# SPECsfs97 Result

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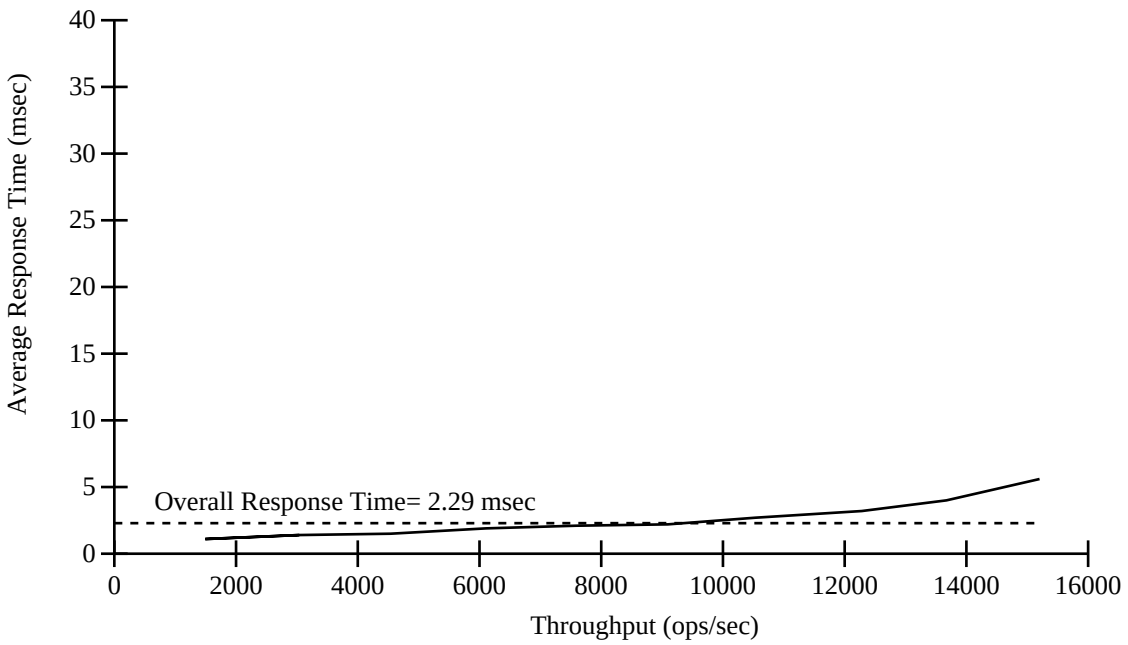
## Hewlett-Packard
## HP server rp7400

SPECsfs97_R1.v3 =

**15202 Ops/Sec (Overall Response Time = 2.29 msec)**

| Tested: | Sept 2001 | By: | Hewlett-Packard | License #: | 3 | Hardware Avail: | June 2001 | Software Avail: | June 2001 |
|---|---|---|---|---|---|---|---|---|---|

| Throughput (ops/sec) | Average Response (msec) |
|---|---|
| 1494 | 1.1 |
| 3039 | 1.4 |
| 4540 | 1.5 |
| 6108 | 1.9 |
| 7589 | 2.1 |
| 9093 | 2.2 |
| 10533 | 2.7 |
| 12281 | 3.2 |
| 13672 | 4.0 |
| **15202** | **5.6** |




## CPU, Memory and Power

| | |
|---|---|
| Model Name: | HP server rp7400 |
| Processor: | PA-8600 550 Mhz |
| # of Processors: | 4 |
| Primary Cache: | 1MB Instruction, 512KB data |
| Secondary Cache: | N/A |
| Other Cache: | N/A |
| UPS: | N/A |
| Other Hardware: | N/A |
| Memory Size: | 8 GB |
| NVRAM Size: | 2 GB (256MB*8) |
| NVRAM Type: | 256 MB NVRAM 5 Day battery |
| NVRAM Description: | FC60 Array controller |

## Server Software

| | |
|---|---|
| OS Name and Version: | HP-UX 11.11 |
| Other Software: | N/A |
| File System: | JFS |
| NFS version: | 3 |

## Network Subsystem

| | |
|---|---|
| Network Type: | Gigabit Ethernet |
| Network Controller Desc.: | PCI 1000Base-SX Model #A4926A-60001 |
| Number Networks: | 4 |
| Number Network Controllers: | 4 |
| Protocol Type: | UDP |
| Switch Type: | HP Procurve 4000M Gigabit |
| Bridge Type: | N/A |
| Hub Type: | N/A |
| Other Network Hardware: | N/A |

## Server Tuning

| | |
|---|---|
| Buffer Cache Size: | Dynamic with ceiling at 65 percent |
| # NFS Processes: | 192 |
| Fileset Size: | 145.0 GB |

## Disk Subsystem

| | |
|---|---|
| Number Disk Controllers: | 9 |
| Number of Disks: | 193 |
| Number of Filesystems: | 96 |
| File System Creation Ops: | mkfs -F vxfs -bs 8192 -o logsize=2048 |
| File System Config: | N/A |
| | |
| Disk Controller: | Ultra2 Wide SCSI (Builtin) |
| # of Controller Type: | 1 |
| Number of Disks: | 1 |
| Disk Type: | SEAGATE ST39102LC |
| File Systems on Disks: | os, swap, dump |
| Special Config Notes: | N/A |
| | |
| Disk Controller: | PCI FiberChannel A3740A Shortwave |
| # of Controller Type: | 8 |
| Number of Disks: | 192 |
| Disk Type: | 9GB, 10000 rpm |
| File Systems on Disks: | F1,F9..F89 F2,F10..F90 F3,F11..F91 ... F8,F16..F96 |
| Special Config Notes: | See notes below. |

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### Load Generator (LG) Configuration

| | |
|---|---|
| Number of Load Generators: | 16 |
| Number of Processes per LG: | 6 |
| Biod Max Read Setting: | 2 |
| Biod Max Write Setting: | 2 |
| | |
| LG Type: | A-Class |
| LG Model: | A-180C |
| Number and Type Processors: | PA-7300LC @ 180 MHz |
| Memory Size: | 256 MB |
| Operating System: | HP-UX 11.11 |
| Compiler: | HP ANSI C compiler |
| Compiler Options: | +O2 -Ae |
| Network Type: | PCI 1000Base-SX Adapter. A4926A-60001 |

### Testbed Configuration

| LG # | LG Type | Network | Target File Systems | Notes |
|---|---|---|---|---|
| 01/02/03/04 | LG1 | N1 | F1..F6/F7..F12/F13..F18/F19..F24 | |
| 05/06/07/08 | LG1 | N2 | F25..F30/F31..F36/F37..F42/F43..F48 | |
| 09/10/11/12 | LG1 | N3 | F49..F54/F55..F60/F61..F66/F67..F72 | |
| 13/14/15/16 | LG1 | N4 | F73..F78/F79..F84/F85..F90/F91..F96 | |

### Notes/Tuning Information

Other Notes
-System tunables:
-maxswapchunks=16384,swchunk=65536,nstrpty=256
-swapmem_on=0,vps_pagesize=4096,vps_ceiling=4096
-nkthread=4000,max_thread_proc=1000,nproc=4096
-maxuprc=2048,dnlc_hash_locks=4096,ftable_hash_locks=4096
-bufcache_hash_locks=4096,vnode_hash_locks=4096
-dbc_min_pct=40,dbc_max_pct=65,nfile=16384
-maxfiles=2048,max_fcp_reqs=1024,ninode=500000
-ncsize=500000,vx_fancyra_enable=1
-There are 8 FC60 disk arrays connected to the
-8 Fibre channel controllers. There are 12 filesystems
-on each FC60 array and each filesystem is a 2 disk simple
-mirror configuration.