

3 July 2009

Response to the

**ENERGY STAR® Enterprise Storage
Draft Specification Framework
June 4, 2009**

by Alan G. Yoder, Ph.D.
on behalf of

NetApp, Inc.

1. NetApp has participated in formulating and supports the response of the Storage Networking Industry Association (SNIA) to this proposal.
2. NetApp applauds EPA's recognition of storage efficiency technologies as a key energy saving feature of storage products. We desire to work with SNIA and EPA to ensure that products which verifiably contain these features are appropriately rewarded in the ENERGY STAR specification. To this end, we mention data deduplication, thin provisioning, thin snapshots and clones, data compression and RAID 5/6 as deserving candidates for adders in the spec.
3. NetApp's position on multiple-output power supplies is that fan current should *not* be included in efficiency calculations (i.e they should be treated the same as single output power supplies). We also believe that slightly lower efficiency targets for multi-output supplies are appropriate.
4. NetApp's position on open reporting technologies is that SNMP is the most widely used reporting technology and is less heavyweight than most others. However, we prefer not to have a specific open reporting technology specified at all, so that market forces may apply.
5. NetApp is concerned that monitoring granularity be addressed correctly. It is difficult to justify economically any approach that demands individual power information from every one of the hundred or so power supplies in a large array, for example. At a top level, we prefer whole-system reporting. However, a single temperature sensor for several cabinets' worth of gear in one array may fail to reveal a hot or cold spot somewhere in the array, or may give wildly erroneous "average" data if placed in such a hot or cold spot. So a balance is needed. We desire a moderate approach, with sensor numbers limited such that there is a readily apparent payback on the expense to the industry and its consumers of adding them.
6. NetApp notes that the response timeline for this proposal has been painfully

short. In future iterations, we request that sufficient time be given for companies (a) to participate in the SNIA response, (b) to then formulate their own positions outside of that response, (c) to have time for internal reviews of SNIA and internal positions, and (d) to be allowed to enjoy holidays when those are within the timeline.