



TGG EPA Server v4.0 Discussion Guide Response – Part II

May 26, 2022

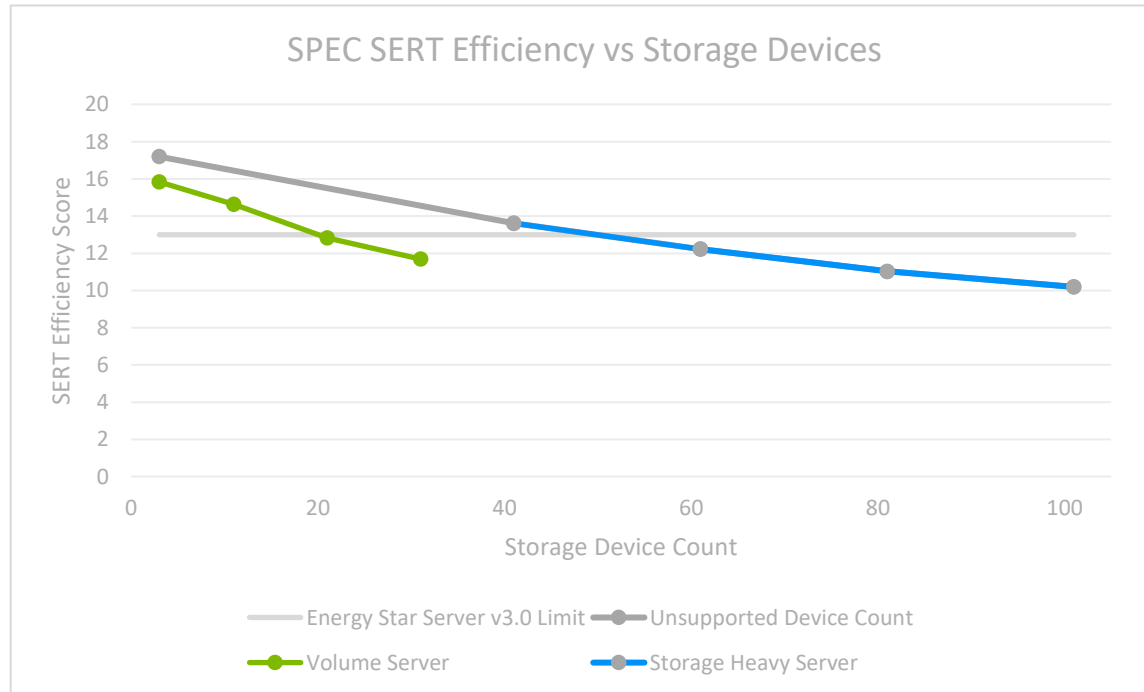


Agenda

1. Storage Heavy Server Methodology
2. Storage Heavy Server Definition
3. TGG SPEC SERT Database Update
4. Revisit TGG Feedback Part I on Discussion Guide

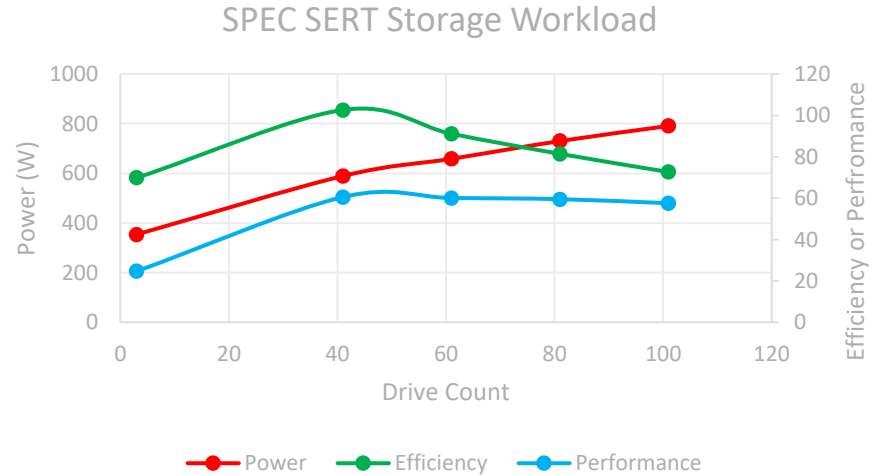
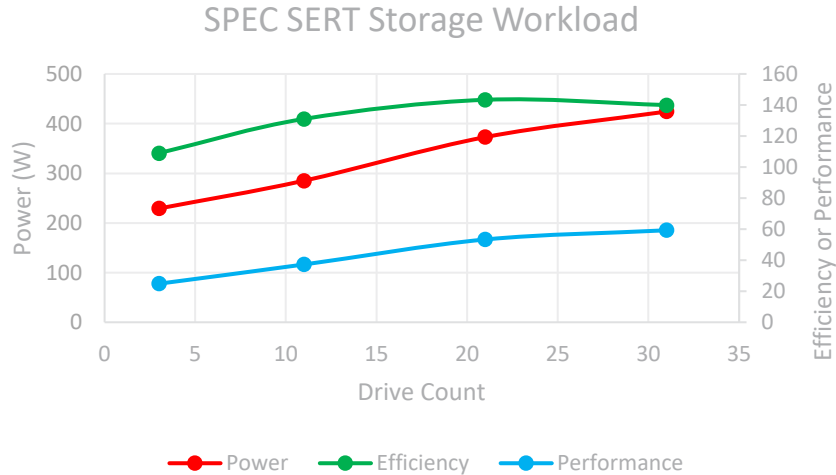
SERT Scaling for Storage Heavy Servers (SHS)

- Storage heavy servers are significantly disadvantaged because the SERT Efficiency score does not scale with device count



Possible Solutions for Storage Heavy Servers

- Need further SHS data to determine SERT Storage workload scaling on storage heavy servers



Note: minimum supported device count on right system is 40

Possible Solutions for Storage Heavy Servers

- If SERT Storage Workload efficiency scales with storage device count, then could make a threshold based on SERT Storage workload score
 - Could be used in conjunction with easier SERT Efficiency score
 - Could have storage device count categories if needed
 - Avoids the complexity of recalculating a new SERT efficiency score
- Otherwise, make SHS category and do only data collection for Energy Star v4.0
- There are few SHS's, only several models per OEM, and very little test data

Minor Storage Heavy Server Definition Update Proposal

- Propose adding a note to help differentiate from Datacenter Storage Systems

storage heavy server

a Storage Heavy Server is a Server with greater storage capacity than a standard server. As shipped, the server supports 30 or greater internal storage devices.

Note 1 to entry: Storage heavy servers run server OSes and software stacks, whereas Datacenter Storage Systems run dedicated storage OSes and applications.

TGG SPEC SERT® Database Update

- TGG Database Update
 - Have now added all EPA QPX SERT results which were not directly submitted to TGG, other than:
 - Older than 2017 or SERT v1.x
 - Incorrect or malformed results
 - CSV or PDF results (processing few PDF results with new methodology now)
- Revisit EPA Server v5/SERT v3 QPX SERT file type ideas
 - EPA specific result file
 - SPEC reduce number of result files or partial result files
 - Names results files based on config information

Minor QPX Updates for Server v4.0

- EPA Enterprise server template xml missing low-end SOR efficiency score
- The below requested performance and power results are not calculated in SERT result output (requires complex geomean)

SERT Active State Efficiency Score Low-end Performance Config	Required if Product Family is Yes. Indicate the SERT Active State Efficiency Score as defined in ENERGY STAR Computer Servers V3, Equation 3.	O	N	Decimal	Min Occurs: 0 No. of Decimal: 2
SERT Total Server Normalized Perform. Score Low-end Config	Required if Product Family is Yes. Indicate manufacturer reported total normalized performance component (numerator) used to calculate the configuration's Active State Efficiency Score.	O	N	Decimal	Min Occurs: 0 No. of Decimal: 2
SERT Total Server Power Score (Watts) Low-end Performance Config	Required if Product Family is Yes. Indicate manufacturer reported total power component (denominator) used to calculate the configuration's Active State Efficiency Score.	O	N	Decimal	Min Occurs: 0 No. of Decimal: 2

TGG Feedback Part I Recap / Further Discussion

- ISO/IEC 21836 compliance for the five SPEC SERT components (TGG 3.2)
- Power supplies < 750W (TGG 3.3)
- Definitions (TGG 3.1)



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