : Approved srcalt ompl    used for peak
       320.equake_m      : Approved srcalt ompl.32 used for peak
       324.apsi_m        : Approved srcalt ompl    used for peak

Math library acml2.7.0 available via download
    http://developer.amd.com/acml.aspx
        file = acml-2-7-0-pathscale-64bit.tgz
    Use the +ACML option to select this library.

For a description of Pathscale Compiler and portability
flags and system parameters used to generate this result,
please refer to HP-Pathscale-20051026.txt file in the flags directory.
```