

Storage Networking Industry Association (SNIA)

Technical Activities Update

April 2020

T11-2020-00086-v000

➤ TLS Specification for Storage Systems v1.1

- ◆ This document specifies the requirements and guidance for use of the Transport Layer Security (TLS) protocol in conjunction with data storage technologies. The requirements are intended to facilitate secure interoperability of storage clients and servers as well as non-storage technologies that may have similar interoperability needs. This document was developed with the expectation that future versions of SMI-S and CDMI could leverage these requirements to ensure consistency between these standards as well as to more rapidly adjust the security functionality in these standards.

<http://www.snia.org/tls>

➤ SNIA Emerald™ Power Efficiency Measurement Specification v4 draft 2

- ◆ This document describes a standardized method to assess the energy efficiency of commercial storage products in both active and idle states of operation. A taxonomy is defined that classifies storage products in terms of operational profiles and supported features. Test definition and execution rules for measuring the power efficiency of each taxonomy category are described; these include test sequence, test configuration, instrumentation, benchmark driver, IO profiles, measurement interval, and metric stability assessment. Qualitative heuristic tests are defined to verify the existence of several capacity optimization methods. Resulting power efficiency metrics are defined as ratios of idle capacity or active operations during a selected stable measurement interval to the average measured power.

<http://www.snia.org/publicreview>

➤ Native NVMe-oF™ Drive Specification v1.0p

- ◆ This document describes the features and functions of a storage device class known as Native NVMe-oF Drives. It includes a taxonomy covering the scope of involved device capabilities.

<http://www.snia.org/publicreview>

➤ NVMe to RF/SF Model Mapping

- ◆ This proposal is a snapshot of work in progress by the NVMe Task Force of the SNIA Scalable Storage Management (SSM) TWG, and does not represent the work of the SSM TWG at this point.

<http://www.snia.org/publicreview>

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- ▶ SNIA Emerald™ Power Efficiency Measurement Specification v4 draft 22
- ▶ Native NVMe-oF Drive™ Specification Version 1.0p
- ▶ NVMe to RF/SF Model Mapping
- ▶ Computational Storage Architecture and Programming Model v0.3 rev 1
- ▶ Swordfish Storage Profiles Bundle v1
- ▶ Persistent Memory (PM) PTS v1.0 rev 0.02 Preamble
- ▶ DRAFT CDMI Extensions and Profiles

Check them out! - Provide Feedback!
Participate in their development!

Storage Developer Podcast: Latest Episode



This week's highlighted Podcast:

#123: [The NVRAM Standard, Bringing Coherence to the Crazy World of Persistent Memory](#) by Bill Gervasi, Principal Systems Architect, Nantero

A variety of persistent memory technologies with DRAM-class performance, known as “memory class storage” or “MCS”, have appeared on the horizon. MCS will change the architecture of future computing systems. These technologies include carbon nanotube memory, phase change memory, magnetic spin memory, and resistive memory, and each has unique characteristics that can complicate systems designed to exploit them. The JEDEC DDR5 NVRAM specification in process intends to bridge the differences between the technologies and provide systems designers with a unified specification for DRAM-class persistent memory. Nantero NRAM is a NVRAM based on carbon nanotube cell structures that provides a DDR4 or DDR5 interface to the system, and provides additional enhancements to yield 20% higher performance at the same clock rate.

Storage Developer Podcast: Upcoming Episodes



- Standardization for a Key-Value Interface underway at SNIA and NVM Express
- Opening up Linux to the wider world: Update on Status of the POSIX Extensions to the SMB3.1.1 Protocol
- Accelerating Windows Integrations: Introducing the SNIA Swordfish™ PowerShell Tool Kit and Windows Admin Center Integration
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- Object Storage Workload Testing Tools
- Surfing the World Wide File: SMB3 improvements for safe and efficient internet access
- So, You Want to Build a Storage Performance Testing Lab?

<http://www.snia.org/podcasts>

SNIA Persistent Memory Summit



Summit included sessions on emerging medias, interconnects, applications, why companies are excited about working with PM, and how PM is changing the infrastructure for cloud, orchestration, micro services, and serverless environments.

Learn more by watching the video recordings!

<https://www.snia.org/pm-summit>

SDC²⁰

Storage Developer Conference
September 21-24, 2020
Santa Clara, CA, USA

Call for
Presentations
Now Open!



<http://www.storagedeveloper.org>

Upcoming SNIA Meetings and Events



- **SNIA SDC SMB3 Interoperability Lab**
 - ◆ September 20-23, 2020; Santa Clara, CA
- **Storage Developer Conference**
 - ◆ September 21-24, 2020; Santa Clara, CA

Important SNIA Links

- <http://www.snia.org/standards/>
- <http://www.snia.org/software/>
- <http://www.snia.org/publicreview/>
- <http://www.snia.org/feedback/>
 - ◆ Public feedback submission form for draft SNIA Technical Work
- <http://www.snia.org/dictionary/>
 - ◆ Current SNIA Dictionary
- <http://www.sniacloud.org>
 - ◆ Latest news on SNIA Cloud activities
- <http://www.storagedeveloper.org>
 - ◆ SNIA Storage Developer Conference (SDC)
- <http://www.snia.org/podcasts/>
 - ◆ SDC Podcasts