



# CINT2000 Result

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## Unisys Corporation

### Unisys ES7000 ARIES 520 (3.0GHz Xeon MP)

SPECint\_rate2000 = 88.4

SPECint\_rate\_base2000 = 82.1

SPEC license #: 15 | Tested by: Unisys Corporation | Test date: Mar-2004 | Hardware Avail: Apr-2004 | Software Avail: Mar-2004

| Benchmark   | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|-------------|-------------|--------------|------------|--------|---------|-------|
| 164.gzip    | 8           | 171          | 76.1       | 8      | 166     | 78.4  |
| 175.vpr     | 8           | 229          | 56.9       | 8      | 203     | 63.9  |
| 176.gcc     | 8           | 99.7         | 102        | 8      | 99.7    | 102   |
| 181.mcf     | 8           | 342          | 48.8       | 8      | 332     | 50.3  |
| 186.crafty  | 8           | 93.4         | 99.3       | 8      | 87.1    | 106   |
| 197.parser  | 8           | 165          | 101        | 8      | 154     | 108   |
| 252.eon     | 8           | 102          | 118        | 8      | 83.8    | 144   |
| 253.perlbnk | 8           | 179          | 93.2       | 8      | 143     | 117   |
| 254.gap     | 8           | 316          | 32.3       | 8      | 316     | 32.3  |
| 255.vortex  | 8           | 188          | 93.7       | 8      | 165     | 107   |
| 256.bzip2   | 8           | 145          | 95.8       | 8      | 145     | 95.8  |
| 300.twolf   | 8           | 204          | 136        | 8      | 202     | 138   |

#### Hardware

CPU: Intel Xeon MP (400MHz system bus)  
 CPU MHz: 3000  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 8 chips, 1 core/chip (HT Technology disabled)  
 CPU(s) orderable: 8,12,16  
 Parallel: No  
 Primary Cache: 12K(I) micro-ops+8KBD on chip  
 Secondary Cache: 512KB(I+D) on chip  
 L3 Cache: 4096KB(I+D) on chip  
 Other Cache: 32MB L4 Cache off chip per 4 CPUs  
 Memory: 4GB  
 Disk Subsystem: 2X36GB SCSI RAID0 DISKs (15K rpm each)  
 Other Hardware:

#### Software

Operating System: MS Windows 2003 Datacenter Edition Build 3790  
 Compiler: Intel C++ Compiler 7.1 Build 20031229Z  
 Microsoft .NET Visual 7.0.9466 (for libraries)  
 SmartHeap Library Version 7.1  
 File System: NTFS  
 System State: Default

### Notes/Tuning Information

```
+FDO: PASS1=-Qprof_gen PASS2=-Qprof_use
Base tuning for C programs : -Qxi -Qipo -Qfp_port
Base tuning for C++ programs: -QxW -Qipo -GX -GR
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
Peak tuning:
164.gzip: -QxW -Qipo -Oa -Oi- +FDO
175.vpr: -QxW -Qipo -O3 +FDO
176.gcc: basepeak=yes
181.mcf: -QxW -Qipo -O3 +FDO
186.crafty: -QxW -Qipo -Oa -O3 +FDO
197.parser: -QxW -Qipo -O3 +FDO
252.eon: -QxW -Qipo -O3 +FDO
253.perlbnk: -QxW -Qipo -O3 +FDO shlW32M.lib
254.gap: basepeak=yes
255.vortex: -QxW -Qipo -O3 +FDO
256.bzip2: basepeak=yes
```



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## Notes/Tuning Information (Continued)

300.twolf: -QxW -Qipo -O3 +FDO shlw32M.lib

Enabled two user settings in the BIOS :

1. "Adjacent Sector Prefetch"
2. "Prefetch Queue"

HT Technology disabled through Unisys Sentinel System Management Product