



CINT2000 Result

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IBM Corporation
IBM eServer pSeries 655 (1700 MHz, 8 CPU)

SPECint_rate2000 = 92.0
SPECint_rate_base2000 = 83.5

SPEC license #: 11 | Tested by: IBM Austin | Test date: Dec-2003 | Hardware Avail: Feb-2004 | Software Avail: Oct-2003

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	8	183	71.0	8	183	71.0
175.vpr	8	182	71.3	8	182	71.3
176.gcc	8	102	99.7	8	102	99.7
181.mcf	8	218	76.6	8	214	77.9
186.crafty	8	113	82.1	8	90.2	103
197.parser	8	361	46.2	8	198	84.3
252.eon	8	103	117	8	103	117
253.perlbnk	8	234	71.3	8	208	80.5
254.gap	8	113	90.7	8	113	90.7
255.vortex	8	131	135	8	124	142
256.bzip2	8	152	91.4	8	149	93.6
300.twolf	8	331	84.1	8	295	94.5

Hardware

CPU: POWER4+
CPU MHz: 1700
FPU: Integrated
CPU(s) enabled: 8 cores, 4 chips, 2 cores/chip, 4 chips/MCM
CPU(s) orderable: 4,8 (order by # cores)
Parallel: No
Primary Cache: 64KBI+32KBD (on chip) per core
Secondary Cache: 1536KB unified (on chip) per chip
L3 Cache: 128MB unified (off-chip) per MCM, 1 MCM in SUT (4 chips per MCM)
Other Cache: None
Memory: 32 GB
Disk Subsystem: 2x36GB SCSI, 10K RPM
Other Hardware: None

Software

Operating System: AIX 5L V5.2 5765-E62 (05/2003)
Compiler: IBM C for AIX, Version 6.0
IBM VisualAge C++ Professional for AIX, Version 6.0
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
-I. -DNDEBUG
253.perlbnk: -DSPEC_CPU2000_AIX
254.gap: -DSYS_IS_BSD -DSYS_STRING_H -DSYS_HAS_TIME_PROTO
-DSYS_HAS_MALLOC_PROTO -DSYS_HAS_CALLOC_PROTO
300.twolf: -DHAVE_SIGNED_CHAR
```

Base Optimization Flags:

```
C: -qpdf1/pdf2
-05 -blpdata -qalign=natural
C++: -qpdf1/pdf2
-05 -lhm -qalign=natural
```

Peak Optimization Flags

```
164.gzip: basepeak = 1
```



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Notes/Tuning Information (Continued)

```

175.vpr:      basepeak = 1
176.gcc:      basepeak = 1
181.mcf:      fdpr -v -R3
              -O5 -blpdata -D_ILS_MACROS
186.crafty:   -qpdf1/pdf2
              fdpr -v -R3
              -O3 -q64
197.parser:   -O5 -blpdata -D_ILS_MACROS
252.eon:      basepeak = 1
253.perlbnk:  -qpdf1/pdf2
              -O5 -lhmu -qalign=natural
254.gap:      basepeak = 1
255.vortex:   -qpdf1/pdf2
              -O5 -lhmu -qalign=natural
256.bzip2:    -qpdf1/pdf2
              -O5 -blpdata -qarch=pwr3 -qtune=pwr3
300.twolf:    -qpdf1/pdf2
              -O5 -lhmu -qalign=natural -blpdata
              "CC      = /usr/vac/bin/xlc"

```

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

C: IBM VAC++ invoked as cc except where noted as xlc
C++: IBM VAC++ invoked as xlc

fpdr: Feedback directed program restructuring tool
ulimits set to unlimited.

Large page mode and memory affinity were set as follows:

```

vmo -r -o lpgg_regions=400 -o lpgg_size=16777216 -o memory_affinity=1
chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
shutdown -r
export MEMORY_AFFINITY=MCM

```

MCM: Acronym for "Multi-Chip Module"
SUT: Acronym for "System Under Test"

Form used to submit "rate" runs:

```
submit = let "MYCPU=\$SPECUSERNUM"; bindprocessor \$\$ \$MYCPU; $command
```