



SDC 18

September 24-27, 2018
Santa Clara, CA

www.storagedeveloper.org

Welcome to SDC 2018

Tuesday, September 25

Welcome



Michael Oros

Executive Director, SNIA



SNIA Areas of Focus

PHYSICAL STORAGE

- Solid State Storage
- Hyperscaler Storage
- Object Drives
- Connectors, Form Factors & Transceivers

DATA MANAGEMENT

- Protection
- Integrity
- Retention

DATA SECURITY

- Storage Security
- Privacy and Data Protection Regulations

CLOUD STORAGE TECHNOLOGIES

- Data Orchestration
- Data into and out of the Cloud

PERSISTENT MEMORY

- NVDIMMs
- Non-Volatile Memory Programming Model

POWER EFFICIENCY MEASUREMENT

- SNIA Emerald™ Power Efficiency

NEXT GENERATION DATA CENTER

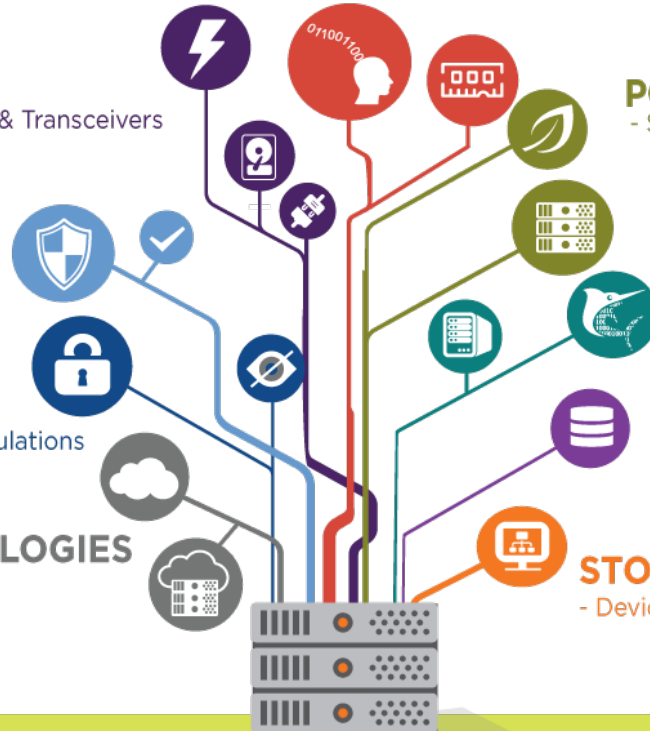
- Software Defined Storage
- Composable Infrastructure
- Next Generation Storage Management API

NETWORKED STORAGE

- Data Access Protocols
- Networking Technologies for Storage

STORAGE MANAGEMENT

- Device and System Management



About SNIA

- ❑ Standards
- ❑ Plugfest and Conformance Test Programs
- ❑ Technology Initiatives (Communities)
- ❑ SNIA Education and Certification
- ❑ SNIA Events

Standards - 2018

- ❑ SNIA Emerald™ Power Efficiency Measurement Specification 3.0.2
- ❑ Linear Tape File System (LTFS) Format Specification v2.4
- ❑ Real World Storage Workload (RWSW) IO Capture & Test Specification for Datacenter Storage Version 1.0.7
- ❑ Solid State Storage Performance Test Specification (PTS) 2.0.1
- ❑ Storage Management Initiative Specification (SMI-S) v1.8.3
- ❑ Swordfish Scalable Storage Management API v1.0.6

Standards - 2019 (in development)

- ❑ Cloud Data Management Interface (CDMI) Specification v2.0
- ❑ CDMI Reference Implementation 1.0
- ❑ SNIA Emerald™ Power Efficiency Measurement Specification 4.0
- ❑ Linear Tape File System (LTFS) Format Specification v3.0
- ❑ NVM Programming Model v1.3
- ❑ Object Drive Key Value API Specification v1.0
- ❑ Swordfish Scalable Storage Management API v1.1
- ❑ Transport Layer Security (TLS) v1.1

Standards – SFF TA TWG

- ❑ SFF-8024 v4.5 - SFF Cross Reference to Industry Products
- ❑ SFF-8053 v5.5 - GBIC (Gigabit Interface Converter)
- ❑ SFF-8070 v1.3 - ATAPI Removable Rewritable Media Devices
- ❑ SFF-8086 v2.6 - Mini Multilane 4X 10 Gb/s Common Elements Connector
- ❑ SFF-8087 v2.6 - Mini Multilane 4X Unshielded Connector Shell and Plug
- ❑ SFF-8088 v3.4 - Mini Multilane 4X Shielded Connector Shell and Plug
- ❑ SFF-8099 v0.8 - SFF Committee Guidelines for Editors
- ❑ SFF-8201 v3.4 - 2.5" Form Factor Drive Dimensions
- ❑ SFF-8301 v1.9 - 3.5" Form Factor Drive Dimensions
- ❑ SFF-8351 v2 - 3.5" Form Factor Drive with High Density Connect
- ❑ SFF-8431 v4.1 - SFP+ 10 Gb/s and Low Speed Electrical Interface
- ❑ SFF-8436 v4.9 - QSFP+ 4X 10 Gb/s Pluggable Transceiver
- ❑ SFF-8448 v1.3b - SAS Sideband Signal Assignments
- ❑ SFF-8449 v2.1a - Management Interface for SAS Shielded Cables
- ❑ SFF-8472 v12.3 - Management Interface for SFP+
- ❑ SFF-8482 v2.5 - Serial Attachment 2X Unshielded Connector
- ❑ SFF-8486 v1.3 - Serial Attachment 4X Unshielded Connector
- ❑ SFF-8631 v1.4 - Serial Attachment X8/X16 Unshielded Device Connector
- ❑ SFF-8642 v3.3 - Mini Multilane 12X 10 Gb/s Shielded Connector (CXP10)
- ❑ SFF-8654 v1.2 - 0.6mm 4/8X Unshielded I/O Connector
- ❑ SFF-8661 v2.5 - QSFP+ 4X Module
- ❑ SFF-8662 v2.9 - QSFP+ 4X 28 Gb/s Connector (Style A)
- ❑ SFF-8667 v1 - Module w/High Density Connector for Enclosure Applications
- ❑ SFF-8672 v1.2 - QSFP+ 4X 28 Gb/s Connector (Style B)
- ❑ SFF-8682 v1.1 - QSFP+ 4X Connector
- ❑ SFF-9400 v1 - Universal 4/8X Pinouts
- ❑ SFF-9402 v1 - Multi-Protocol Internal Cables for SAS and/or PCIe
- ❑ SFF-9482 v1 - Serial Attachment 2X Unshielded Connector Pinouts
- ❑ SFF-9629 v1 - Serial Attachment 4X Unshielded Connector Pinouts
- ❑ SFF-9639 v2.0a - Multifunction 6X Unshielded Connector Pinouts
- ❑ SFF-TA-1000 v1 - 2.5" Form Factor Drive with High Density Connector
- ❑ SFF-TA-1001 v1.1 - Universal x4 Link Definition for SFF-8639
- ❑ SFF-TA-1005 v1 - Universal Backplane Management (UBM)
- ❑ SFF-TA-1006 v1.1 - Enterprise & Datacenter 1U Short SSD Form Factor
- ❑ SFF-TA-1007 v1 - Enterprise and Datacenter 1U Long SSD Form Factor
- ❑ SFF-TA-1008 v1 - Enterprise and Datacenter SSD 3" Form Factor
- ❑ SFF-TA-1009 v2 - Enterprise and Datacenter SSD Pin & Signal Spec.
- ❑ SFF-TA-1002-04, 10-15
 - ❑ In Process specs

Upcoming SNIA Events

- ❑ [SNIA Annual Members Meeting](#) (Conference Call)
 - ❑ Thursday, October 11, 2018, 8:00-9:00am PT
- ❑ [SNIA Annual Members Symposium](#)
 - ❑ January 21-25, 2019, Santa Clara, CA
- ❑ [Persistent Memory Summit](#)
 - ❑ January 24, 2019, Santa Clara, CA

SDC International



SDC EMEA 2019 – January 30, Tel Aviv
<https://www.snia.org/sdcemea>



SDC India 2019 – May 23-24, Bangalore
<https://www.snia.org/sdcindia>

Thanks

- Thank you Attendees, Speakers and Plugfesters
- Special Thanks to our Sponsors:

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SNIA SMB3 PLUGEST UNDERWRITER



IN PARTNERSHIP WITH



SNIA SWORDFISH™ WORKSHOP UNDERWRITER



MEDIA PARTNERS



ASSOCIATION PARTNERS



Tuesday Schedule At-a-Glance

- General Sessions (also in this room) 9:00 - 12:00
- Lunch and Sponsor Showcase (Mezzanine) 12:00 - 1:00
- Breakout Sessions 1:00 - 4:55
- Networking Reception with Sponsors (Mezzanine) 5:00 - 7:00
- Birds of a Feather Sessions 7:00 - 8:00



Storage Developer Conference Mobile App

❑ Why download the App?

- ❑ Agenda scheduler and updates
- ❑ Abstract information
- ❑ Speaker information and bios
- ❑ Rate Sessions
- ❑ Download presentations



❑ How to use the App

- ❑ Use the link from your Pathable invitation or scan QR code in guide or on sign in registration area
- ❑ You can also login online at storagedeveloper.org

Thank You SNIA SMB3 Plugfest Underwriters and Participants

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Thank You to the SNIA Swordfish™ Workshop Underwriter



Tuesday General Session Speakers



9:00 AM - 9:45 AM

Tunneling through Barriers: The Key to the Evolution of Solid State Memory
Andy Walker, Vice President of Product, Spin Transfer



9:45 AM - 10:25 AM

Storage Lessons from HPC: A Multi-Decadal Struggle
Gary Grider, HPC Division Leader, Los Alamos National Laboratory



10:40 AM - 11:20 AM

Unleashing Innovation from Core to Edge
Adam Roberts, Engineering Fellow, Western Digital



11:20 AM - 12:00 PM

Glass: A New Media for a New Era
Austin Donnelly, Principal RSDE Lead, Microsoft Research

SNIA Swordfish™ Workshop



- ❑ Tuesday, 2:50 PM & 5:00 – 7:00 PM (Mezzanine)
- ❑ Visit interactive demonstrations and dive into self-paced, self-driven exercises across several independent workstations.

Tuesday Birds of a Feather Meetings

❑ **SNIA NVMe BOF and Meetup**

7:00 PM - 8:00 PM • Cypress Room

Join the local Bay Area NVMe Meetup group in a session dedicated to NVMe technology. A panel of experts will discuss some of the latest projects and answer questions on implementing or using solutions based on this standard

❑ **OpenZFS BoF**

7:00 PM - 8:00 PM • Stevens Creek Room

A user and developer meeting for anyone currently using or considering using OpenZFS on any supported platform.

SDC Speaker Evaluations

❑ Win a \$100 Gift Card!

- ❑ Your feedback makes a difference! Please complete these session evaluations to help us plan future conferences.
- ❑ The evaluation link is located linked to each session in the agenda. This is accessible online or through the mobile app.
- ❑ For each evaluation completed, you'll be entered into the daily prize draw for a \$100 gift card!

Have a great SDC!

Thank you Attendees, Speakers, and Sponsors