



CINT2000 Result

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Sun Microsystems
Sun Fire 280R

SPECint_rate2000 = 11.9
SPECint_rate_base2000 = 10.6

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	376	8.63	2	347	9.36
175.vpr	2	353	9.21	2	312	10.4
176.gcc	2	236	10.8	2	192	13.3
181.mcf	2	332	12.6	2	315	13.3
186.crafty	2	208	11.2	2	170	13.7
197.parser	2	426	9.80	2	344	12.1
252.eon	2	286	10.6	2	264	11.4
253.perlbnk	2	383	10.9	2	356	11.7
254.gap	2	352	7.24	2	348	7.33
255.vortex	2	297	14.9	2	256	17.2
256.bzip2	2	277	12.6	2	262	13.3
300.twolf	2	611	11.4	2	543	12.8

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: 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/>