



CINT2000 Result

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Sun Microsystems
Sun Netra 20 (900MHz)

SPECint_rate2000 = 12.2
SPECint_rate_base2000 = 10.8

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	2	381	8.53	2	347	9.37
175.vpr	2	348	9.34	2	313	10.4
176.gcc	2	224	11.4	2	190	13.4
181.mcf	2	342	12.2	2	302	13.8
186.crafty	2	200	11.6	2	168	13.8
197.parser	2	428	9.76	2	344	12.1
252.eon	2	262	11.5	2	254	11.9
253.perlbnk	2	388	10.8	2	356	11.7
254.gap	2	340	7.50	2	339	7.52
255.vortex	2	286	15.4	2	225	19.6
256.bzip2	2	276	12.6	2	264	13.2
300.twolf	2	598	11.6	2	532	13.1

Hardware

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

Software

Operating System: Solaris 9
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/nebs/>