

SPECweb99_SSL Result

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Sun Microsystems: Sun Fire V490 (4-node cluster)

SPECweb99_SSL 10700

Sun Microsystems: Sun Java System Web Server 6.1 SP2

Test Date: Nov-2004
Tester: Sun Microsystems

Hardware Avail: Sep-2004 OS Avail: Apr-2004 HTTPS Software Avail: Apr-2004 Sup. Software Avail: Dec-2004 SPEC license #: 6

Hardware

Notes/Tuning Information

Vendor: Sun Microsystems
Model: Sun Fire V490 (4-node cluster)
Processor used: xntpd to 1950MHz UltraSPARC II
Processors: 4

Operating System Notes

```
sq_max_size=0
set rlim_fd_max=260000
set rlim_fd_cur=260000
set segmap_percent=90
set tcp:tcp_conn_hash_size=262144
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_ppmax=3407872
set nca:nca_vpmax=3407872
set nca:nca_conn_hash_size=262144
set nca:nca_conn_req_max_q=10240
set nca:nca_conn_req_max_q0=10240
set nca:ncaurhash_sz=393209
set nca:nca vnodehash_sz=393209
set nca:nca_ppthresh=128
/usr/sbin/ndd -set /dev/ce instance 0,1,2,3,4,5
/usr/sbin/ndd -set /dev/ce rx_intr_time 500
/usr/sbin/ndd -set /dev/ce rx_intr_pkts 24
/platform/sun4u/kernel/drv/ce.conf: interrupts=1,2;
/usr/sbin/ndd -set /dev/nca nca_http_keep_alive_timeout 30000
/usr/sbin/ndd -set /dev/nca nca_max_cache_size 900000
/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
/usr/sbin/ndd -set /dev/nca nca_segmap_min_size 4096
/etc/nca/nca.if: ce0 ce1 ce2 ce3 ce4 ce5, /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 Java System Web Server 6.1 SP2
On each node two unique instances of Sun Java System WS is started.
The first instance listening on port 80
The second instance listening on port 443
config/magnus.conf (one per instance):
RqThrottle 0
StackSize 262144
CGIWaitPid on
ListenQ 8192
GIStubIdleTimeout 10000
ThreadIncrement 10
ConnQueueSize 0
MaxKeepAliveConnections 0
KeepAliveTimeout 0

config/obj.conf (one per instance):

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Notes/Tuning Information (Continued)

HTTPS Software Notes (Continued)

Disable PathCheck for 'check-acl

config/nsfc.conf (one per instance):

FileCacheEnable=on

CopyFiles=off

TransmitFile=on

CacheFileContent=on

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=8

family=nca

blocking=on

config/server.xml - webserver instance listening on port 443:

Disable ACLFILE

acceptorthreads=8

family=nca

blocking=off

SSLPARAMS

security=on

ssl2=no

ssl3=yes

ssl3tlsciphers=+rsa_rc4_128_sha

tls=no

clientauth=no

HTTP API Notes

Dynamic API: SUN-20041108-API.tar.gz

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

1 Sun StorEdge 3510 FC Array with 12 x 73GB disks

file_set - 6 disk RAID0

post.log - 2 disk RAID0

access logs - 4 JBOD disks (1 per node)

Disk Configuration on each node:

OS, swap - 1 Internal FC-AL disk

webserver - 1 Internal FC-AL disk

file_set - SS3510 6 disk RAID0 mounted RW on post.log node and RO on 3 other nodes.

post.log - SS3510 2 disk RAID0 mounted RW on post.log node. Mounted via NFS on the 3 other nodes.

access log - SS3510 1 JBOD disk

UserPersonality, Custom.Ads - local to the post.log node. Mounted via NFS on 3 other nodes.

Network Notes

All clients can access all web server nodes.

post.log node: 6 networks, 5 networks with 1 client per network

1 network handling post.log and NFS activities

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Notes/Tuning Information (Continued)

Network Notes (Continued)

non post.log nodes: 6 networks with 1 client per network

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 Java System Web Server 6.1 SP2: Tuning Guide: <http://docs.sun.com>