



# CINT2000 Result

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## IBM Corporation

IBM IntelliStation POWER 275 Workstation (1450 MHz, 2 CPU)

SPECint\_rate2000 = 20.0

SPECint\_rate\_base2000 = 18.0

SPEC license #: 11 | Tested by: IBM, Austin, TX | Test date: Jun-2003 | Hardware Avail: Jul-2003 | Software Avail: May-2003

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	213	15.2	2	213	15.2
175.vpr	2	204	15.9	2	204	15.9
176.gcc	2	118	21.7	2	118	21.7
181.mcf	2	223	18.7	2	216	19.3
186.crafty	2	132	17.6	2	106	21.9
197.parser	2	484	8.64	2	232	18.0
252.eon	2	121	24.8	2	121	24.8
253.perlbnk	2	267	15.6	2	236	17.7
254.gap	2	137	18.6	2	137	18.6
255.vortex	2	148	29.8	2	148	29.9
256.bzip2	2	183	19.1	2	180	19.3
300.twolf	2	358	19.4	2	321	21.7

### Hardware

CPU: POWER4+  
 CPU MHz: 1450  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip, 1 processor chip/DCM  
 CPU(s) orderable: 1,2 (order by # cores)  
 Parallel: No  
 Primary Cache: 64KBI+32KBD (on chip) per core  
 Secondary Cache: 1536KB unified (on chip) per chip  
 L3 Cache: 8MB unified (off-chip) per DCM, 1 DCM in SUT  
 Other Cache: None  
 Memory: 8 GB  
 Disk Subsystem: 1x36GB SCSI, 10K RPM  
 Other Hardware: None

### Software

Operating System: AIX 5L V5.2  
 Compiler: IBM C for AIX, Version 6.0  
 IBM VisualAge C++ Professional for AIX, Version 6.0  
 File System: AIX/JFS  
 System State: Multi-User

## Notes/Tuning Information

### Integer 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
-O5 -blpdata -qalign=natural
C++:
-qpdf1/pdf2
-O5 -lhu -qalign=natural
```

### Integer Peak Optimization Flags

164.gzip



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## Notes/Tuning Information (Continued)

```
BASEPEAK = 1
"CC      = /usr/vac/bin/xlc"
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.

DCM: Acronym for "Dual-Chip Module"  
SUT: Acronym for "System Under Test"

fpdr: Feedback directed program restructuring tool  
/usr/spec2000 filesystem mounted with no JFS log file I/O.  
APAR IY 43549 was applied to AIX to enable new hardware support.  
ulimits set to unlimited.

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

Large page mode and memory affinity were set as follows:  
vmo -r -o lpgp\_regions=400 -o lpgp\_size=16777216 -o memory\_affinity=1  
chuser capabilities=CAP\_BYPASS\_RAC\_VMM,CAP\_PROPAGATE \$USER  
shutdown -r  
export MEMORY\_AFFINITY=MCM