



# CINT2000 Result

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Sun Microsystems  
Sun Fire 280R

SPECint2000 = 529  
SPECint\_base2000 = 470

SPEC license #: 6 Tested by: Sun Microsystems, Palo Alto Test date: Nov-2001 Hardware Avail: Dec-2001 Software Avail: Feb-2002

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	374	374	345	406	
175.vpr	1400	346	405	304	460	
176.gcc	1100	219	503	190	579	
181.mcf	1800	298	604	267	673	
186.crafty	1000	207	483	169	590	
197.parser	1800	425	424	343	526	
252.eon	1300	287	453	260	499	
253.perlbnk	1800	381	473	355	507	
254.gap	1100	334	329	328	335	
255.vortex	1900	294	647	241	787	
256.bzip2	1500	275	546	261	575	
300.twolf	3000	608	493	541	555	

### 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: None  
Primary Cache: 32KBI+64KBD on chip  
Secondary Cache: 8MB(I+D) off chip  
L3 Cache: None  
Other Cache: None  
Memory: 2GB  
Disk Subsystem: 2 x 36GB  
Other Hardware: --

### Software

Operating System: Solaris 8 10/01  
Compiler: Forte Developer 7 EA  
Forte Developer 6 update 2  
File System: tmpfs  
System State: Multi-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
```

### Base Flags:

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

### Peak Flags:

```
164.gzip: -x05 -xtarget=native -xalias_level=std -W2,-whole -xcrossfile -W2,-Ainline -xprofile
175.vpr: -fast -xalias_level=std -xcrossfile -xsfpconst -xdepend -W2,-whole
        -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 -l12amm -xprofile
181.mcf: -fast -xcrossfile -xprefetch -xdepend
```



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## Notes/Tuning Information (Continued)

```

-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 -xdepend -xprefetch=no%auto -xcrossfile -xregs=syst
-Wc,-Qgsched-trace_late=1,-Qgsched-T4 -xalias_level=strong -Wc,-Qipa:valueprediction -xprofile
252.eon: -fast -xcrossfile -xsafe=mem -Qoption iropt -Mt500,-xrestrict
-Qoption cg -Qgsched-trace_late=1,-Qgsched-T4 -xprofile
-Wc,-Qiselect-sw_pf_tbl_th=20 -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
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 -xdepend -ll2amm -lprism32 -xprofile
256.bzip2: -fast -W2,-Abopt -xcrossfile -xalias_level=strong
-Wc,-Qiselect-funcalign=32 -xdepend -xregs=syst -xprofile
300.twolf: -fast -xalias_level=strong -xsafe=mem -xcrossfile -xprefetch=no%auto
-Wc,-Qms_pipe+intdivusefp -xprofile

```

Forte Developer 7 (final) will ship May-2002

ONESTEP=yes for all benchmarks in base and peak except for C benchmarks in fp base

252.eon compiled with Forte Developer 6 update 2 for both base and peak

### Shell Environments:

```

LD_LIBRARY_PATH=/usr/lib:/Forted7/FD7/lib/v8plusb:/Forted7/FD7/YNH/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 December 2001) at  
<http://www.sun.com/servers/workgroup/280r/>