SPECweb99 Result

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Aspen Systems: Glacier 12

Zeus Technology Ltd.: Zeus WebServer 4.2r2 (32-bit)

SPECweb99 = 7898

Test Date: Apr-2003
Tester: Advanced Micro Devices

Hardware Avail:	Jul-2003	OS Avail:	May-2003	HTTP Software Avail:	Mar-2003	Sup. Software Avail:	May-2003	SPEC license #:	49

Hardware

Vendor:	Aspen Systems
Model:	Glacier 12
Processor:	AMD Opteron 844 1.8 GHz
# Processors:	4 cores, 4 chips, 1 core/chip
Primary Cache:	64KBI+64KBD on chip
Secondary Cache:	1MB
Other Cache:	none
Memory:	32 GB pc2100 DDR
Disk Subsystem:	3 15K Ultra320 SCSI
Disk Controllers:	Onboard LSI SCSI
Other Hardware:	4: Dell PowerConnect 5012 switches

Software

Operating System:	SuSE Linux Enterprise Server 8 for AMD32
File System:	ext2
Other Software:	Intel 4.2.17 driver

HTTP Software

Vendor:	Zeus Technology Ltd.
HTTP Software:	Zeus WebServer 4.2r2 (32-bit)
API:	Zeus PEPP 0.8 ISAPI
Server Cache:	None
Log Mode:	Binary Log Format

Test Sponsor

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Network

# of Controllers:	4
Network Controllers:	Intel Pro1000 MT Dual Port Server Adapter
# of Nets:	4
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:	24
Model:	Angstrom RenderFX Series 500
Processor:	AMD Athlon MP 2000+ 1.67 GHz
# of Processors:	1
Memory:	512MB
Network Controller:	Intel Pro1000 MT
Operating System:	Windows 2000 Professional
Compiler:	Microsoft Visual C++ 6.0

Notes/Tuning Information

Operating System Notes

1 port of each dual port NIC used, one NIC irq bound per CPU.
Each NIC's TX queue length set to 20000, default 100
File systems mounted with "noatime, nodiratime", no inode access time updating
ulimit -n 340000, sets number of file descriptors, default 1024
fs.file-max = 1128010, maximum number of open files, default 1024
net.ipv4.nonlocal_bind = 1, allows processes to bind to non-local IP adresses
net.ipv4.tcp_timestamps = 0, turns TCP timestamp support off, default on
net.ipv4.tcp_max_tw_buckets = 2000000, sets TCP time-wait buckets pool size, default 180000
net.ipv4.tcp_rmem = 10000000 10000000 10000000, sets min/default/max TCP read buffer, default 4096 87380 174760
net.ipv4.tcp_wmem = 10000000 10000000 10000000, sets min/pressure/max TCP write buffer, default 4096 16384 131072
net.ipv4.tcp_mem = 10000000 10000000 10000000, sets min/pressure/max TCP buffer space, default 31744 32256 32768
net.ipv4.tcp_sack = 0, turn SACK support off, default on
net.ipv4.tcp_window_scaling = 0, turn TCP window scaling support off, default on
net.core.hot_list_length = 20000, maximum number of skb-heads to be cached, default 128
net.core.rmem_max = 10000000, maximum receive socket buffer size, default 131071
net.core.wmem_max = 10000000, maximum send socket buffer size, default 131071
net.core.rmem_default = 10000000, default receive socket buffer size, default 65535
net.core.wmem_default = 10000000, default send socket buffer size, default 65535
net.core.optmem_max = 10000000, maximum amount of option memory buffers, default 10240
net.core.netdev_max_backlog = 300000, number of unprocessed input packets before kernel starts dropping them, default 300

HTTP Software Notes

Zeus 4.2r2 global.cfg performance parameters
For explanation and default values, refer to: http://support.zeus.com/faq/entries/tuning.html
tuning!cache_cooling_time 0
tuning!cache_files 569263

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Notes/Tuning Information (Continued)

HTTP Software Notes (Continued)

tuning!cache_max_bytes 0
tuning!cache_small_file 4096
tuning!cache_large_file 1048576
tuning!cache_stat_expire 180000
tuning!cache_flush_interval 180000
tuning!cache_cooling_time 0
tuning!cbuff_size 1048576
tuning!clientfirst_optimize yes
tuning!keepalive yes
tuning!keepalive_max -1
tuning!keepalive_timeout 1000
tuning!listen_queue_size 9216
tuning!maxaccept 64
tuning!max_connections -1
tuning!modules!cgi!cleansize 0
tuning!modules!nsapi!enabled no
tuning!modules!stats!enabled no
tuning!sendfile yes
tuning!sendfile_minsize 1
tuning!sendfile_maxsize 1048576
tuning!sendfile_reservefd 220247
tuning!ssl_diskcache no
tuning!so_wbuff_size 1048576
tuning!bind_any no
tuning!unique_bind yes
tuning!softservers no
Other Zeus 4.2r2 global.cfg parameters:
gid root
uid root
controlport 9080
controlallow localhost
Other Zeus 4.2r2 virtual_server performance parameters:
(%zeushome%/web-4.2r2/runningsites/pos-suse)
dnslookup no
docroot /data2/html
modules!cgi!enable yes
modules!isapi!enable yes

Hardware Notes

1 disk for OS, 1 disk for logs, 1 disk for web pages.

Other Notes

Tuning Disclosure: See above.
Zeus API toolkit 0.8 used for dynamic content
Dynamic API: HP-20020724-API.tgz
Kernel config: AMD-20030413-kernel32-config.txt