



# CINT2000 Result

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**IBM**  
**xSeries 445 (2.8 GHz Xeon MP)**

SPECint\_rate2000 = **75.2**

SPECint\_rate\_base2000 = **73.7**

SPEC license #: 11 | Tested by: IBM, Research Triangle Park, NC | Test date: Aug-2003 | Hardware Avail: Jul-2003 | Software Avail: Apr-2003

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	8	153	85.2	8	150	86.3
175.vpr	8	180	72.0	8	181	71.7
176.gcc	8	371	27.5	8	369	27.7
181.mcf	8	540	30.9	8	539	31.0
186.crafty	8	92.2	101	8	91.8	101
197.parser	8	177	94.1	8	177	94.2
252.eon	8	105	115	8	90.5	133
253.perlbnk	8	153	109	8	152	110
254.gap	8	334	30.5	8	334	30.5
255.vortex	8	128	138	8	128	138
256.bzip2	8	179	77.9	8	169	82.2
300.twolf	8	219	127	8	219	127

### Hardware

CPU: Intel Xeon MP (400 MHz system bus)  
 CPU MHz: 2800  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 8 chips, 1 core/chip  
 CPU(s) orderable: 2,4,8,16  
 Parallel: No  
 Primary Cache: 12K(I) micro-ops + 8KB(D) on chip  
 Secondary Cache: 512KB(I+D) on chip  
 L3 Cache: 2048KB(I+D) on chip  
 Other Cache: 64MB per 4 CPUs  
 Memory: 8 x 1024MB DDR200  
 Disk Subsystem: 2 x 36GB SCSI  
 Other Hardware:

### Software

Operating System: Windows 2003 Advanced Server Build 3790  
 Compiler: Intel C++ Compiler 7.0 (20021018Z)  
 Microsoft Visual Studio .NET (7.0.9466)  
 File System: NTFS  
 System State: Default

## Notes/Tuning Information

### PORTABILITY FLAGS

176.gcc: -Dalloca=\_alloca /F10000000  
 186.crafty: -DNT\_i386  
 253.perlbnk: -DSPEC\_CPU2000\_NTOS -DPERLDLL /MT  
 254.gap: -DSYS\_HAS\_CALLOC\_PROTO -DSYS\_HAS\_MALLOC\_PROTO

### FEEDBACK DIRECTED OPTIMIZATION

ONESTEP=yes

### BASE TUNING

C: -QxW -Qipo -O3 +FDO  
 C++: -QxW -Qipo -GX -GR

### PEAK TUNING

164.gzip: -QxW -Qipo -Oa -O3 +FDO  
 175.vpr: -QxW -Qipo -O3 +FDO  
 176.gcc: -QxW -Qipo -O3 +FDO  
 181.mcf: -QxW -Qipo -O3 +FDO  
 186.crafty: -QxW -Qipo -O3 +FDO  
 197.parser: -QxW -Qipo -O3 +FDO  
 252.eon: -QxW -Qipo -O3 +FDO  
 253.perlbnk: -QxW -Qipo -O3 +FDO  
 254.gap: basepeak=yes



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## Notes/Tuning Information (Continued)

```
255.vortex    basepeak=yes
256.bzip2:    -Qipo -Oa -Qunroll1 +FDO
300.twolf:    basepeak=yes
EXTRA LIBRARIES
```