



Storage Networking Industry Association

Technical Activities Update

October 2020



SNIA Technical News: New SNIA Technical Position

- Key Value Storage API Specification v1.1
 - This document describes the Key Value Storage (KVS) Application Program Interface (API) specification for SSD storage devices with Object Drive based Key Value Storage. It provides a set of APIs that are portable across multiple vendor SSD products.

SNIA Technical News: New SNIA Technical Position

- **Cloud Data Management Interface (CDMI) Specification v2.0**
 - The Cloud Data Management Interface defines the functional interface that applications will use to create, retrieve, update and delete data elements from the Cloud. As part of this interface the client will be able to discover the capabilities of the cloud storage offering and use this interface to manage containers and the data that is placed in them. In addition, metadata can be set on containers and their contained data elements through this interface.
 - This interface is also used by administrative and management applications to manage containers, accounts, security access and monitoring/billing information, even for storage that is accessible by other protocols. The capabilities of the underlying storage and data services are exposed so that clients can understand the offering.

SNIA Technical News: New Public Review DRAFT

- Swordfish v1.2.1

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

SNIA Public Review Drafts

- Swordfish v1.2.1
- Computational Storage Architecture and Programming Model v0.5 rev 1
- Swordfish Storage Profiles Bundle v1.2
- NVMe to RF/SF Model Mapping
- Persistent Memory Performance Test Specification White Paper v0.7.3
- DRAFT CDMI Extensions and Profiles

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

Storage Developer Podcast: Latest Episode



This week's highlighted Podcast:

#134: Best Practices for OpenZFS L2ARC in the Era of NVMe by Ryan McKenzie, Performance Engineer, iX Systems

The ZFS L2ARC is now more than 10 years old. Over that time, a lot of secret incantations and tribal knowledge have been created by users, testers, developers, and the odd sales or marketing person. That collection of community wisdom informs the use and/or tuning of ZFS L2ARC for certain IO profiles, dataset sizes, server class, share protocols, and device types.

In this talk, we will review a case study in which we tested a few of these L2ARC myths on an NVMe-capable OpenZFS storage appliance. Can high-speed NVMe flash devices keep L2ARC relevant in the face of ever-increasing memory capacity for ARC (primary cache) and all-flash storage pools?

Learning Objectives:

- 1) Overview of ZFS L2ARC design goals and high level implementation details that pertain to our findings.
- 2) Performance characteristics of L2ARC during warming and when warmed, plus any tradeoffs or pitfalls with L2ARC in these states.
- 3) How to leverage NVMe as L2ARC devices to improve performance in a few storage use cases.

Storage Developer Podcast: Upcoming Episodes

- Programming emerging storage interfaces
- Using SmartNICs as a new platform for Storage Services
- Persistent Memory Programming on Conventional Hardware
- Opportunities for Storage in the Growing Global Markets for Video Games
- Average Storage Latency Sucks. Let's fix it!

Missed SDC 2020? We've Got You Covered

Storage Developer Conference

SDC₂₀

BY Developers FOR Developers

Virtual Conference:
Watch All the Presentations
On-Demand Now!

SNIA's Storage Developer Conference (SDC) took place virtually last month to an audience of nearly 1,000 storage experts. **While the virtual conference has ended, the content is still available on-demand for another 4 weeks.**

The SDC 2020 agenda is packed with over 130 on-demand sessions on topics covering *NVMe-oF, Computational Storage, Storage Architecture, Zoned Storage, Storage Resource Management, Orchestration, SMB*, and much more.

Geek Out on Storage Architecture



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

Important SNIA Links

- <http://www.snia.org/standards/>
- <http://www.snia.org/software/>
- <http://www.snia.org/publicreview/>
 - Draft SNIA Technical Work available for public review
- <http://www.snia.org/feedback/>
 - Public feedback submission form for draft SNIA Technical Work
- <http://www.snia.org/dictionary/>
 - Current SNIA Dictionary
- <http://www.snia.org/library>
 - Educational Library
- <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