SNIA Emerald Program

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SNIA Emerald™ Training

SNIA Emerald Power Efficiency Measurement Specification,
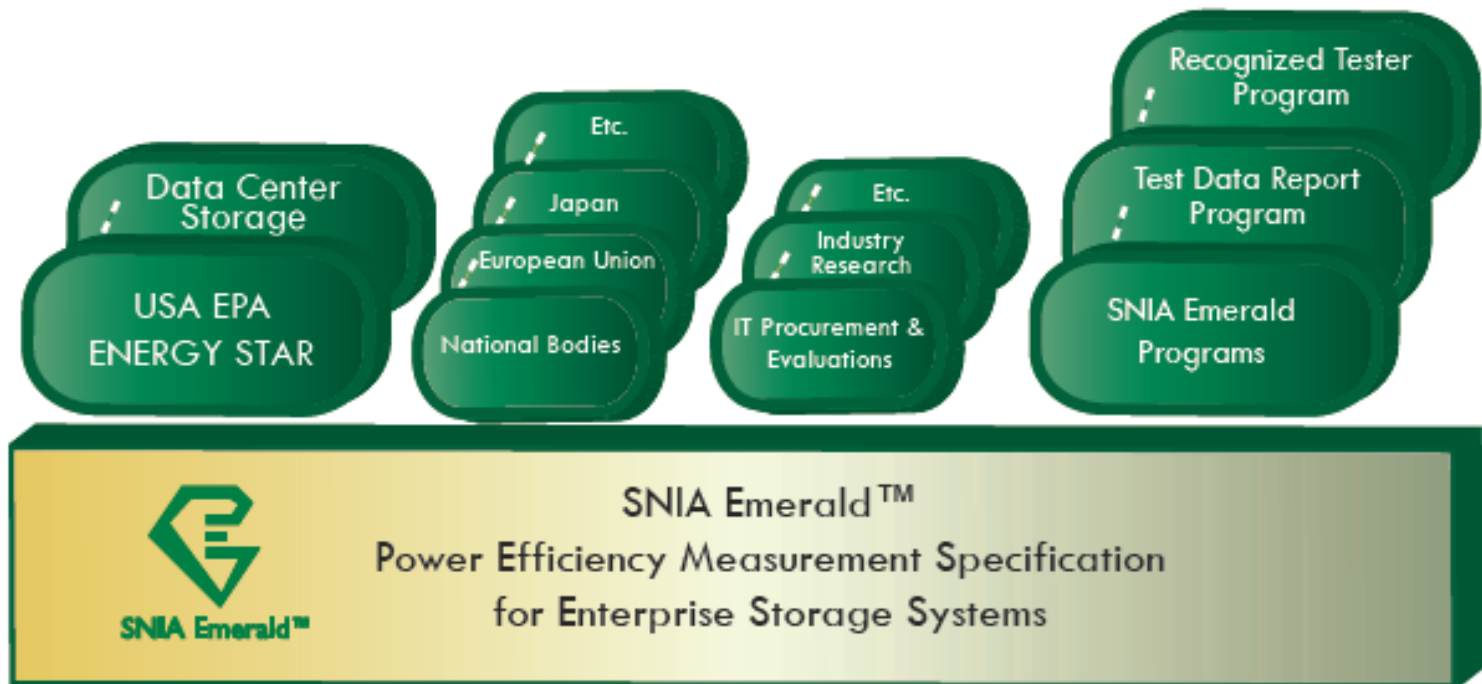
Version 2.1

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Objective

- ◆ Provide overview of various facets of the SNIA Emerald™ Program

- ◆ Address changes motivated by publication of *SNIA Emerald™ Power Efficiency Measurement Specification* V2.1.0

- ◆ For more detailed information, visit www.sniaemerald.com

Emerald Program

- An activity of the SNIA Green Storage Initiative (GSI)
- Led by representatives of leading storage companies world-wide
- Overall program for the *SNIA Emerald™ Power Efficiency Measurement Specification* developed by SNIA Green Storage Technical Work Group
- Seeks to
    - Encourage storage vendors to build more energy efficient products
    - Stimulate the IT community to more rapidly deploy and efficiently operate multi-vendor storage technology

SNIA Emerald™ Specification Building Block for Industry

Facets of the Emerald Program

- Emerald Specification

- Emerald Newsletter / Emerald Update*

- Training for Emerald testers*

- Resources for Emerald testers*

- Test Data Publication (SNIA Emerald Program & EPA ENERGY STAR Data Center Storage Program)

- EPA ENERGY STAR Data Center Storage Unit Shipment Reporting

- Recognized Tester Program (RTP)

*Addressed by this event as a whole or by other sessions of this event

Emerald Specification: Green Storage TWG plans through 2015 and beyond

- **SNIA Emerald Specification 2.2**
  - Revised, expanded Storage Taxonomy
  - If applicable, revised block IO test and measurement methods
    - Analysis of publicly available test data
  - File I/O test and measurement methods
    - Validation of industry performance tools reapplied to energy efficiency testing
- **Collaboration with EPA Energy Star for V2.0 of Data Center Storage**
  - Threshold for Block I/O
  - NAS
- **Collaboration with Green Grid**
  - Block I/O analysis
  - Operational metrics
- **Collaboration with ECOS 80Plus for Power Supplies**

Emerald Test Data Publication

- Support publication of Emerald Test Data for storage products
  - SNIA Emerald Test Data Publication Program (www.sniaemerald.com/view)
  - Through EPA ENERGY STAR Data Center Storage Program (https://data.energystar.gov/Active-Specifications/ENERGY-STAR-Certified-Data-Center-Storage/gqtf-hp7x)

- Emerald Publication program
  - $0-$1500 fee to publish a result; no fee to access results
  - Legal protections for those submitting results and using results

- A single test produces the data needed for either/both an Energy Star and Emerald Test Data submission

EPA ENERGY STAR Data Center Storage Unit Shipment Reporting

- The EPA designated the SNIA an industry collection and aggregation point for 2014 product unit shipment data for ENERGY STAR certified Data Center Storage products

- The SNIA Emerald Program provides this service for the industry regardless of SNIA membership

- SNIA handles data in a confidential manner and submits only aggregate data to the EPA

- Data for 2014 has been provided to the EPA; we expect EPA to release results soon

Recognized Tester Program (RTP)

◆ Goal: Recognize organizations that have demonstrated proficiency in performing testing in accordance with the Emerald Specification

  ◆ Testing service vendors

  ◆ Independent labs

  ◆ Manufacturers' in-house test teams

◆ Nominal Fee to enroll; awarded Certificate; Emerald Program website listing

◆ Not required to be a tester for SNIA Emerald or EPA ENERGY STAR

◆ Validates capabilities to run SNIA Emerald tests, generate/analyze data test results, and complete reports

◆ Accepting requests for

  ◆ Recognition for Emerald Specification V2.0.2 or V2.1.0 testing proficiency ($12,000 + travel; discounts available for SNIA members)

  ◆ Upgrading recognition for Emerald Specification V2.0.2 testing to Emerald Specification V2.1.0 testing ($9,000; discounts available for SNIA members)

◆ For more formation, view www.sniaemerald.com/rtp-overview

Questions?