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Storage Networking Industry Association

Technical Activities Update

August 2020

SNIA Technical News: New SNIA Technical Work Group

- Blockchain Storage TWG
  - The Blockchain Storage TWG is created for the purpose of establishing architectures and software for blockchain storage. This TWG creates software and standards that enable specific features for these devices that meet the requirements of stakeholders with these Blockchain Storage needs.

http://www.snia.org/blockchain

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SNIA Technical News: New SNIA Technical Work Group

- ## Smart Data Accelerator Interface (SDXI) TWG
  - The SDXI TWG develops and standardizes an extensible, forward-compatible memory to memory data movement and accelerator interface that is independent of actual data movement and data acceleration implementations and underlying I/O interconnect technology.

http://www.snia.org/sdxi

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SNIA Technical News: New SNIA Technical Position

- SNIA Emerald™ Power Efficiency Measurement Specification v4
  - This document describes a standardized method to assess the energy efficiency of commercial storage products in both active and idle states of operation. A taxonomy is defined that classifies storage products in terms of operational profiles and supported features. Test definition and execution rules for measuring the power efficiency of each taxonomy category are described; these include test sequence, test configuration, instrumentation, benchmark driver, IO profiles, measurement interval, and metric stability assessment. Qualitative heuristic tests are defined to verify the existence of several capacity optimization methods. Resulting power efficiency metrics are defined as ratios of idle capacity or active operations during a selected stable measurement interval to the average measured power.

http://www.snia.org/emerald

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SNIA Technical News: New SNIA Technical Position

- Native NVMe-oF™ Drive Specification v1.0.1
  - 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/nvme

SNIA Technical News: New Public Review DRAFT

- ## Key Value Storage API Specification v1.1a
  - 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.

http://www.snia.org/publicreview

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SNIA Technical News: New Public Review DRAFT

- ## Swordfish v1.2.0
  - 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.

http://www.snia.org/publicreview

SNIA Technical News: New Public Review DRAFT

- ## NVMe to RF/SF Model Mapping

  - This overview is released in conjunction with the Swordfish v1.2.0 Specification and bundle release, and the DMTF's Redfish Forum Work-in-Progress June 2020 release of DSP-IS0014 (v0.95). It provides an overview of the mapping between NVMe and NVMe-oF concepts, and enhancements to the Redfish and Swordfish models and schema, to support the management of NVMe and NVMe-oF devices and systems.

http://www.snia.org/publicreview

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SNIA Technical News: New Public Review DRAFT

- Cloud Data Management Interface (CDMI) 2.0a
    - 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.

http://www.snia.org/publicreview

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SNIA Public Review Drafts

- Key Value Storage API Specification v1.1a
- Swordfish v1.2.0
- NVMe to RF/SF Model Mapping
- Cloud Data Management Interface (CDMI) 2.0a
- Persistent Memory Performance Test Specification White Paper v0.7.3
- Computational Storage Architecture and Programming Model v0.3 rev 1
- Swordfish Storage Profiles Bundle v1
- DRAFT CDMI Extensions and Profiles

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

http://www.snia.org/publicreview

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Storage Developer Podcast: Latest Episode

This week's highlighted Podcast:
#132: Emerging Scalable Storage Management Functionality by Richelle Ahlvers, Principal Storage Management Architect, Broadcom Inc.; Chair, SNIA SSM TWG

By now, you have a good understanding of SNIA Swordfish™ and how it extends the DMTF Redfish® specification to manage storage equipment and services. Attend this presentation to learn what's new and how the specification has evolved since last year. The speaker will share the latest updates ranging from details of features and profiles to new vendor-requested functionality that's supporting the specification from direct-attached to NVMe. You won't want to miss this opportunity to be brought up-to-speed.

Learning Objectives:
1. Educate the audience on what's new with Swordfish
2. Describe features and profiles and why they are useful
3. Provide an overview of vendor-requested Swordfish functionality

http://www.snia.org/podcasts

Storage Developer Podcast: Upcoming Episodes

- NVMe based Video and Storage solutions for Edged based Computational Storage
- Best Practices for OpenZFS L2ARC in the Era of NVMe
- 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!

http://www.snia.org/podcasts

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2020 Storage Developer Conference (SDC)

Taking place **September 22-23, 2020**, SNIA's Storage Developer Conference (SDC) brings the storage developer community together to collaborate and network with peers through the sharing of ideas, industry developments and best practices.

While SNIA is not able to hold a face-to-face event this year due to COVID-19, we feel it is important to continue the momentum that SDC brings to the storage development community in a virtual event. SDC will continue to present excellent and informative content, as well as provide many opportunities for networking.

http://www.storagedeveloper.org

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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.sniacloud.org
    - Latest news on SNIA Cloud activities
- http://www.storagedeveloper.org
    - SNIA Storage Developer Conference (SDC)
- http://www.snia.org/podcasts/
    - SDC Podcasts

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