

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, orange, and yellow, arranged in a repeating pattern.

# Storage Networking Industry Association (SNIA)

## Technical Activities Update

June 2019

- ▶ **Linear Tape File System (LTFS) Format Specification v2.5**
  - ◆ 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>

- **NVM PM Remote Access for High Availability Technical White Paper**
  - ◆ This paper explores the requirements and desirable design characteristics that High Availability extensions to the NVM.PM.FILE mode of the SNIA NVM Programming Model might impose on high speed networking.

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

- Persistent Memory Performance Test Specification v1.0 rev 0.02 Preamble
  - ◆ This document is the initial preamble that describes the plan to develop a specification that describes best practices for Persistent Memory Storage Performance Test and sets forth a performance test methodology, PM storage platform set up, test settings, synthetic benchmark workloads, real-world application workloads and test results reporting format. It is intended to provide accurate, repeatable and reliable comparison of Block IO and In-Memory byte addressable test results used in traditional and PM aware applications under various PM Storage configurations.

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

### ➤ Swordfish Profile Core Bundle Working Draft version v0.9

- ◆ The Swordfish Profile Core Bundle contains the definition of the set of features and the corresponding detailed profiles required to implement Swordfish. Swordfish uses advertised Features and corresponding Profile definitions to clearly define what functionality an implementation supports, and to assure interoperability. For example, the IOPerformance Feature and corresponding profile together specify that when an implementation advertises `SNIA.Swordfish.Block.IOPerformance`, any instances of Volumes and StoragePools will implement a fully populate IOStatistics object.

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

### ➤ Swordfish Non-Service Based Task Force Working Draft

- ◆ This proposal is a snapshot of work in progress by the Non-service based task force of the SNIA Scalable Storage Management TWG, and does not represent the work of the SSM TWG at this point. Contents are subject to change at any time.

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

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- ▶ Persistent Memory (PM) PTS v1.0 rev 0.02 Preamble
- ▶ Swordfish Profile Core Bundle Working Draft version v0.9
- ▶ Swordfish Non-Service Based Task force Working 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:

## **#97: Delivering Scalable Distributed Block Storage using NVMe over Fabrics (NVMe-oF)**

by Mohan Kumar, Fellow, Intel and Sujoy Sen, Senior Principal Engineer, Intel

NVMe and NVMe over Fabrics (NVMe-oF) protocols provide a highly efficient access to flash storage inside a server and over the network respectively. Current generation of distributed storage software stacks use proprietary protocols which are sub-optimal to deliver end to end low latency. Moreover it increases operational complexity to manage NVMe-oF managed flash storage and distributed flash storage in private cloud infrastructure. In this session, we present NVMe over Fabrics based high performance distributed block storage that combines the best of both worlds to deliver performance, elasticity and rich data services.

Learning Objectives: 1) NVMe, NVMe-oF for flash data path IO architecture; 2) Programming, architecture and optimization for flash; 3) Distributed storage, data services.



# Storage Developer Podcast: Upcoming Episodes



- Rethinking Ceph Architecture for Disaggregation Using NVMe-over-Fabrics
- SNIA Nonvolatile Memory Programming TWG - Remote Persistent Memory
- A Comparison of In-storage Processing Architectures and Technologies
- Introduction to Persistent Memory Configuration and Analysis Tools
- Achieving 10-Million IOPS from a single VM on Windows Hyper-V
- PCI Express: What's Next for Storage
- Introduction to Open-Channel/Denali Solid State Drives

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

# Upcoming Storage Developer Event

The logo for the Storage Developer Conference 2019, consisting of the letters 'S', 'D', and 'C' in a large, bold, purple font, with the number '19' inside the 'C'.

SDC 19

STORAGE DEVELOPER CONFERENCE

Taking place on **September 23-26, 2019** in Santa Clara, CA, SNIA's Storage Developer Conference (SDC) is the destination for technical discussions and education on the latest storage technologies and standards

[www.storagedeveloper.org](http://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