SPECweb96 Result

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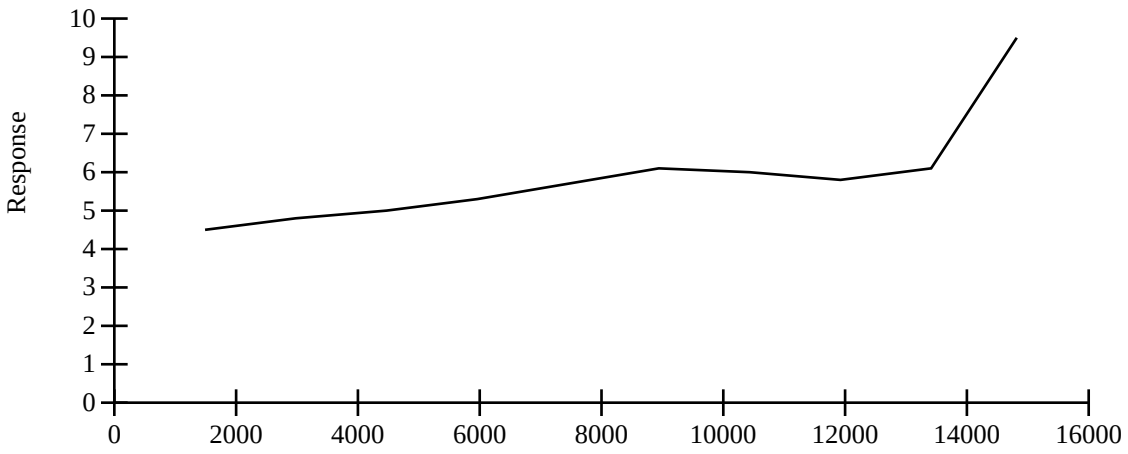
Dell Computer Corp.
PowerEdge 4400/800

SPECweb96= 14819

Test Date : Jan-2000
Tested by Dell Computer Corp.

Hardware Avail:	Feb-2000	OS Avail:	Feb-2000	HTTP Software Avail:	Feb-2000	SPEC license #:	55

Throughput ops/sec	Response msec
1490	4.5
2980	4.8
4470	5.0
5961	5.3
7451	5.7
8941	6.1
10433	6.0
11924	5.8
13413	6.1
14819	9.5



Hardware

Model Name:	PowerEdge 4400/800
Processor:	800MHz Pentium III
# of Processors:	2
Primary Cache:	16KBI+16KBD on chip
Secondary Cache:	256KB(I+D) ATC
Other Cache:	--
Memory:	4GB
Disk Subsystem:	5 9GB 10K RPM Drive
Disk Controllers:	Onboard Adaptec Ultra-SCSI
Other Hardware:	4 Alteon ACEswitch 180

Software

Operating System:	Windows 2000 Advanced Server
File System:	NTFS
Other Software:	None

HTTP Software

Vendor:	Microsoft
HTTP Software:	IIS 5.0 and SWC 2.0
# of "threads":	1
Server Cache:	Microsoft Scalable Web Cache 2.0
Log Mode:	Binary CLF

Network

# of Controllers:	4
Network Controllers:	Alteon ACEnic PCI
# of Nets:	4
Type of Nets:	Jumbo Frame Gigabit
Network Speed:	1000Mb/s
Time Wait (secs):	60 (Non RFC1122)

Load Generators

# of Load Generators:	20
# of Processes Each:	7
Model:	Dell Precision 410
Processor:	450MHz PentiumII
# of CPUs:	2
Memory:	128MB
OS:	Microsoft Windows 2000 Professional
Compiler:	Microsoft Visual C++ 5.0

Benchmark Configuration

Max Requested Load:	14900
Max Fileset Size (MB):	2665

Notes/Tuning Information

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Each AceSwitch 180 connects one card in the SUT and 6-7 clients.
MTU size = 9000 bytes.
IIS settings: listen port 80, no logging, maximum performance.
IIS Home Directory: Access for Read and Directory Browsing Allowed  only, Application Settings permissions "none".
Network interrupts affinitized one NIC per CPU.
One 9GB 10KRPM disk for OS and pagefile, 4 9GB 10KRPM disks striped  for web pages and logs.
Registry Settings:
- Tcpip/Parameters/MaxHashTableSize=0x10000, sets TCB hash table  size to 65,536 entries, default is 512.
- Tcpip/Parameters/TcpTimedWaitDelay=0x3c, sets TIME_WAIT parameter  to 60 seconds (non-RFC 1122), default is 240.
- Tcpip/Parameters/MaxFreeTwTcbs=950000, sets maximum number of  TIME_WAIT tcbs to 1,500,000.
- Tcpip/Parameters/MaxSendSegments = 0x1000, sets maximum TCP  segments sent consecutively to a destination, default 64.
- Tcpip/Parameters/NumTcbTablePartitions = 32, sets number of  independent TCB table segments, default 4.
- NDIS/Parameters/ProcessorAffinityMask=0, forces processor that  handled interrupt to also handle that DPC, default is any processor.
- Inetinfo/Parameters/ObjectCacheTTL=0, sets IIS object cache  timeout to 0 seconds, default 10 minutes
- Inetinfo/Parameters/OpenFileInCache=0, sets number of open files  in object cache to 0
- Inetinfo/Parameters/MaxPoolThreads=1, sets pool threads per  processor, default is 10
- Inetinfo/Parameters/PoolThreadLimit=2, sets total pool threads per  system to 2
For each Alteon NIC:
- Altndis(X)/Parameters/SendCoalMax=20, sets number of send buffer  descriptors in send ring, default 333.
- Altndis(X)/Parameters/RecvCoalMax=20, sets number of frames  received before notifying host, default 333.
- Altndis(X)/Parameters/SendCoalTicks=1000, sets number of microsec.  before send buffers are returned to host, default 2.
- Altndis(X)/Parameters/RecvCoalTicks=1000, sets number of microsec.  before recv buffers are given to host, default 2.
- Altndis(X)/Parameters/JumboFrames=1, enables Jumbo Frame  support.
Alternate HTTP/HT.c used.  Repeated client-side calls to  gethostbyname() omitted, as approved
 by SPEC.  No change in measured server performance but reduction in  client load.
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For More Information contact

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