



Scalable Storage Management (SSM) TWG

2023 Review and 2024 Plans

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SSM TWG 2023 Accomplishments

- Charter: <https://members.snia.org/wg/ssmtwg/document/21899>
 - Summary: Extend DMTF's Redfish spec for Storage
- New Releases:
 - Version 1.2.5 and 1.2.5a – concurrent release with RF 2023.1 – added expanded support for Swordfish profiles and support to map Swordfish to the 2.0c version of the NVMe™ and NVMe-oF™ specifications in the Swordfish NVMe Model Overview and Mapping Guide.
 - New functionality: metrics for volumes, drives, and storage controllers, as well as support for NVMe SMART Metrics, enhanced NVMe-oF discovery controller capabilities managing NVMe-oF centralized discovery controllers. There are also enhancements to the storage connections model, used to provide an updated mapping and masking model. Other integrated functionality is delivered in conjunction with the Redfish 2023.1 release.
 - Updated user's guide with new uses cases for NVMe SecuritySend/Receive
 - New mockups on swordfishmockups.com:
 - NVMe SmartMetrics, NVMe Discovery Controllers, NVM/TCP Array
 - Swordfish CTP Conformant
 - Version 1.2.6 will release January 2024:
 - New NVMe-oF White Paper
 - Adds new Metrics for FileSystem, StoragePool, StorageService, and enhancements to VolumeMetrics
 - Fully adds new mapping and masking models using Connections in RF Fabrics, deprecates StorageGroups.
 - Adds support for new volume properties: ProvidingStoragePool, ChangeStripSize, ALUA to manage reservations.
 - NVMe: Adds NVMe Domain Management, including ALUA support. Updates and simplifies LBAFormat representation, adds multiple namespace management.


SSM TWG 2023 Accomplishments


- Open source software additions:
 - Update Swordfish emulator:
 - Support all RF/SF schema, add https support, add session service support, add account service, start work on event service
 - Support joint work with Open Fabrics Alliance, DMTF, and GenZ work, prototyping managing fabrics and storage fabrics
- Submitted version 1.2.5a to ISO
- For reference - versions:
 - Version 1.2.x: Adds NVMe support - 2020
 - Version 1.1.x: Support for full block storage implementations - 2019
 - Version 1.0.x: Support for service-based implementations


SSM TWG Work Items: 2024


- Collaboration with NVM Express, DMTF for new functionality
 - Additional NVMe / NVMe-oF capabilities, supporting new NVMe features as they are added
 - Enhanced Namespace Management
 - Computational Storage, KV
 - NVMe-oF / Boot Storage Use Cases
- Continue collaboration with OFA (and DMTF) to expand support added for NVMe-oF to additional types of fabrics
 - Continue collaboration with OFA, adding CXL fabric management
- Support for other SNIA Standards and Work Groups
 - CS, SDXI, xPU
- Support new work from other alliance partners (e.g., UEC)
- Enhancements to support implementation feedback
- Enhancements to existing profiles based on feedback from CTP


SSM TWG Membership (Jan'24)
















































































Joined since last symposium

*Dropped Members: StarWind, WD, Cisco

SSM TWG Participation

- Industry impact:
 - Develop, maintain, and enhance Swordfish Storage Management Specification and supporting ecosystem – for standards-based storage management of: (Redfish) server-attach storage, external (standalone) storage, storage management of NVMe / NVMe-oF systems, cloud / hyperscalar, hyperconverged, enterprise datacenters
- Who Participates:
 - Storage vendors, storage client application developers (storage management, server management, OS vendors, etc)
- Join the SSM TWG to:
 - Contribute new or modify existing content to improve interoperability, add support for new functionality, and accelerate your company's implementation
 - Monitor new content and discussions as your company decides when to start implementation
- For additional information, contact:
 - Richelle Ahlvers, Chair: ssmtwg-chair@snia.org