



# SNIA Emerald™ Program Participation & SNIA Green Storage Initiative

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## SNIA Emerald™ Training

*SNIA Emerald Power Efficiency  
Measurement Specification,*  
for use in EPA ENERGY STAR®

June 24-27, 2013

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# Agenda

- SNIA (Storage Networking Industry Association)
- SNIA Green Storage Activities
- SNIA Emerald Program Introduction
- SNIA Emerald Program Value
- SNIA Emerald Test Data Submission Process

# Storage Networking Industry Association



- A world-wide presence connecting People and Information
- 4,000+ Active Members
- 400+ organizations including Vendors, End Users, Academia, Channel and Service Providers
- 45,000+ IT Users and Vendor Employees Educated
- 1,500 Certified Professionals Achieving 3,200 Certifications



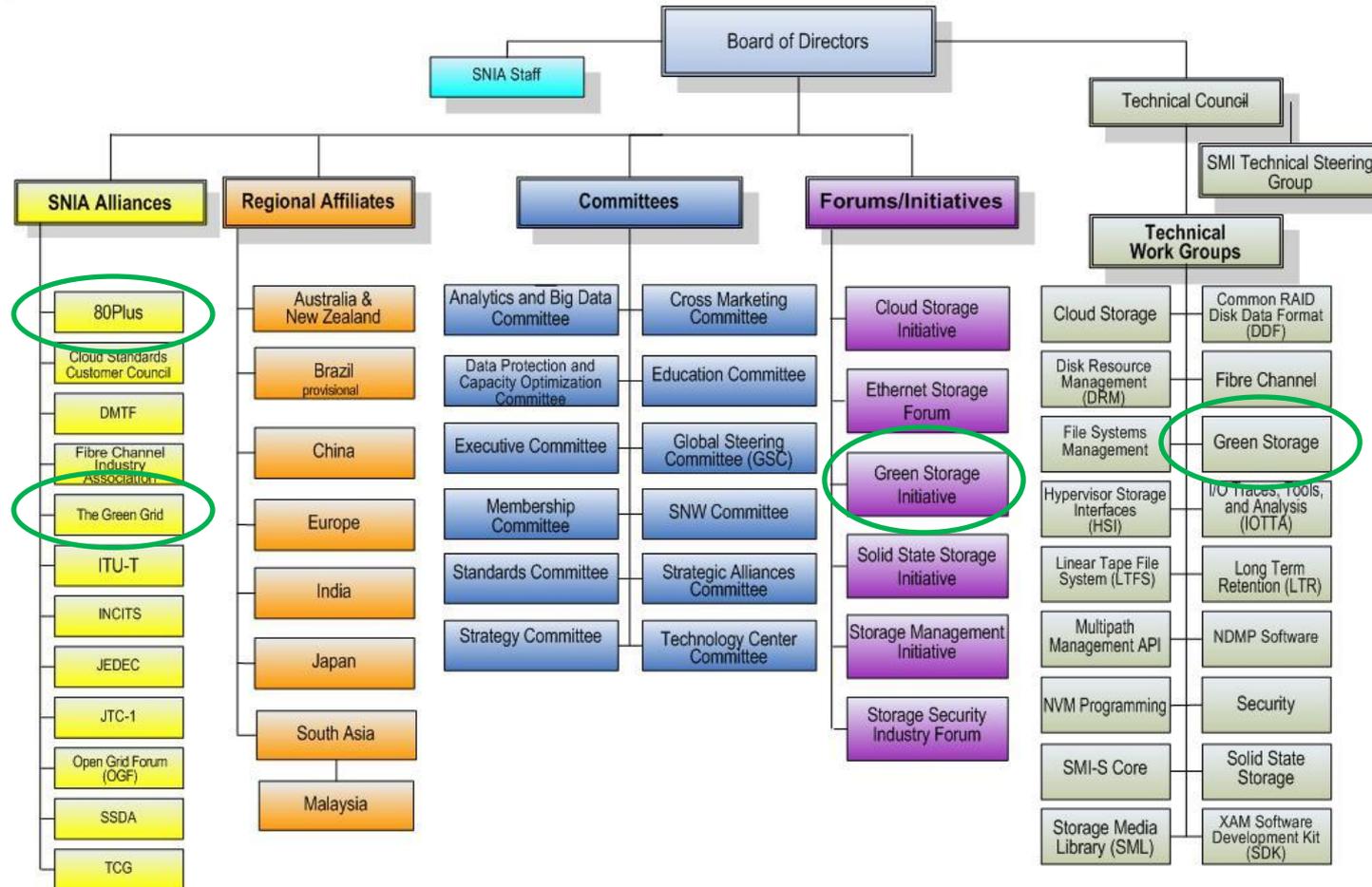


# SNIA Green Storage Activities



- SNIA Green Storage Initiative (GSI)
- SNIA Green Storage Technical Working Group (TWG)
- SNIA Emerald™ Program

# SNIA Organization



Storage Networking Industry Association • Governance & Committee Structure • August 2012

# Green Storage Initiative (GSI)

## Goals

- Conduct research on power and cooling issues confronting storage administrators
- Educate the vendor and user community about the importance of power efficiency in shared storage environments
- Leverage SNW and other SNIA and partner conferences to focus attention on energy efficiency for networked storage infrastructures
- Provide input to the SNIA Green Storage TWG on requirements for green storage metrics and standards
- Provide external advocacy and support of SNIA Green Storage TWG technical work

- Provides overall guidance of “green” work within SNIA
  - Guides the work of the Green Storage TWG
  - Operates the SNIA Emerald™ Program
  - Developed (with Green Storage TWG) this training program
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- SNIA members pay an additional fee to join GSI

# Green Storage Technical Working Group (TWG) - 1



- Technical body working on green storage metrics and standards
- Gets direction from GSI
- Developed the SNIA Emerald™ Power Efficiency Measurement Specification
  - ◆ V1.0, V2.0, V2.0.1
- Developed User Guide for the SNIA Emerald™ Power Efficiency Measurement Specification
  - ◆ Revised for each version of the Emerald specification

# Green Storage Technical Working Group (TWG) - 2

- Any SNIA member can participate at no charge
- Has path to de-jure (ISO, ANSI) standardization
- Operates under intellectual property policy that protects developers and users of work (as typical of standards bodies)

# SNIA Emerald™ Program

## Purpose



- Provide open access to storage system power efficiency information using a well-defined testing procedure and additional information related to system power characteristics
- Help IT professionals make storage platform selections as part of an overall Green IT and Sustainability objective

# SNIA Emerald™ Program Introduction



- Program operated by SNIA GSI
- Open, public, web-based repository location for SNIA Emerald™ Program Test Data Reports based on the SNIA Emerald™ Power Efficiency Measurement Specification

<http://www.sniaemerald.com/>

- Easily identifiable program logo
- SNIA membership not required to participate

# SNIA Emerald™ Program Overview - 1



## ➤ Test procedure:

- ◆ SNIA Emerald™ Power Efficiency Measurement Specification

## ➤ Public access and submittal is through the [sniaemerald.com](http://sniaemerald.com) web site

- ◆ No charge to access test results, specifications or user guides
- ◆ Submission of results is for a modest fee, discounted or waived for SNIA/GSI members
- ◆ SNIA membership not required to submit or access test results
- ◆ Voluntary, non-exclusionary, low cost program for manufacturer
- ◆ Options for self-measurement or third party measurement

# SNIA Emerald™ Program Overview - 2



- Coordinated with EPA ENERGY STAR program for enterprise storage
  - ◆ Based on same test specification and test process
  - ◆ One test execution generates the data needed for both programs
  - ◆ Test results can be submitted to either or both SNIA Emerald and EPA programs
  - ◆ Increases efficiency, lowers costs!
  - ◆ Test results submission for EPA and SNIA Emerald are different and independent

# SNIA Emerald™ Program

## Overview - 3



### ➤ Process

- ◆ Storage Vendors test their equipment and submit test results to the Emerald Program
- ◆ Emerald Program publishes results on [sniaemerald.com](http://sniaemerald.com)
- ◆ IT users (public) download results from [sniaemerald.com](http://sniaemerald.com)
- ◆ Vendor gains right to use the SNIA Emerald™ logo in conjunction with tested products

### ➤ Legal protections

- ◆ Terms of Use: conditions on use of test results agreed to by those downloading results
- ◆ Terms of Submission: agreed to by vendor submitting test results

### ➤ Sign up for the mailing list via [sniaemerald.com](http://sniaemerald.com)



# Why Should Storage Vendors Use the Emerald Program?



## ➤ SNIA Emerald Program seeks to

- ◆ Encourage storage vendors to build better products
- ◆ Stimulate the IT community to more rapidly deploy and operate multi-vendor storage technology efficiently

## ➤ SNIA Emerald Program

- ◆ Provides a level playing field for test sponsors
- ◆ Produces results that are powerful and yet simple to use
- ◆ Provides value for vendors as well as IT consumers and solution integrators
- ◆ Reports results in a manner that is easy to submit, audit and verify

# Why Should Storage Consumers Use the Emerald Program?



## ➤ SNIA Emerald Program seeks to

- ◆ Provide a collection of standard metrics and data that allows IT architects to objectively compare a range of possible storage solutions

## ➤ SNIA Emerald Program

- ◆ Enables users to select the mode of storage usage that accomplishes their work objectives with the lowest overall energy consumption
- ◆ Drives vendor companies to innovate and compete in the development of energy efficient products as measured by the standard yardsticks

# Test Data Submission Overview

- Test Data Results may be submitted to the Emerald Program for publication via [sniaemerald.com](http://sniaemerald.com) web site
- Download Test Data Report template spreadsheet from [sniaemerald.com](http://sniaemerald.com) using the “Documents and Downloads” menu item
- Complete the template with information on your product and your test results – classroom exercise later today
- Note:
  - ◆ After administrative editing, this spreadsheet will be converted to a PDF verbatim and published
  - ◆ So, make sure that the spreadsheet as submitted represents your product and company appropriately

# Test Data Submission Mechanics - 1

- Upload completed Test Data Report spreadsheet to [sniaemerald.com](http://sniaemerald.com) using the “Submit Test Data Results” menu item
- Fill in web form with basic information on your company and the tested product
  - ◆ Note: The “submitter” is the person making the submission; the “submitter company” is his/her company
  - ◆ Note: The “product vendor” is the company whose product was tested

# Test Data Submission Mechanics - 2

- Agree on behalf of your company to the legal “Terms of Submission” that are your company’s agreement to the policies of the SNIA Emerald Program
  - ◆ Note: you may wish to review these terms in advance of doing the submission
- After processing, your results will be published on [sniaemerald.com](http://sniaemerald.com) and will be available for download by anyone agreeing to the “Terms of Use”
  - ◆ If there are any issues with your submission, you will be contacted by the SNIA Emerald Program Director

# Test Data Submission Mechanics - 3

## ➤ Report status

- ◆ Submissions are published in Provisional status for 2 months
- ◆ If no serious issues arise regarding the submission within 2 months, the report is advanced to Accepted status

## ➤ Suggestion

- ◆ After a report is published, review the report as published
- ◆ If you desire any changes/corrections, contact the program

## ➤ For problems or questions regarding the submission process or the Test Data Report template, contact the SNIA Emerald Program Director at [emerald@snia.org](mailto:emerald@snia.org)

# Thank You

## ➤ Email questions/feedback to:

- ◆ SNIA Emerald Program: [emerald@snia.org](mailto:emerald@snia.org)
- ◆ Green Storage Initiative: [GSI@snia.org](mailto:GSI@snia.org)
- ◆ Green TWG: [greentwg-chair@snia.org](mailto:greentwg-chair@snia.org)

## ➤ Storage Networking Industry Association

- ◆ <http://www.snia.org>

## ➤ Green Storage Initiative

- ◆ <http://www.snia.org/forums/green>
- ◆ Green tutorials and white papers

## ➤ SNIA Emerald Program

- ◆ <http://www.sniaemerald.com/>
- ◆ Measurement Specification
- ◆ User guide
- ◆ Download test data reports
- ◆ Submission process and requirements
- ◆ Training materials