SPECweb99_SSL Result

© Copyright 1999-2004, Standard Performance Evaluation Corporation

Sun Microsystems: Sun Fire 280R
Sun Microsystems: Sun ONE Web Server 6.0 SP5

SPECweb99_SSL =1008

Test Date: Mar-2003
Tester: Sun Microsystems

Hardware Avail:	Apr-2003	OS Avail:	Apr-2003	HTTPS Software Avail:	Dec-2002	Sup. Software Avail:	Mar-2003	SPEC license #:	6

Hardware

Vendor:	Sun Microsystems
Model:	Sun Fire 280R
Processor:	1200MHz UltraSPARC III Cu
# Processors:	2 cores, 2 chips, 1 core/chip
Primary Cache:	32KBI+64KBD on chip
Secondary Cache:	8MB(I+D) off chip
Other Cache:	none
Memory:	8 GB
Disk Subsystem:	2 x 36GB internal FC-AL 12 x 36GB Sun StorEdge 3310 SCSI Array
Disk Controllers:	Integrated FC-AL Sun StorEdge PCI Dual Ultra3 SCSI Host Adapter
Other Hardware:	1 x Sun Crypto Accelerator 1000 Board Version 1.1 1 x Cisco Systems Catalyst 4912G

Software

Operating System:	Solaris 9 4/03
File System:	UFS
Other Software:	Sun Crypto Accelerator 1000 patch 114790-01 Netscape Security Services Libraries - NSS 3.4 Sun GigaSwift Ethernet 1.0 driver patch 112817-07

HTTPS Software

Vendor:	Sun Microsystems
HTTPS Software:	Sun ONE Web Server 6.0 SP5
API:	NSAPI
Server Cache:	SNCA
Log Mode:	SNCA Binary CLF

Test Sponsor

Test Date:	Mar-2003
Tested By:	Sun Microsystems
SPEC License:	6

Network

# of Controllers:	2
Network Controllers:	Sun GigaSwift Ethernet
# of Nets:	2
Type of Nets:	Gigabit Ethernet
Network Speed:	1 Gb/s
MSL (sec):	30 (Non RFC1122)
Time-Wait (sec):	60 (Non RFC1122)
MTU:	1500

Clients

# of Clients:	8
Model:	Ultra 60
Processor:	450MHz UltraSPARC II
# of Processors:	2
Memory:	512MB
Network Controller:	Sun GigaSwift Ethernet
Operating System:	Solaris 8 2/02
Compiler:	Sun Workshop 6 update 2 C 5.3

Notes/Tuning Information

SUT Notes

Operating System Notes

```
set autoup=60
segmap_percent=90
set pcisch:pci_stream_buf_enable=0
set rlim_fd_max=131072
set rlim_fd_cur=131072
set maxpgio=128
set tcp:tcp_conn_hash_size=65536
set ce:ce_bcopy_thresh=96
set ce:ce_dvma_thresh=95
set ce:ce_taskq_disable = 1
set ce:ce_tx_ring_size = 8192
set ce:ce_reclaim_pending=16
set ce:ce_no_tx_lb=1
set nca:nca_conn_hash_size=393209
set nca:nca_conn_req_max_q=10240
set nca:nca_conn_req_max_q0=10240
set nca:ncaurihash_sz=289669
set nca:ncavnodehash_sz=289669
set nca:nca_ppthresh=128
set nca:nca_ppmax=840000
set nca:nca_vpmax=840000
```

SPECweb99_SSL Result

© Copyright 1999-2004, Standard Performance Evaluation Corporation

Notes/Tuning Information (Continued)

Operating System Notes (Continued)

/usr/sbin/ndd -set /dev/ce instance 0,1
/usr/sbin/ndd -set /dev/ce rx_intr_time 500
/usr/sbin/ndd -set /dev/ce rx_intr_pkts 16
/platform/sun4u/kernel/drv/ce.conf: interrupts=1,2;
/usr/sbin/ndd -set /dev/tcp tcp_time_wait_interval 60000
/usr/sbin/ndd -set /dev/tcp tcp_conn_req_max_q 8192
/usr/sbin/ndd -set /dev/tcp tcp_conn_req_max_q0 8192
/usr/sbin/ndd -set /dev/nca nca_http_keep_alive_timeout 30000
/usr/sbin/ndd -set /dev/nca nca_max_cache_size 1000000
/usr/sbin/ndd -set /dev/nca nca_segmap_min_size 4096
/usr/sbin/ndd -set /dev/nca nca_use_segmap 1
/etc/nca/nca.if: ce0 ce1, /etc/nca/ncakmod.conf: status=enabled
/etc/nca/ncalogd.conf: status=enabled, logd_file_size=1000000000
/etc/nca/ncalogd.conf: logd_path_name=/http_logs/log0 ... /http_logs/log5

HTTPS Software Notes

Sun ONE 6.0 Tuning
Two unique instances of Sun One started.
The first instance listening on port 80
The second instance listening on port 443
config/magnus.conf:
RqThrottle 16
CGIWaitPid on
GIStubIdleTimeout 10000
ThreadIncrement 10
ConnQueueSize 8192
ListenQ 8192
MaxKeepAliveConnections 0
KeepAliveTimeout 0
config/obj.conf:
Disable PathCheck for ’check-acl’
config/nsfc.conf:
FileCacheEnable=true
CopyFiles=false
TransmitFile=true
CacheFileContent=true
MaxAge=86400
MaxFiles=65536
MaxOpenFiles=65536
SmallFileSizeLimit=1000000
SmallFileSpace=1
MediumFileSizeLimit=1000001
MediumFileSpace=1
config/server.xml - webserver instance listening on port 80
Disable ACLFILE
acceptorthreads=2
family=nca
config/server.xml - webserver instance listening on port 443
Disable ACLFILE
acceptorthreads=2
family=nca
SSLPARAMS
security=on
ssl2=no
ssl3=yes
ssl3tlsciphers=+rsa_rc4_128_sha
tls=no
clientauth=no

SPECweb99_SSL Result

© Copyright 1999-2004, Standard Performance Evaluation Corporation

Notes/Tuning Information (Continued)

HTTP API Notes

Dynamic API: SUN-20010412-API.tar.gz
Compiled with Sun WorkShop 6 update 2 C 5.3
CFLAGS: -c -x04 -DMCC_HTTPD -DXP_UNIX -DSPAPI20
IFLAGS: -I. -I$(INCLUDEDIR) -I$(INCLUDEDIR)/base -I$(INCLUDEDIR)/frame -I$(INCLUDEDIR)/nspr
LDFLAGS: -G
Flag descriptions in SUN-20030331-APIFlags.txt

Hardware Notes

Disk Configuration:
OS - 1 Internal FC-AL disk
file_set & logs - SS3310, 6 disk RAID 0 LUN
Filesystems mounted with noatime option - no inode access time updating

Network Notes

2x4 load generators used 2 CE NIC interfaces

Client Notes

set sq_max_size=0, set hires_tick=1
ndd -set /dev/tcp tcp_smallest_anon_port 2048
ndd -set /dev/tcp tcp_time_wait_interval 60000
Client code generated with: CFLAGS=-xO4 -xchip=ultra -xarch=v8plusa
./configure --enable-posix-threads --enable-gethostbyname_r --enable-pthread_scope_system --enable-rlimit --enable-safe-usleep=no

Other Notes

Tuning Disclosure: Sun-20030331.txt
Sun ONE Web Server 6.0 Tuning Guide: http://docs.sun.com