Storage Networking Industry Association (SNIA)

Technical Activities Update

February 2018

SNIA Technical News
New Public Review DRAFT

- Linear Tape File System (LTFS) v2.4.0 DRAFT
  - 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/publicreview

SNIA Technical News
New Public Review DRAFT

Swordfish Scalable Storage Management API v1.0.5 DRAFT

- 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

SNIA Technical News
New Public Review DRAFT

- Persistent Memory Hardware Threat Model v0 rev 3 DRAFT
  - This white paper discusses approaches for securing persistent memory (PM); particularly considering unique characteristics of PM. This work includes a threat model, potential responses to threats and recommended security requirements for PM.

http://www.snia.org/publicreview

SNIA Public Review Drafts

http://www.snia.org/publicreview

- **Linear Tape File System (LTFS) v2.4**
- **Swordfish Scalable Storage Management API v1.0.5**
- **Persistent Memory Hardware Threat Model v0 rev 3**
- Storage Management Initiative Specification (SMI-S) v1.8.0r1
- Simple IP Based Drive Mockup-4
- IP Based Drive Array Mockup-2
- CDMI Test Specification v1.0a DRAFT
- CDMI Reference Implementation v1.0e 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:

#63: What's new with SMB 3? by Mathew George, Principal Software Design Engineer, Microsoft, and David Kruse, Lead Software Developer, Microsoft

This explores the new capabilities that are proposed to be added to SMB3 for supporting emerging scenarios like containers, direct-access filesystem (DAX) and large scale-out clusters with affinitized storage.

Containerized workloads accessing data hosted on a remote share typically authenticate to the remote resource using the identity of the container or a pre-plumbed credential setup by an administrator. We explore "identity tunneling" extensions to the protocol to allow applications to tunnel their identity to the server on top of an existing authenticated SMB session.

Direct access storage (Storage Class Memory (SCM) /Persistent Memory (PM)) is now being deployed in more and more scenarios where low-latency IO is required. SMBDirect/RDMA provides a mechanism for clients to directly access DAX storage on a server. We will look at various approaches to accessing DAX storage – first via the existing SMB3 protocol and potential enhancements to mostly bypass the software stack on the client and server.

Lastly in the context of a large scale-out cluster, we'll take a look at enhancements to the SMB3 protocol to automatically direct the cluster-node hosting the data need by the client. This complements some of the functionality provided by the Witness protocol – and is a step towards scaling out data access via the SMB3 protocol.

http://www.snia.org/podcasts

Storage Developer Podcast: Upcoming Episodes

- Past and Present of the Linux NVMe Driver
- Accelerated NVMe over Fabrics Target/Host via SPDK
- Remote Persistent Memory - With Nothing But Net
- p2pmem: Enabling PCIe Peer-2-Peer in Linux
- Update on Windows Persistent Memory Support
- Persistent Memory over Fabrics – Adding RDMA to Persistent Memory

http://www.snia.org/podcasts

Check out the online video presentations!

SNIA PERSISTENT MEMORY PM SUMMIT

JANUARY 24, 2018 | SAN JOSE, CA

If you missed attending you can still *learn about the fundamental changes that have been brought about by persistent memory and how companies can apply this technology, by watching the online video presentations!*

http://www.snia.org/pm-summit

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