

A decorative horizontal bar is located at the top of the slide, below the SNIA logo. It consists of a series of colored squares in shades of purple, blue, yellow, and orange, arranged in a repeating pattern.

Storage Networking Industry Association (SNIA)

Technical Activities Update

April 2018

SNIA Technical News

New SNIA Technical Position



- **Solid State Storage Performance Test Specification v2.0.1**
 - ◆ This specification describes a solid state storage device-level performance test methodology, test suite and reporting format intended to provide an accurate, repeatable and reliable comparison of NAND Flash-based solid state storage products of various form factors, protocols and interfaces used in Client and Enterprise applications.

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

SNIA Technical News

New SNIA Technical Position



➤ Linear Tape File System (LTFS) v2.4.0

- ◆ The LTFS Format Specification defines a file system format separate from any implementation on data storage media. Using this format, data is stored in LTFS Volumes. An LTFS Volume holds data files and corresponding metadata to completely describe the directory and file structures stored on the volume.

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

- **Swordfish Scalable Storage Management API v1.0.6 DRAFT**
 - ◆ The Swordfish Scalable Storage Management API ("Swordfish") uses RESTful interface semantics and a standardized data model to provide a scalable, customer-centric interface for managing storage and related data services.

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

- Persistent Memory Hardware Threat Model v0 rev 9 DRAFT
 - ◆ This white paper discusses approaches for securing persistent memory (PM); particularly considering unique characteristics of PM. This work includes a threat model, potential responses to threats and recommended security requirements for PM.

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

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- **Swordfish Scalable Storage Management API v1.0.6**
- **Persistent Memory Hardware Threat Model v0 rev 9**
- **Storage Management Initiative Specification (SMI-S) v1.8.0r1**
- **Simple IP Based Drive Mockup-4**
- **IP Based Drive Array Mockup-2**
- **CDMI Test Specification v1.0a DRAFT**
- **CDMI Reference Implementation v1.0e DRAFT**
- **DRAFT CDMI Extensions and Profiles**

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

Storage Developer Podcast: Latest Episode



This week's highlighted Podcast:

#68: Andromeda: Building the Next-Generation High-Density Storage Interface for Successful Adoption by Laura Caulfield, Senior Software Engineer, Microsoft

Open Channel describes a new interface to Solid State Drives (SSDs) which promises to increase usage of SSDs' raw bandwidth from 40% to 95%, increase user-visible flash capacity from 50%-70% to 99%, increase I/O bandwidth by 3x and reduce per-GB hardware cost by 50%. Despite many proposals and implementations proving these benefits, industry has seen limited adoption and no standards body has integrated the concept. One of the largest hurdles to adoption is that the proposed changes permeate every layer in the storage stack, from device firmware to application. To reap the benefits, we need not only an end goal, but a pragmatic approach to introducing these changes to one or two layers at a time.

We present relevant information about host and drive architecture, the expected use cases for Open Channel, and a general-purpose, maintainable end target for Open Channel. The final architecture refactors Flash Translation Layer into Log-Management, handled in the host, and NAND Management, handled in the drive. This consolidates repeated software algorithms, and retains media-specific functionality in the drive.

The results of this design set up the storage community to innovate in traditionally independent areas. With a new interface in place, host-side software developers can apply a wide variety of software and technologies to further optimize their storage logs, and firmware and drive designers can focus on improvements in media management and density improvements.

Storage Developer Podcast: Upcoming Episodes



- Update on Windows Persistent Memory Support
- SPDK Blobstore: A Look Inside the NVM Optimized Allocator
- Azure File Service: Expectations vs. Reality on the Public Cloud
- Self-Optimizing Caches
- SoftFlash: Software-Defined Flash for Programmable Storage
- Innovations, Challenges, and Lessons Learned in HPC Storage Yesterday, Today, and Tomorrow
- Key Value SSD Explained – Concept, Device, System, and Standard
- Dip your Toe in the Water: A Swordfish Introduction

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



Speaking Opportunity

Call for Presentations is Now Open: SDC is now seeking storage development professionals willing to share their knowledge and experience by submitting a presentation proposal for consideration at SDC. **The deadline to submit a proposal is May 10th.**

The SDC Planning Team seeks presentations on a wide range of storage development topics. Each session will be 50 minutes in length. We are also looking for proposals for tutorials and panel discussions.

www.storagedeveloper.org

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