SPECweb99 Result

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Sun Microsystems: Sun Netra 20
Zeus Technology Ltd.: Zeus 4.0r1

SPECweb99 = 2503

Test Date: Nov-2001
Tester: Sun Microsystems

Hardware Avail:	Jun-2002	OS Avail:	Nov-2001	HTTP Software Avail:	Nov-2001	Sup. Software Avail:	--	SPEC license #:	6

Hardware

Vendor:	Sun Microsystems
Model:	Sun Netra 20
Processor:	900MHz 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:	8GB
Disk Subsystem:	1 x 36GB FC-AL 9 x 18GB Sun StorEdge T3
Disk Controllers:	Integrated FC-AL PCI Single FC Network Adapter
Other Hardware:	1 x Cisco Systems Catalyst 4912G

Software

Operating System:	Solaris 8 10/01
File System:	UFS
Other Software:	Forte C/6.1

HTTP Software

Vendor:	Zeus Technology Ltd.
HTTP Software:	Zeus 4.0r1
API:	ISAPI
Server Cache:	SNCA
Log Mode:	SNCA binary CLF

Test Sponsor

Test Date:	Nov-2001
Tested By:	Sun Microsystems
SPEC License:	6

Network

# of Controllers:	2
Network Controllers:	SUN Gigabit 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:	7
Model:	Ultra 60
Processor:	450MHz UltraSPARC II
# of Processors:	2
Memory:	512MB
Network Controller:	Sun Gigabit Ethernet
Operating System:	Solaris 8 07/01
Compiler:	Sun Workshop 5.0 C

Notes/Tuning Information

SUT Notes

Operating System Notes

set sq_max_size=0, set segmap_percent=90
set ge:ge_intr_mode=1, set ge:ge_dmaburst_mode=1
set ge:ge_tx_fastdvma_min=95, set ge:ge_nos_tmds=8192
set ge:ge_nos_txdvma=8192, set ge:ge_tx_onemblk=2
set ge:ge_tx_bcopy_max=96
set rlim_fd_max=70000, set rlim_fd_cur=70000
set pcisch:pci_stream_buf_enable = 0, set autoup=60
set nca:nca_conn_req_max_q=10240, set nca:nca_conn_req_max_q0=10240
set nca:nca_ppmax=840000, set nca:nca_vpmax=840000
set nca:nca_conn_hash_size=82500, set nca:ncaurihash_sz=12281
set nca:nca_ppthresh=128
/usr/sbin/ndd -set /dev/nca nca_max_cache_size 800000
/usr/sbin/ndd -set /dev/nca nca_http_keep_alive_timeout 20000
/usr/sbin/ndd -set /dev/nca nca_use_segmap 1
/etc/nca/nca.if: ge0 ge1, /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
Mount /docs for file_set with noatime option.

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Notes/Tuning Information (Continued)

HTTP Software Notes

Zeus 4.0r1 Tuning
Virtual Server Configuration (runningsites/wstest)
modules!cgi!logenabled no
modules!cgi!logid 0
modules!cgi!logsize 0
modules!dirlist!enabled no
modules!errors!enabled no
modules!imagemap!enabled no
modules!isapi!enabled yes
modules!isapi!runeextensions no
modules!stats!enabled no
Parameters - global.cfg:
tuning!modules!stats!enabled no
tuning!accelerator!nca!enabled yes
tuning!cache_files 98041
tuning!cache_max_bytes 0
tuning!cache_small_file 4096
tuning!cache_large_file 1048576
tuning!cache_stat_expire 31536000
tuning!cache_flush_interval 31536000
tuning!cache_cooling_time 0
tuning!sendfile yes
tuning!listen_queue_size 8192
tuning!so_wbuff_size 1048576
tuning!so_rbuff_size 0
tuning!modules!cgi!cleansize 0
tuning!cbuff_size 65536
tuning!sendfile_minsize 1
tuning!sendfile_reservefd 69000
tuning!bind_any no

HTTP API Notes

Zeus ISAPI interface used
Zeus PEPP Toolkit (0.6) used for SPECweb99 dynamic content
API Software compiled using using Forte 6.1: ./Configure; make

Hardware Notes

Disk Configuration:
OS - 1 Internal FC-AL disk
file_set & post log - T3, 6 disk RAID 0 LUN
access log - T3, 3 disk RAID 0 LUN
Default rd_ahead on and cache auto set in T3

Network Notes

1 NIC with 4 clients on 66MHz PCI
1 NIC with 3 clients on 33MHz PCI

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

Other Notes

Tuning Disclosure: Sun-20011126.txt
Dynamic API: SUN-20010402-API.tar.gz