SPECweb99_SSL Result

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Sun Microsystems: Sun Fire V240
Sun Microsystems: Sun ONE 6.0 SP5

SPECweb99_SSL =1022

Test Date: Jan-2004
Tester: Sun Microsystems

Hardware Avail:	Feb-2004	OS Avail:	Aug-2003	HTTPS Software Avail:	Dec-2002	Sup. Software Avail:	Aug-2003	SPEC license #:	6

Hardware

Vendor:	Sun Microsystems
Model:	Sun Fire V240
Processor:	1280MHz UltraSPARC IIIi
# Processors:	2 cores, 2 chips, 1 core/chip
Primary Cache:	32KBI+64KBD on chip
Secondary Cache:	1MB(I+D) on chip
Other Cache:	none
Memory:	8 GB
Disk Subsystem:	2 x 36GB Ultra160SCSI
Disk Controllers:	Integrated Ultra160SCSI
Other Hardware:	2 x Cisco Catalyst 3508 XL Switch Sun Crypto Accelerator 500

Software

Operating System:	Solaris 9 8/03
File System:	UFS
Other Software:	Sun Crypto Accelerator 1000 patch 114790-02

HTTPS Software

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

Test Sponsor

Test Date:	Jan-2004
Tested By:	Sun Microsystems
SPEC License:	6

Network

# of Controllers:	2
Network Controllers:	Internal SUN Broadcom 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
set rlim_fd_max=131072
set rlim_fd_cur=131072
set segmap_percent=90
set maxpgio=128
set tcp:tcp_conn_hash_size=65536
set nca:nca_ppmax=840000
set nca:nca_vpmax=840000
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
/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
/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
/etc/nca/nca.if: bge1 bge2, /etc/nca/ncakmod.conf: status=enabled
/etc/nca/ncalogd.conf: status=enabled, logd_file_size=1000000000

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Notes/Tuning Information (Continued)

Operating System Notes (Continued)

/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 (one per instance):
RqThrottle 16
CGIWaitPid on
GIStubIdleTimeout 10000
ThreadIncrement 10
ConnQueueSize 8192
MaxKeepAliveConnections 0
KeepAliveTimeout 0

config/obj.conf (one per instance):
Disable PathCheck for check-acl

config/nsfc.conf (one per instance):
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

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

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Notes/Tuning Information (Continued)

Hardware Notes

Disk Configuration:
OS & access logs - 1 Internal Ultra160SCSI disk
file_set & post log - 1 Internal Ultra160SCSI disk

Network Notes

2x4 load generators used with each onboard network interface

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