



CINT2000 Result

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IBM Corporation

IBM IntelliStation POWER 285 Workstation (1900 MHz, 2 CPU)

SPECint_rate2000 = 39.6

SPECint_rate_base2000 = 38.8

SPEC license #: 11 | Tested by: IBM | Test date: Sep-2005 | Hardware Avail: Oct-2005 | Software Avail: Oct-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	244	26.7	4	247	26.3
175.vpr	4	195	33.3	4	197	33.0
176.gcc	4	120	42.7	4	121	42.0
181.mcf	4	150	55.7	4	149	56.2
186.crafty	4	149	31.1	4	149	31.1
197.parser	4	223	37.5	4	220	38.0
252.eon	4	138	43.7	4	133	45.5
253.perlbnk	4	276	30.2	4	254	32.9
254.gap	4	137	37.4	4	137	37.4
255.vortex	4	143	61.7	4	130	67.9
256.bzip2	4	165	42.1	4	160	43.5
300.twolf	4	371	37.5	4	371	37.5

Hardware

CPU: POWER5+
 CPU MHz: 1900
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip (SMT on)
 CPU(s) orderable: 1,2
 Parallel: None
 Primary Cache: 64KBI+32KBD (on chip)/core
 Secondary Cache: 1920KB unified (on chip)/chip
 L3 Cache: 36MB unified (off-chip)/DCM, 1 DCM/SUT
 Other Cache: None
 Memory: 8x2GB
 Disk Subsystem: 1x73GB SCSI, 15K RPM
 Other Hardware: None

Software

Operating System: AIX 5L V5.3
 Compiler: XL C/C++ Enterprise Edition Version 8.0 for AIX
 File System: AIX/JFS2
 System State: Multi-user

Notes/Tuning Information

Portability Flags:

```
176.gcc: -ma -DHOST_WORDS_BIG_ENDIAN
186.crafty: -DAIX
252.eon: srcalt=fmax_errno
253.perlbnk: -DSPEC_CPU2000_AIX
254.gap: -DSYS_IS_BSD -DSYS_STRING_H
          -DSYS_HAS_MALLOC_PROTO -DSYS_HAS_CALLOC_PROTO
300.twolf: -DHAVE_SIGNED_CHAR
```

Base Optimization Flags:

```
C: -qpdf1/pdf2
   -O5 -blpdata -D_ILS_MACROS
C++: -qpdf1/pdf2
      -O5 -lhm -qalign=natural
```

Peak Optimization Flags

```
164.gzip: -qpdf1/pdf2
          -O5 -qalign=natural -lhm -blpdata -qf DPR -Q
          fdpr -q -O3
175.vpr: -qpdf1/pdf2
```



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Notes/Tuning Information (Continued)

```

176.gcc:      -O5 -lhma -blpdata -D_ILS_MACROS
              -qpdf1/pdf2
181.mcf:      -O5 -blpdata -qalign=natural -D_ILS_MACROS
              -O5 -blpdata -qfdpr
              fdpr -q -O3
186.crafty:   basepeak=1
197.parser:   -qpdf1/pdf2
              -O5 -blpdata -D_ILS_MACROS
252.eon:      -qpdf1/pdf2
              -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural -D_ILS_MACROS
253.perlbnk:  -qpdf1/pdf2
              -O5 -lhma -qalign=natural -blpdata -D_ILS_MACROS
254.gap:      basepeak=1
255.vortex:   -qpdf1/pdf2
              -O5 -lhma -blpdata
256.bzip2:    -O5 -blpdata -qfdpr -D_ILS_MACROS
              fdpr -q -O3
300.twolf:    basepeak=1

```

Approved alternate-source file 252.eon.fmax_errno.src.alt.tar.gz was used with 252.eon for POSIX-compatibility.

The installed OS level is AIX 5L for POWER version 5.3 with the 5300-03 Recommended Maintenance package.

SMT: Acronym for "Simultaneous Multi-Threading". A processor technology that allows the simultaneous execution of multiple thread contexts within a single processor core. (Enabled by default)

DCM: Acronym for "Dual-Chip Module" (one dual-core processor chip + one L3-cache chip)

SUT: Acronym for "System Under Test"

```

Extended C:   IBM XL C for AIX invoked as cc
ANSI C89:     IBM XL C for AIX invoked as xlc
C++:         IBM XL C for AIX invoked as xlc

```

ulimits set to unlimited.

Large page mode and memory affinity were set as follows:

```

vmo -r -o lgpg_regions=400 -o lgpg_size=16777216
chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
reboot -q
export MEMORY_AFFINITY=MCM

```

The following config-file entry was used to assign each benchmark process to a core:

```

submit = let "MYCPU=2*\$SPECUSERNUM"; if ((("\$MYCPU > 3")) then let "MYCPU=3"; fi; bindprocessor \$\$ \$MYCPU; $command

```

The "bindprocessor" AIX command binds a process to a CPU core.

Use flags-description file IBM-20050919-AIX.txt.