



# CINT2000 Result

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Sun Microsystems  
Sun Fire V880

SPECint\_rate2000 = 47.6  
SPECint\_rate\_base2000 = 41.9

SPEC license #: 6 Tested by: Sun Microsystems, Palo Alto Test date: May-2002 Hardware Avail: Jun-2002 Software Avail: May-2002

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	8	385	33.7	8	350	37.1
175.vpr	8	361	36.0	8	326	39.9
176.gcc	8	236	43.2	8	195	52.3
181.mcf	8	384	43.5	8	305	54.8
186.crafty	8	204	45.5	8	172	53.9
197.parser	8	431	38.8	8	347	48.2
252.eon	8	264	45.6	8	255	47.2
253.perlbnk	8	392	42.6	8	363	46.1
254.gap	8	359	28.4	8	366	27.9
255.vortex	8	305	57.8	8	236	74.9
256.bzip2	8	281	49.5	8	268	52.0
300.twolf	8	600	46.4	8	540	51.6

### Hardware

CPU: UltraSPARC III Cu  
CPU MHz: 900  
FPU: Integrated  
CPU(s) enabled: 8 cores, 8 chips, 1 core/chip  
CPU(s) orderable: 2,4,8  
Parallel: No  
Primary Cache: 32KBI+64KBD on chip  
Secondary Cache: 8MB(I+D) off chip  
L3 Cache: None  
Other Cache: None  
Memory: 16GB  
Disk Subsystem: 12 x 36GB  
Other Hardware: None

### Software

Operating System: Solaris 8 02/02  
Compiler: Sun ONE Studio 7 with patch 111704-01  
Sun Performance Library 7  
File System: ufs  
System State: Single-User

## Notes/Tuning Information

### Portability:

```
176.gcc: -Dalloca=__builtin_alloca -DHOST_WORDS_BIG_ENDIAN
186.crafty: -DSUN
252.eon: -library=iostream
253.perlbnk: -DSPEC_CPU2000_SOLARIS
254.gap: -DSYS_IS_USG -DSYS_HAS_TIME_PROTO -DSYS_HAS_SIGNAL_PROTO
        -DSYS_HAS_CALLOC_PROTO -DSYS_HAS_IOCTL_PROTO
```

-xprofile: PASS1=-xprofile=collect, PASS2=-xprofile=use

### Base Flags:

```
Base C flags: -fast -xcrossfile -l12amm -xprofile
Base C++ flags: -fast -xcrossfile -xprofile
```

### Peak Flags:

```
164.gzip: -xO5 -xtarget=native -xalias_level=std -W2,-whole -xcrossfile -W2,-Ainline -xprofile
175.vpr: -fast -xalias_level=std -xcrossfile -xsfpcnst -W2,-whole
        -Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1,-Qeps:rp_filtering_margin=100
        -xregs=syst -lmopt -xprofile
```



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## Notes/Tuning Information (Continued)

```

176.gcc: -fast -xcrossfile -W2,-whole -Wc,-Qgsched-trace_late=1,-Qgsched-T4 -l12amm -xprofile
181.mcf: -fast -xcrossfile -Wc,-Qms_pipe-pref,-Qlp=1-fa=1-av=64-t=3-fl=1
        -lprism32 -xprofile
186.crafty: -fast -xF -xinline= -xcrossfile -Wc,-Qgsched-trace_late=1,-Qgsched-T4
           -xalias_level=strong -xregs=syst -W2,-Ashort_ldst,-Aivel:duplicate_loops
           -xprofile
197.parser: -fast -xprefetch=no%auto -xcrossfile -xregs=syst
           -Wc,-Qgsched-trace_late=1,-Qgsched-T4 -xalias_level=strong -Wc,-Qipa:valueprediction -xprofile
252.eon: -fast -xcrossfile -xalias_level=compatible -xsafe=mem -Qoption iropt -Mt500,-xrestrict
        -Qoption cg -Qgsched-trace_late=1,-Qgsched-T4 -lmopt -xprofile
253.perlbnk: -xO5 -xtarget=native -xcrossfile -xalias_level=std -xsafe=mem
            -Wc,-Qgsched-trace_late=1,-Qgsched-T4,-Qgsched-trace_spec_load=1
            -Wc,-Qinline_memcpy=32 -Wc,-Qiselect-funcalign=32,-Qicache-chbab=1
            -Wc,-Qiselect-sw_pf_tbl_th=20 -xprofile
254.gap: -fast -xcrossfile -xalias_level=std -xprefetch -W2,-whole -lprism32 -xprofile
255.vortex: -fast -xcrossfile -Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1
            -Wc,-Qinline_memcpy=32 -W2,-Aheap,-reroll=1,-Aunroll,-Ms1,-Mt500,-Mr6000,-crit
            -Wc,-Qdepgraph-early_cross_call=1 -Wc,-Qiselect-funcalign=32
            -Wc,-Qpeep-Sh0 -xrestrict -l12amm -lprism32 -xprofile
256.bzip2: -fast -W2,-Abopt -xcrossfile -xalias_level=strong
           -Wc,-Qiselect-funcalign=32 -xregs=syst -xprofile
300.twolf: -fast -xalias_level=strong -xsafe=mem -xcrossfile -xprefetch=no%auto
           -Wc,-Qms_pipe+intdivusefp -xprofile
ONESTEP=yes for all benchmarks in base and peak

```

### Shell Environments:

```

LD_LIBRARY_PATH=/usr/lib:/opt/SUNWspro/lib/v8plusb:/opt/SUNWspro/prod/lib/v8plusb
PRISM_HEAP=268435456
PRISM_MODE=2

```

Stack size set to unlimited via "ulimit -s unlimited"

### Kernel Parameters (/etc/system):

```

set shmsys:shminfo_shmmin=1
set shmsys:shminfo_shmmax=1477846784
set shmsys:shminfo_shmmni=256
set shmsys:shminfo_shmseg=400

```

System configuration details located (as of Jun 2002) at  
<http://www.sun.com/servers/entry/>