SNIA GTWG Comments – Draft 4 V1.0 ENERGY STAR Storage 4/26/2013

Eligibility Criteria Draft 4

Section 1: If there is a SNIA dictionary or Emerald Spec definition, please try to align
Line 3(box): Issue resolved
Line 175,176, 184,185: Need to have the "Less than 20" to "Less than or equal to" and clarify the statement of Primary vs. not Primary output.
Line 204: should GB per second be just GB?
Line 207: to be consistent with Emerald MiB should be used instead of MB
Line 262 to 283: Need a clear example on how the combinations work (expect by 4/26/13)
E.g. try:
Let Configuration A be 1 drawer of 24 SSDs.
Let Configuration B be 4 drawers of 14 HDDs each.
Line 278: This is very confusing. The Emerald spec does not cover NAS.
Line 288: This restriction is puzzling. 80% of the world's data is only stored, never read. What is the motivation for requiring high throughput or I/O efficiency from a system designed to hold that data?
Line 301: Probably "shares" should be "share"
Section 381: Add a section about if we include a component in our storage system that by itself falls under an ENERGY STAR category, e.g. switches and displays, does not to meet the ENERGY STAR for that device
Line 444-445: implies that we do need an (inlet?) ambient air sensor, if not for reporting, then for using to control fan speed? Also, this is only for primary components?
Section 3.5.1: To qualify, all active and idle results shall be reported…..this means that at least 3 sets of best-foot-forward data (drive types of our choice), and then more sets of BFF data (other drive types) as we desire?
Line 482: What happened to Random Read and Write? This is confusing.
Line 494: We appreciate the expedited publication of this draft, but recommend the use of a spell checker before final publication.
Line 495: Table 5 lists things as optional, and here they appear to be mandatory. If the intent is "mandatory to submit, optional to report publicly" please clarify this.
Line 503: It may not be possible for all storage systems to be resized in one direction or another (e.g. when the optimal configuration is one shelf). A forward reference to item (f), which allows this, would be useful.
Lines 514-517: Confusing
Line 514: So what does an all-SSD system report? Also, elsewhere it is stated that Optimal Configurations are not allowed.
Line 543: The way this is written, it asks for data at non-shelf boundaries.
Consider a system with an optimum point at 10 shelves of 24 drives each. The 15% topside configuration would be 12 shelves (276 drives rounded up to 288). The spec seems to say that you want measurements at 248, 256, 264, 272, 280, and 288 drives. Given that disk drawers may perform sub-optimally when not full, the numbers at 248, 256, 272 and 280—whether modeled or measured—may not be helpful.
We suggest asking for modeled data points on each shelf boundary, to a maximum required of six points each way.
Section 3.5.4: What is the modeling accuracy requirement?
Section 3.6.1: In general what's wrong with being better, e.g. faster or more capacity at essentially the same power?
Line 607: Should it be "similar or better"?
Line 613: What's wrong with a faster interface?
Line 619: Higher cap can come from more platters, higher TPI, and higher BPI. The latter will result in higher sustained transfer rates – what's wrong with that?

Section 3.7.3:

While need for averaging is understood, why rolling?
Why do internal sample rates matter except for accuracy?
Please provide sampling examples

Line 683: Time-stamping should also have a parenthetic (clarify that this is optional)

Line 705: What does "Be made available for sale and delivery" mean?

- Do we have to sell it or offer it as an option?
- Can we refer the customer to a third party to purchase it?

What if the customer has iPDU's already?

Draft 2 Test Method

Add 400 V ac to 3-Phase and Change 3-Phase frequency to "50 Hz or 60 Hz"

Table 2 Voltage tolerance?

- Should I be wider to accommodate line voltage without power conditioner for the higher power systems?
- Is 1.5 the right KW threshold to change from conditioned power to line voltage?
- Should we consider also allowing 208 V line voltage for higher power systems?

Line 95-102, Sect C; NAS – why do this; not really seeing the full performance. Just set up and test for block for V1.0