



Storage Networking Industry Association

Technical Activities Update

January 2024



SNIA Technical News: New SNIA Standard

- DNA Data Storage Sector Zero v1.0
 - This SNIA Standard defines the recommended method and embodiment for storing basic vendor and CODEC information (sector zero contents) within a DNA data storage archive for the purpose of enabling an archive reader to then consume archive metadata (sector one) and data contents.

SNIA Technical News: New SNIA Standard

- DNA Data Storage Sector One v1.0
 - This SNIA Standard defines the recommended method and embodiment for storing archive metadata within a DNA data storage archive for the purpose of enabling an archive reader to read the archive and then consume the logical structure and its data contents.

SNIA Technical News: New SNIA Technical Work Group

■ Storage Data Placement TWG

- Data Placement is becoming a fundamental building block of today's storage ecosystem. Out of several Data Placement methods, two examples that are being developed are, Zoned Storage and Flexible Data Placement.
- While command interfaces for Zoned Storage and Flexible Data Placement have been standardized (ZAC/ZBC for SMR HDDs and ZNS/FDP for NVMe SSDs), the command specifications themselves leave substantial flexibility regarding how host software interacts with the storage I/O stack and storage devices.
- TWG Goal:
 - Facilitate a common industry understanding of Data Placement use cases and host/device architecture and programming model, providing a framework for data placement SW and HW design, and enabling the development of a robust data placement ecosystem.

SNIA Technical News: Cloud Object Storage Plugfest

- SNIA is planning an open collaborative Cloud Object Storage Plugfest co-located at SNIA Storage Developer Conference (SDC) scheduled for September 2024 to work on improving cross-implementation compatibility for client and/or server implementations of private and public cloud object storage solutions.

This endeavor is designed to be an independent, vendor-neutral effort with broad industry support, focused on a variety of solutions, including on-premises and in the cloud. This Plugfest aims to reduce compatibility issues, thus improving customer experience and increasing the adoption rate of object storage solutions.

<https://www.surveymonkey.com/r/objectplugfest>

SNIA Technical News: SAS Plugfest: Call for Participation

- The SNIA STA Forum will be hosting a SAS Plugfest during the week of April 22 - 26, 2024. This will be the first fully in-person SAS Plugfest since 2019, and the 20th SAS Plugfest overall, [spanning twenty years of cooperative technology development](#).
- For additional information send an email to sasplugfest@snia.org.

SNIA launches new *SNIA Experts on Data* Podcast

- The SNIA Experts on Data podcast is an easy way to keep up with the latest industry developments. In this series, we interview SNIA experts from around the world who share candid insights on established and emerging technologies related to data that are making an impact and have the potential to reshape the industry.
- Latest episodes:
 - How AI is Challenging Infrastructure
 - The Future of Financial Services: AI, Big Data and Data Architecture
 - SNIA Setting the Standard for Storage Innovation
 - Storage Technology Update: SNIA and SCSI Trade Association Join Forces
 - Breaking Barriers in Data Movement with SNIA SDXI
 - The World of Storage Management: Insights and Standards
 - Storage Futures – It's All About the Data

Storage Developer Podcast: Latest Episode



This week's highlighted Podcast:

#198: Riding the Long Tail of Optane's Comet - Emerging Memories, CXL, UCIe, and More by Jim Handy, Objective Analysis and Tom Coughlin, Coughlin Associates

It's been a year since the announcement that Intel would "Wind Down" its Optane 3D XPoint memories. Has anything risen to take its place? Should it? This presentation reviews the alternatives to Optane that are now available or are in development, and evaluates the likelihood that one or more of these could fill the void that is being left behind. We will also briefly review the legacy Optane left behind to see how that legacy is likely to be used to support persistent memories in more diverse applications, including cache memory chiplets. Along the way we'll show how Optane not only spawned new thinking on software, as embodied in the SNIA Nonvolatile Memory Programming Model, but also drove the creation of new communication protocols, particularly CXL and UCIe.

Learning Objectives: 1) Understand the growing role of emerging memory technologies in future processors; 2) Learn how Persistence, NUMA, and Chiplets have blossomed in Optane's wake; 3) See how SNIA's NVM Programming Model will support tomorrow's software, even though Optane won't be using it.

Storage Developer Podcast: Upcoming Episodes

- CXL Memory Disaggregation and Tiering: Lessons Learned from Storage
- An Introduction to the IEEE Security in Storage Working Group
- Towards large-scale deployments with Zoned Namespace SSDs
- What is the NVM Express® Flexible Data Placement (FDP)
- What 10 years of drive stats data can tell us
- Storage Sanitization - Why, When, and How
- CXL and the Art of Hierarchical Memories: Their Management and Use
- How Bad is TCP? (And What Are the Alternatives?)

Upcoming SNIA LIVE Webinars

- Emerging Memories Branch Out
 - Monday January 22, 2024; 10 am PT
- Accelerating Generative AI – Options for Conquering the Dataflow Bottlenecks
 - Wednesday January 24, 2024; 10 am PT
- How Are Technology Innovations within CXL and HBM Shaping the Future of Memory and Storage Use and Assembly
 - Tuesday January 30, 2024; 10 am PT
- Everything You Wanted to Know About Throughput, IOPs, and Latency, But Were Too Proud to Ask
 - Wednesday February 7, 2024; 10 am PT
- Addressing the Hidden Costs of AI
 - Tuesday February 27, 2024; 10 am PT

Recent SNIA Webinars available on Demand

- Navigating the Complexities of Object Storage Compatibility
- How is Data Harming Your Health?
- Catch the Wave – Managing NVMe-oF™ in the Enterprise
- Simplified Namespace Management – The Open Standard Way
- Why Distributed Edge Data is the Future of AI
- The Rise of Confidential AI
- NVMe/TCP: Performance, Deployment and Automation
- Data Fabric: Connecting the Dots between Structured and Unstructured Data
- Persistent Memory, CXL & Memory Tiering - Past , Present & Future
- Why Web 3.0 is Important to Enterprise Storage
- Casting the Net: Scaling Management of Storage and Fabrics
- Sustainability in the Data Center Ecosystem

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.snia.org/webcasts>
 - SNIA Webcasts
- <http://www.storagedeveloper.org>
 - SNIA Storage Developer Conference (SDC)
- <http://www.snia.org/podcasts/>
 - SDC Podcasts