



CINT2000 Result

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Sun Microsystems
Sun Fire 280R (1.015GHz)

SPECint2000 = 574
SPECint_base2000 = 511

SPEC license #: 6 Tested by: Sun Microsystems, Santa Clara Test date: Nov-2002 Hardware Avail: Sep-2002 Software Avail: Sep-2002

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	352	398	319	438	
175.vpr	1400	319	439	287	488	
176.gcc	1100	199	553	181	607	
181.mcf	1800	319	565	280	643	
186.crafty	1000	182	548	154	650	
197.parser	1800	393	458	319	564	
252.eon	1300	233	557	222	587	
253.perlbmk	1800	348	518	323	558	
254.gap	1100	299	368	297	370	
255.vortex	1900	270	704	201	945	
256.bzip2	1500	257	585	244	614	
300.twolf	3000	564	532	504	596	

Hardware

CPU: UltraSPARC III Cu
 CPU MHz: 1015
 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: 8GB
 Disk Subsystem: 2 x 18GB
 Other Hardware: None

Software

Operating System: Solaris 8 02/02
 Compiler: Sun ONE Studio 7 and 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
```

Profile Feedback (-xprofile):

```
fdo_pre0: rm -rf ./feedback.profile ./SunWS_cache
Pass 1: -xprofile=collect:./feedback
Pass 2: -xprofile=use:./feedback
```

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
```



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Notes/Tuning Information (Continued)

```

-Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1,-Qeps:rp_filtering_margin=100
-xregs=syst -lmopt -xprofile
176.gcc: -fast -xcrossfile -W2,-whole -Wc,-Qgsched-trace_late=1,-Qgsched-T4 -ll2amm -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 -dn -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 -ll2amm -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

```

Software Patches: All patches for the Sun ONE Studio 7
 Compiler (Product Patches and OS Patches) as recommended
 by <http://access1.sun.com/sundev/sls7-patches.html>
 on Aug 7th, 2002 were installed (111704-04, 111705-03,
 111706-02, 111708-01, 111709-02, 111714-02, 111715-01,
 111716-02, 111718-01, 111723-01, 108434-08, 108435-09,
 111697-03, 111721-02