



# CINT2000 Result

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IBM Corporation  
IBM eServer pSeries 655 (1700 MHz, 1 CPU)

SPECint2000 = 1158  
SPECint\_base2000 = 1064

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	178	786	178	786	
175.vpr	1400	137	1021	137	1021	
176.gcc	1100	94.8	1161	94.8	1161	
181.mcf	1800	104	1725	104	1729	
186.crafty	1000	110	911	88.1	1135	
197.parser	1800	351	514	186	969	
252.eon	1300	101	1286	101	1286	
253.perlbmk	1800	225	801	204	883	
254.gap	1100	105	1043	105	1043	
255.vortex	1900	114	1667	113	1687	
256.bzip2	1500	134	1119	131	1148	
300.twolf	3000	215	1399	210	1426	

### Hardware

CPU: POWER4+  
 CPU MHz: 1700  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 4 chips, 2 cores/chip, 4 chips/MCM  
 CPU(s) orderable: 1 MCM (order by # MCM)  
 Parallel: No  
 Primary Cache: 64KBI+32KBD (on chip) per core  
 Secondary Cache: 1536KB unified (off chip) per chip  
 L3 Cache: 128MB unified (off-chip) per MCM, 1 MCM in SUT  
 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.perlbmk: -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
   -O5 -blpdata -qalign=natural
C++: -qpdf1/pdf2
      -O5 -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.perlbmk:  -qpdf1/pdf2
              -O5 -lhm -qalign=natural
254.gap:      basepeak = 1
255.vortex:   -qpdf1/pdf2
              -O5 -lhm -qalign=natural
256.bzip2:    -qpdf1/pdf2
              -O5 -blpdata -qarch=pwr3 -qtune=pwr3
300.twolf:    -qpdf1/pdf2
              -O5 -lhm -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"

7 processors were deconfigured through the configuration menu.