Performance Results

Our last performance results dispatch was on SPC block storage performance. In this one we report on NAS system performance using SPEC SFS97_R1* NFS V3 results.

Latest SFS97_R1 NFS V3 results

The latest runs by NEC NV7300 and NV5300, NetApp FAS2050, EMC NS20, SGI NEXIS 2000 SAS, and Glue systems AnyStor GW-C systems all were out of the running for top 10 systems and so we show no change in our top 10 list (see Appendix Figure 3 & 4). So instead of focusing on Top 10 results we will take another slice of the data. We provide a histogram of SCI NFS performance band results in Figure 1.

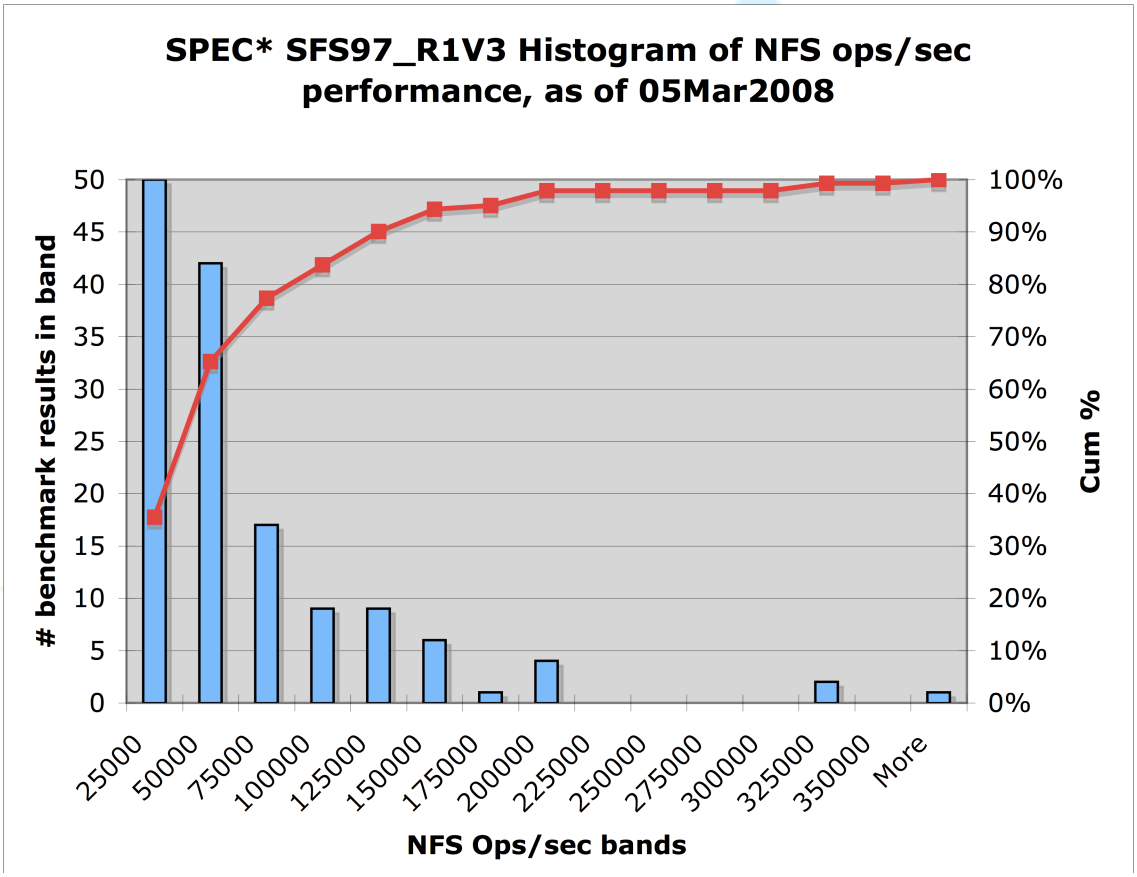


Figure 1 SPEC* SFS97_R1V3 Histogram

Figure 1 is a histogram of SPEC SFS results showing how many benchmarks performed within each band. Each SCI NFS performance band is 25,000

* Standard Performance Evaluation Corporation System File Server performance results from http://www.spec.org/sfs97r1/ as of 05 March 2008

NFS ops wide, so the first band depicts the number of benchmarks (50) that had performance between 0 and 25K NFS ops/sec, the second band had ~42 benchmarks with results between 25K and 50K, the third band ~17 results between 50K and 75K, etc. There were some bands with 0 results, e.g. from 200K to 300K and between 325K and 350K. Anything above 350K NFS ops/sec we lumped into one band for now. This report will show detailed results for the third performance band, 50,001 to 75,000 NFS ops/sec. (See Figure 2.)

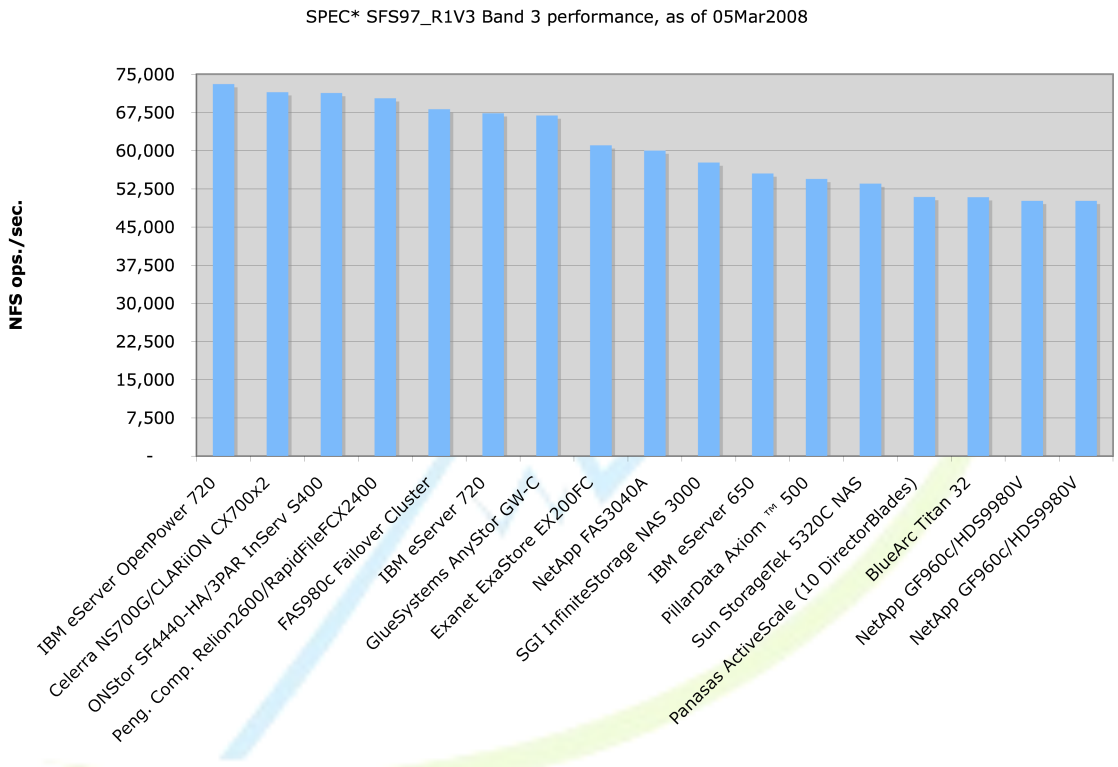


Figure 2 SPEC* SFS97_R1V3 Band 3 performance

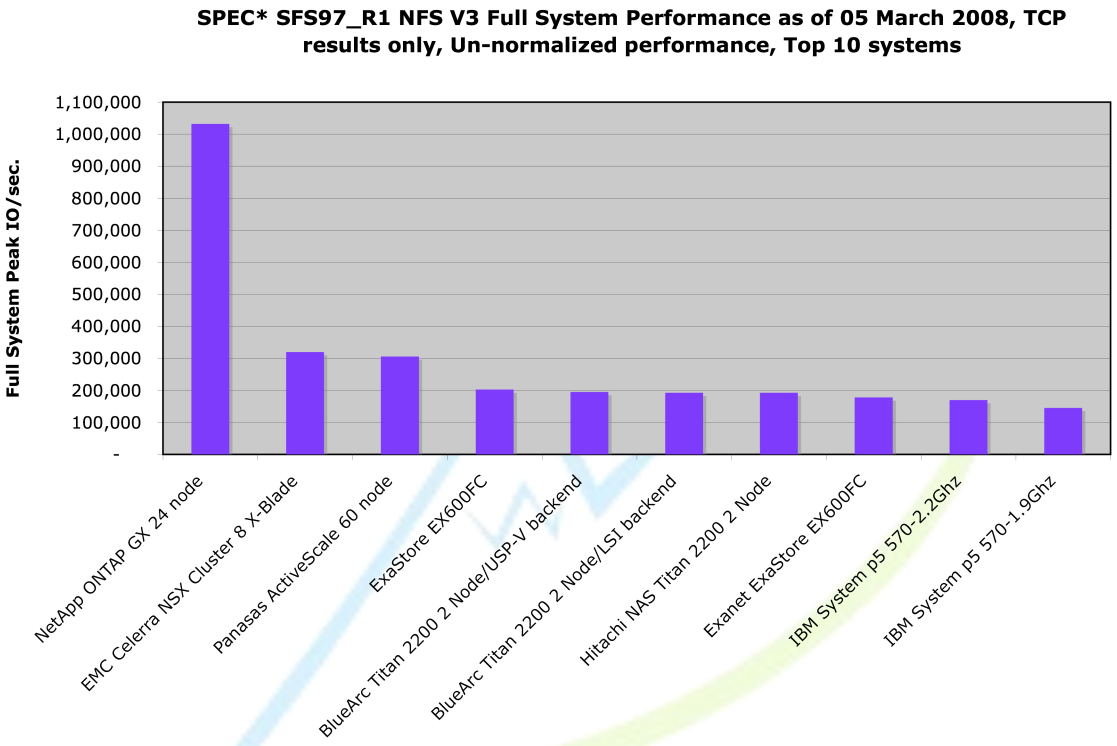
A couple of items of note here, the most recent benchmark result by GlueSys AnyStor shows up as number 7 for this band with ~66K NFS ops/sec. Recent products from Exanet, NetApp, ONStor/3PAR, PillarData, Panasas, and Sun also show performance results within this band. Finally, four or so years back performance in this band was top notch with BlueArc Titan 32, EMC NS700G, NetApp GF960C/HDS9980V and NetApp FAS980C products all contending for performance in this band. Nowadays this performance band is less than a quarter of what's available from top 10 performers.

Silverton Consulting
Strategy, Storage & Systems
P.O. Box 492|Broomfield, CO 80038-0492|
720-221-7270|info@silvertonconsulting.com

Appendix A

Top 10 performance is still being led by NetApp ONTAP GX 24 Node followed by EMC Celerra NSX Cluster 8-blade and the next 3 are all variants of BlueArc (with HDS USP-V backend, LSI backend and as an HDS NAS Titan products).

Figure 3 Top 10 SPEC* SFS97_R1 NFS V3 TCP performance results



As discussed last time we reported on NFS performance ONTAP GX presents a major hurdle to overcome at over 1 million NFS operations per second. NetApp's next major system the FAS6070 that is their mainstream product only comes close to top 10 performance, at number 13.

Silverton Consulting
Strategy, Storage & Systems
P.O. Box 492|Broomfield, CO 80038-0492|
720-221-7270|info@silvertonconsulting.com

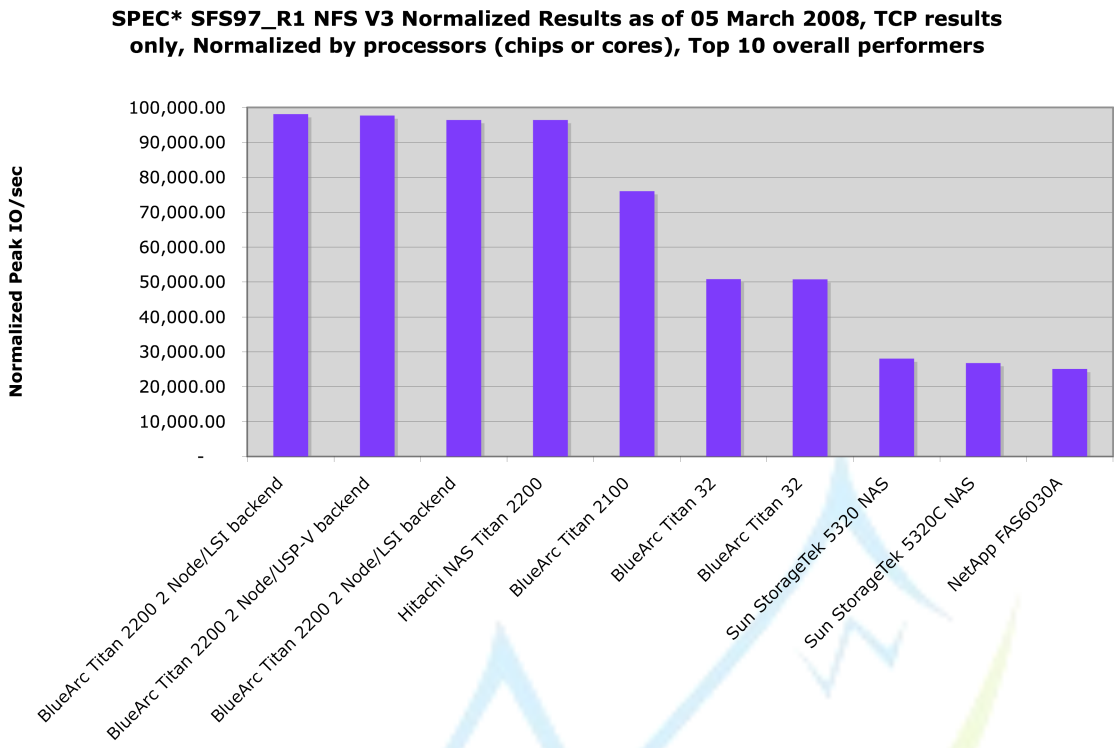


Figure 4 Top 10 SPEC* SFS97_R1 NFS V3 TCP normalized performance results

Just as in our last report on SPEC SFS results in the normalized view BlueArc and their OEM partner HDS take the top seven slots and at number six and seven is the prior version of the Titan hardware. Realize that BlueArc may have an unfair advantage here as they perform most of the NFS processing in hardware while most of the other NAS systems do this in software.

Silverton Consulting
Strategy, Storage & Systems
P.O. Box 492|Broomfield, CO 80038-0492|
720-221-7270|info@silvertonconsulting.com