Introducing the SNIA Emerald™ Program

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Staring out the window at Puget Sound and Whidbey Island, the beautiful evergreen trees seem to dominate all visible land. Ah – Green! Symbolic of anything that has to do with energy efficiency, there is a real appreciation for the natural conversion of sunlight to energy by the trees in view. Being part of the storage networking industry, I wonder how good it would be for data storage networking systems to be as efficient as the trees when it comes to converting energy to real work. Even better would be a way to measure just how energy efficient all these storage networking systems are and be able to compare one system to another.

Back in 2006, the Storage Networking Industry Association (SNIA) began studying energy efficiency as applied to data storage networking systems. As a result, a Green Storage Technical Working Group (GS-TWG) was formed to study the issue. Soon after the formation of the GS-TWG we saw ongoing efforts would be needed, and to ensure the GS-TWG had guidance, focus and a means of promoting its efforts, the Green Storage Initiative (GSI) was formed. As is typical in industry associations, when a technical activity gains steam, the need for providing additional industry requirements and publicizing the results does become needed. Essentially, the GSI became the marketing arm of the highly technical GS-TWG in order to provide this much needed service.

The GSI gathered input from the industry, from end-users around the world, and from multiple international government agencies. The GSI promoted the efforts by the GS-TWG as well as the GSI itself to ensure a broad level of education about the development of a meaningful set of metrics for measuring storage networking system energy efficiency. As a part of the development of the set of metrics, it became glaringly obvious a means of managing and displaying the results of the testing was needed. This provided the perfect segue for the GSI to start development of a program to do just that: Manage the testing to ensure integrity, versioning, submission and the display of results.

The program that is under development, named the SNIA Emerald™ Program, came into existence in mid 2010 with the current target of being fully launched in the second half of 2011. The SNIA Emerald Program has a fairly broad mandate, including a roadmap into the future for adding additional sectors of the storage networking market.

The SNIA Emerald Program and its corresponding website, www.SNIAEmerald.com, is targeted at multiple audiences: the storage networking industry, companies evaluating the energy efficiency of storage networking systems as a component of their purchase strategy, facility managers looking for help determining power requirements for their datacenters, the press, analysts and others. Currently, not only is there no vendor neutral means of determining storage networking system energy efficiency, there is no central location for determining peak and average power usage that can be used to help determine facility costs. The SNIA Emerald not only requires the results of testing to be submitted, but also requires basic power ratings be included beyond just testing. At last, useful information in a

standardized format will be made available to anyone needing this information without having to sift through the literature and manuals of multiple storage networking industry vendors.

Storage networking systems tested fall into a certain classification according to a taxonomy being developed by the GS-TWG. The taxonomy breaks storage networking systems down by size, target use, level of reliability and availability, and more. Additional considerations, such as thin provisioning and data deduplication, are being incorporated to ensure inclusion and presentation in ways acceptable to the storage networking industry.

From a storage networking industry perspective, the SNIA Emerald Program process is quite straightforward. A storage networking company downloads the SNIA Emerald Power Efficiency Measurement Specification™ (Specification) from the SNIA Emerald website, tests their products, and submits the test results and other required information along with a nominal license fee that grants the company the rights to use the SNIA Emerald™ Tested trademark and logo. Once submitted, the results enter a period of public review where anyone can challenge the results – although challenges are vetted quite thoroughly to ensure there is nothing of a frivolous nature. If the results survive all challenges during the probationary period, the results are made permanent. Depending on the nature of the challenge, if a challenge is found to be valid, remedies can range from fixing typographical errors to rescinding the SNIA Emerald™ Tested trademark and logo, and removal of the results from the results list.

Test results submitted for official inclusion in the comparative database also go through a rigorous auditing process. SNIA Emerald Program Test Auditors may review every phase of an audited submittal, from physical onsite monitoring to final review of a submission. Between the challenge process and the requirement in the Specification for auditing official test results, the integrity of audited SNIA Emerald results is certain.

An end-user can now view both energy efficiency results and facility requirements on a variety of storage networking systems from a single pane of glass. The SNIA Emerald™ Tested trademark and logo is also easily identified and provides end-users the knowledge that the storage networking system they are evaluating is a part of an accepted industry developed test program. End-users in their purchase orders may also require SNIA Emerald™ Tested – Audited as selection criteria. This ensures systems are listed for comparison purposes for energy efficiency as well as facility planning.

Going forward, we anticipate the SNIA Emerald Program will grow after its public launch in the second half of 2011 and to mature in the information and value provided. The Specification will also continue to mature and will grow to include an even larger set of systems according to the taxonomy being developed by the GS-TWG. Stay tuned as this exciting new program becomes a key part of storage networking system selection and as it helps do its part in keeping all those trees outside my window alive and green.

The SNIA Emerald Program is sponsored, operated and promoted by the Storage Networking Industry Association (SNIA) Green Storage Initiative (GSI). The SNIA is a non-profit, international organization of manufacturers, systems integrators, developers, systems vendors, industry professionals, and end users.

For more information please visit: www.snia.org and www.snia.org/forums/green