



CINT2000 Result

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Sun Microsystems
Sun Netra 20 (900MHz)

SPECint2000 = 533
SPECint_base2000 = 475

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	380	369	345	405	
175.vpr	1400	343	408	306	458	
176.gcc	1100	215	511	189	582	
181.mcf	1800	317	567	283	636	
186.crafty	1000	200	499	168	594	
197.parser	1800	426	423	342	526	
252.eon	1300	261	498	254	513	
253.perlbmk	1800	386	467	355	507	
254.gap	1100	326	338	325	338	
255.vortex	1900	284	670	222	855	
256.bzip2	1500	275	545	263	571	
300.twolf	3000	598	501	529	567	

Hardware

CPU: UltraSPARC III Cu
 CPU MHz: 900
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 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: 2GB
 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.perlbmk: -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,-inline -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"

System Settings:

2nd cpu physically removed from system

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/>