

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 rigorous 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=1000000, maximum amount of option memory buffers, default 10240
net.core.rmem_default=1000000, default receive socket buffer size, default 65535
net.core.rmem_max=10000000, maximum receive socket buffer size, default 131071
net.core.wmem_default=1000000, 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, maximum 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=3000000 3000000 3000000, maximum TCP read-buffer space allocatable, default 4096 87380 174760
net.ipv4.tcp_wmem=3000000 3000000 3000000, maximum TCP write-buffer space allocatable, default 4096 16384 131072
net.ipv4.tcp_mem=3000000 3000000 3000000, 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-m1370-tux.tar.gz
Kernel Configuration: Compaq-20020120-config.txt