SPECweb99 Result

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Compaq Computer Corp.: ProLiant DL320
Red Hat: TUX 2.1

SPECweb99 = 1943

Test Date: Jan-2002
Tester: Compaq

Hardware Avail:	Jan-2002	OS Avail:	Jan-2002	HTTP Software Avail:	Jan-2002	Sup. Software Avail:	Jun-2001	SPEC license #:	2

Hardware

Vendor:	Compaq Computer Corp.
Model:	ProLiant DL320
Processor:	1130MHz Intel Pentium III
# Processors:	1 core, 1 chip, 1 core/chip
Primary Cache:	16KBI+16KBD on chip
Secondary Cache:	512KB
Other Cache:	None
Memory:	2 GB
Disk Subsystem:	2x18GB 10K RPM SCSI
Disk Controllers:	COMPAQ Integrated SCSI Controller
Other Hardware:	Anritsu MultiFlow 5128 Switch

Software

Operating System:	Red Hat Linux 7.2
File System:	ext2
Other Software:	None

HTTP Software

Vendor:	Red Hat
HTTP Software:	TUX 2.1
API:	TUX user API
Server Cache:	None
Log Mode:	Binary CLF

Test Sponsor

Test Date:	Jan-2002
Tested By:	Compaq
SPEC License:	2

Network

# of Controllers:	1
Network Controllers:	Compaq NC7770 1000TX
# of Nets:	1
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:	4
Model:	Compaq ProLiant DL380
Processor:	1.0GHz Intel Pentium III
# of Processors:	2
Memory:	128MB
Network Controller:	Alteon ACENIC 1000SX
Operating System:	Red Hat 7.0
Compiler:	gcc 2.96

Notes/Tuning Information

SUT Notes

1 partition on first drive for OS
1 partition on second drive for logs
1 software RAID0 on both disks for fileset
set noatime on OS,logs and fileset mounts; avoids writing back the main inode block for every file accessed
set nocheck on OS,logs and fileset mounts; optimizes ext2fs overhead, by using less rigorious on-disk data validation, this can be done for known reliable media such as harddisks

Operating System Notes

Tuning parameters:
ulimit -n 10000, set number of open files to 10000, default 8192
net.core.optmem_max=10000000, maximum amount of option memory buffers, default 10240
net.core.rmem_default=10000000, default receive socket buffer size, default 65535
net.core.rmem_max=10000000, maximum receive socket buffer size, default 131071
net.core.wmem_default=10000000, default send socket buffer size, default 65535
net.core.wmem_max=10000000, maximum send socket buffer size, default 131071
net.core.hot_list_length=10000, maximm number of skb-heads to be cached, default 128
net.core.netdev_max_backlog=300000, number of unprocessed input packets before kernel starts dropping them, default 300
net.ipv4.tcp_max_tw_buckets=2000000, set TCP time-wait buckets pool size, default 180000
net.ipv4.tcp_rmem=30000000 30000000 30000000, maximum TCP read-buffer space allocatable, default 4096 87380 174760
net.ipv4.tcp_wmem=30000000 30000000 30000000, maximum TCP write-buffer space allocatable, default 4096 16384 131072
net.ipv4.tcp_mem=30000000 30000000 30000000, maximum TCP buffer space allocatable, default 195584 196096 196608
net.ipv4.tcp_timestamps=0, turns TCP timestamp support off, default on

HTTP Software Notes

net.tux.cgiroot=/, cgi root check; default /var/www/tux/cgiroot/
net.tux.cgi_uid=99, userid for cgi scripts; default -1
net.tux.cgi_gid=99, groupid for cgi scripts; default -1
net.tux.mode_allowed=255, allowed file permission bits, default 4

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Notes/Tuning Information (Continued)

HTTP Software Notes (Continued)

net.tux.mode_forbidden=2, forbidden file permission bits, default 0
net.tux.documentroot=/www, document root for web server, default /var/www/tux
net.tux.logging=1, enable logging, default off
net.tux.threads=1, number of TUX threads, default 2

Network Notes

txqueuelen=1000, transmit queue length, default 100

Other Notes

Tuning Disclosure: See Above
Dynamic API: Compaq-20010709-ml370-tux.tar.gz
Kernel Configuration: Compaq-20020120-config.txt