



# CINT2000 Result

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IBM Corporation  
IBM xSeries 445 (3.0GHz, Intel Xeon MP)

SPECint\_rate2000 = 93.7  
SPECint\_rate\_base2000 = 93.3

SPEC license #: 11 | Tested by: IBM Corporation | Test date: Jul-2004 | Hardware Avail: Mar-2004 | Software Avail: Jul-2004

180	150	120	90	60	30	Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
						164.gzip	8	136	95.3	8	135	96.4
						175.vpr	8	162	80.3	8	162	80.3
						176.gcc	8	117	87.3	8	113	90.6
						181.mcf	8	356	46.9	8	357	46.8
						186.crafty	8	86.1	108	8	85.8	108
						197.parser	8	166	100	8	163	102
						252.eon	8	100	120	8	101	120
						253.perlbnk	8	125	134	8	125	134
						254.gap	8	271	37.6	8	273	37.4
						255.vortex	8	108	164	8	107	166
						256.bzip2	8	150	92.6	8	154	90.3
						300.twolf	8	199	140	8	199	140

### Hardware

CPU: Intel Xeon MP (3.0GHz, 400MHz bus)  
 CPU MHz: 3000  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 8 chips, 1 core/chip  
 CPU(s) orderable: 2,4,8,16,32  
 Parallel: no  
 Primary Cache: 12K micro-ops I + 8KBD on chip  
 Secondary Cache: 512KB(I+D) on chip  
 L3 Cache: 4096KB(I+D) on chip  
 Other Cache: 64MB per 4 CPUs (chips)  
 Memory: 8x512MB PC1600  
 Disk Subsystem: 2x36GB 10K Ultra320 SCSI  
 Other Hardware:

### Software

Operating System: SUSE Linux  
 Compiler: Intel(R) C++ Compiler for 32-bit applications  
 Version 8.0 Build 20031016Z  
 File System: Reiserfs  
 System State: Default

## Notes/Tuning Information

### Portability flags:

```
186.crafty: -DLINUX_i386
252.eon: -DHAS_ERRLIST
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
```

### Base tuning:

```
C programs: -xW -fast +FDO
C++ programs: -xW -O3 -ipo +FDO
+FDO: PASS1=-prof_gen PASS2=-prof_use
```

### Peak tuning:

```
164.gzip: -xW -O3 -ipo -Oa -unroll8 -Zp4 +FDO
175.vpr: basepeak = YES
176.gcc: -xW -O3 -ipo -ansi_alias +FDO
181.mcf: -xW -O3 -ipo -static -unroll4 +FDO
186.crafty: -xW -O3 -ipo -static +FDO
197.parser: -xW -O3 -ipo -static -tpp7 -unroll4 +FDO
252.eon: -xW -O3 -ipo -ansi_alias +FDO
```



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## Notes/Tuning Information (Continued)

```
253.perlbnk: basepeak = YES
254.gap:      -xW -O3 -ipo -static +FDO
255.vortex:   -xW -O3 -ipo -ansi_alias -static -tpp7 -unroll8 -Zp4 +FDO
256.bzip2:   -xW -O3 -ipo -ansi_alias +FDO
300.twolf:   basepeak = YES
BIOS Configuration Notes
Hyper-threading disabled
```