

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

October 2019

### ➤ **SNIA Emerald™ Power Efficiency Measurement Specification v3.0.3**

- ◆ Approved as ISO/IEC 24091:2019
- ◆ Currently in the process of being published

### ➤ Native NVMe-oF Drive™ Specification Version 1.0k

- ◆ 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>

### ➤ **Swordfish Scalable Storage Management API v1.1.0**

- ◆ 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>

### ➤ Swordfish Storage Profiles Bundle v1

- ◆ This bundle contains all the Swordfish profiles. The Swordfish Core Profiles define 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.
- ◆ The EnergyStar for Storage Profile formalizes the requirements from the ENERGY STAR Data Center Storage Version 1.1 Updated Program Requirements – April 1, 2019 on storage products. The profile indicates what properties Swordfish implementations need to support in order to properly instrument EnergyStar reporting capability. This functionality is intended to support EnergyStar data gathering requirements as part of the EnergyStar certification process.

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

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- Native NVMe-oF Drive™ Specification Version 1.0k
- Swordfish Scalable Storage Management API v1.1.0
- 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:

## #110: Datacenter Management of NVMe Drives

by Mark Carlson, Principal Engineer, Industry Standards, Toshiba Memory Corporation

This talk describes work going on in three different organizations to enable scale out management of NVMe SSDs. The soon to be released NVME-MI 1.1 standard will allow management from host based agents as well as BMCs. This might be extended to allow support for Binary Encoded JSON (BEJ) in support of host agents and BMCs that want to support the Redfish Standard. We will also cover work going on in SNIA (Object Drive TWG) and DMTF in support.

Learning Objectives: 1) Principles and limitations of scale out datacenter management; 2) An understanding of the NVMe-MI standard; 3) A Redfish profile for NVMe drives; 4) Inside the box management networks and outside the box management networks; 5) Platform Layer Data Model (PLDM).

# Storage Developer Podcast: Upcoming Episodes



- SMB3 Landscape and Directions
- Adding Your Own Secret Sauce to SPDK!
- Catching Up With Container Storage
- Synchronous DR over IP fabrics with NetApp MetroCluster-IP
- Barrier-Enabled IO Stack for Flash Storage
- Designing High-Performance Non-Volatile Memory-aware RDMA Communication Protocols for Big Data Processing
- A Deep Dive Sea Trek with SNIA Swordfish™
- A New Open Source SMB2/3 Server – Running on Windows in User Mode!
- Fishing with Open Source Tools for SNIA Swordfish

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



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

Check out the **100+ presentations** that were presented by developers at companies like eBay, on topics including Computational Storage, Persistent Memory, NVM Express, and more.  
***Available for download now!***

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

# Upcoming SNIA Meetings and Events



- **October Technical Symposium**
  - ◆ October 21-23, 2019; Colorado Springs, CO
- **SNIA Annual Members Symposium**
  - ◆ January 20-24, 2020; Santa Clara, CA
- **SNIA Persistent Memory Summit**
  - ◆ January 23, 2020; Santa Clara, CA
- **SNIA SDC EMEA**
  - ◆ February 5, 2020; Tel Aviv, Israel
- **SNIA SDC EMEA SMB3 Interoperability Lab**
  - ◆ February 2-6, 2020; Tel Aviv, Israel

# 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