



CINT2000 Result

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Unisys Corporation
ES7000 ORION 540 (3.0GHz Xeon MP)

SPECint_rate2000 = 169
SPECint_rate_base2000 = 162

SPEC license #: 15 Tested by: Unisys Corporation Test date: Jul-2004 Hardware Avail: Apr-2004 Software Avail: Aug-2004

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	16	189	138	16	189	138
175.vpr	16	243	107	16	217	120
176.gcc	16	86.0	237	16	86.0	237
181.mcf	16	359	92.9	16	359	92.9
186.crafty	16	99.2	187	16	89.4	208
197.parser	16	180	185	16	173	193
252.eon	16	91.9	262	16	91.9	262
253.perlbnk	16	149	224	16	138	241
254.gap	16	357	57.2	16	354	57.7
255.vortex	16	192	184	16	167	211
256.bzip2	16	153	181	16	153	181
300.twolf	16	213	261	16	207	269

Hardware

CPU: Intel Xeon MP(400MHz system bus)
CPU MHz: 3000
FPU: Integrated
CPU(s) enabled: 16 cores, 16 chips, 1 core/chip (HT Technology disabled)
CPU(s) orderable: 16,20,24,28,32
Parallel: No
Primary Cache: 12K(I) micro-ops + 8KB(D) on chip
Secondary Cache: 512KB (I+D) on chip
L3 Cache: 4096KB (I+D) on chip
Other Cache: 32MB L4 Cache off chip per 4 CPUs
Memory: 4 GB
Disk Subsystem: 1X36GB SCSI DISK (15K rpm)
Other Hardware:

Software

Operating System: Suse Linux Enterprise Server release 9.0 RC 5, 2.6.5-7.97-bigsm
Compiler: Intel(R) C++ Compiler for Linux 7.1 (Build 20040309Z)
Intel(R) C++ Compiler for Linux 8.0 (Build 20040412Z)
File System: ext2
System State: Multi-user (init 3)

Notes/Tuning Information

Portability Flags:

```
176.gcc: -Dalloca=_alloca -DUSG
186.crafty: -DLINUX_i386
252.eon: -DHAS_ERRLIST
252.eon: srcalt=fmax_errno
253.perlbnk: -DSPEC_CPU2000_LINUX_I386 -DSPEC_CPU2000_NEED_BOOL
           -DSPEC_CPU2000_GLIBC22
254.gap: -DSYS_IS_USG -DSYS_HAS_IOCTL_PROTO -DSYS_HAS_TIME_PROTO
         -DSYS_HAS_SIGNAL_PROTO -DSYS_HAS_ANSI -DSYS_HAS_CALLOC_PROTO
255.vortex: srcalt=closed_files
```

Baseline tuning flags:

```
C programs : -xi -ipo -fp_port
CXX programs: -xW -O3 -ipo +FDO
```

Peak tuning flags:

```
164.gzip: basepeak=yes
175.vpr: PASS1= -xW -prof_gen PASS2= -xW -O3 -ipo -prof_use
176.gcc: basepeak=yes
```



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Notes/Tuning Information (Continued)

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181.mcf: basepeak=yes
186.crafty: PASS1= -xW          -prof_gen PASS2= -xW -O3 -ipo          -prof_use
197.parser: PASS1= -xW          -prof_gen PASS2= -xW -O3 -ipo          -prof_use
252.eon: basepeak=yes
253.perlbnk: PASS1= -xW          -prof_gen PASS2= -xW -O3 -ipo          -prof_use
254.gap: PASS1= -xi            -prof_gen PASS2= -xi      -ipo -fp_port -prof_use
255.vortex: PASS1= -xi            -prof_gen PASS2= -xi      -ipo -fp_port -prof_use
256.bzip2: basepeak=yes
300.twolf: PASS1= -xW          -prof_gen PASS2= -xW -ipo -Oa -O3          -prof_use

```

HyperThreading disabled in BIOS

Enabled two user settings in the BIOS:

1. "Adjacent Sector Prefetch"
2. "Prefetch Queue"

The Intel 8.0 and 7.1 compilers were invoked using their fully qualified paths; the environment setting scripts were not used during compilation or runtime.