

## **SNIA / NVM Express Alliance Agreement**

### **Date Initiated: 9/12/2019**

This Alliance Agreement is created between SNIA and NVM Express organizations to formally define the initial scope, benefits, and deliverables of the Alliance. The agreement structure helps the organizations coordinate efforts to achieve the stated goals and objectives. Additional Collaboration and Work Register items are created and added to this agreement by means of mutually approved Agreement Addendums.

### **Alliance Organizations**

[Storage Networking Industry Association](#) (SNIA) and [NVM Express](#) (NVMe).

### **Background**

SNIA is an organization that develops and promotes standards, technologies, and educational services to empower the management of information in the storage domain.

SNIA has begun work on Computational Storage. This work is intended to become embodied in NVMe architecture in addition to other potential embodiments. It is expected that this work will result in contributions from SNIA into NVMe.

SNIA Compute, Memory, and Storage Initiative (CMSI), supports the acceptance and growth of Computational Storage (CS), Solid State Storage (SSS), and Persistent Memory (PM) in the marketplace. Our member companies educate vendor and user communities, support SNIA technical work in Computational Storage, Physical Storage, and Persistent Memory, promote CS, SSS, and PM technology in the marketplace, and influence standards activities.

NVM Express<sup>®</sup> is an open collection of standards and information to fully expose the benefits of non-volatile memory in all types of computing environments from mobile to data center. NVMe<sup>™</sup> is designed from the ground up to deliver high bandwidth and low latency storage access for current and future NVMe technologies.

### **Alliance Objectives and Benefits**

- High-level coordination between the two organizations
- Marketing coordination to advance the adoption and market for NVMe based SSDs
- Industry Education on NVM Express technologies
- Enables a holistic development of Computational Storage standards
- Enables management for NVM Express and Computational Storage devices
- Ensures that SNIA and NVM Express standards are coordinated (e.g. address all Computational Storage requirements)
- Promotes SNIA and NVM Express standards to member companies
- Enables collaboration on programming models and software relating to NVMe-based Computational Storage Devices.

## **Alliance Technical Goals and Assets**

The technical goals are to coordinate standards for managing NVMe devices and the various aspects of Computational Storage Devices (CSxes). The identified assets within the organizations are:

SNIA Computational Storage Technical Work Group (CS TWG) is developing:

- The Computational Storage Architecture standard which defines architectures for Computational Storage that may be used on any interface including NVMe/PCIe® and NVMe-oF.
- An API specification that would define the Application Programming Interface (API) for Computational Storage
- A management standard that would define the management characteristics of a Computational Storage Device

SNIA Non-volatile Memory Work Group (NVM TWG)

SNIA SFF Technology Affiliate Work Group (SFF TA TWG)

SNIA Solid State Storage Initiative

SNIA Swordfish™ and Scalable Storage Management Work Group (SSM TWG)

NVM Express:

- Defines the NVMe base specification which defines the interface that allows host software to communicate with an NVMe Subsystem
- Defines the NVMe Management Interface (NVMe-MI) which allows a Management Controller to communicate with an NVMe Subsystem over one or more external interfaces.
- May develop a Computational Storage namespace and command set specification

## **Other Alliance Agreements**

- Three-way alliance between SNIA, NVM Express and DMTF already in place.
- SNIA and NVM Express agreement for NVM Express Annual Members Meeting Event at SNIA Technical Symposium, Spring 2020

## **Alliance Coordination**

- Cross-promotion (including social media, email blast, newsletter inclusion) of news and events by both organizations:
  - Webcasts
    - Topic to be reviewed as applicable to both organizations

- Events
  - NVM Express Annual Member Meeting, Storage Developer Conference, SNIA Annual Members Symposium
- Industry News
  - Topic to be reviewed as applicable to both organizations
  - Joint announcements
- Industry Terms Definition
  - SNIA Dictionary to be utilized for defining relevant storage terminology and be referenced/promoted by both orgs
- Marketing Calls Attendance
  - SNIA Marketing Alliance coordinator and NVMe Marketing team will communicate when there are updates available
  - NVMe will invite SNIA to participate in NVMe marketing calls when there are overlapping topics being discussed
  - SNIA will invite NVMe to participate in SNIA marketing calls when there are overlapping topics being discussed
- Industry Event Participation
  - Share event calendars
  - Coordination at industry events can include shared booth space, BOF meetings, literature display
- Logo Utilization
  - NVMe may use the SNIA Logo in educational material and presentations
  - SNIA may use the NVMe logo in educational material and presentations
- Wordmark Utilization
  - Use of NVMe wordmarks is not restricted in educational material, presentations, and specifications
  - Use of SNIA wordmarks is not restricted in educational material, presentations, and specifications

### **NVM Express Annual Member Meeting**

**SNIA entitlements:**

- SNIA is invited to attend the NVM Express Annual Member Meeting
- SNIA receives complimentary table for SNIA collateral and literature at the NVM Express Annual Member Meeting
- SNIA is allowed a tabletop sign and literature on their activities
- SNIA Logo to be displayed as Industry Sponsor on presentation slides, website and in print
- SNIA logo featured in Sponsor section of the event onsite signage (where applicable)
- SNIA is to receive eight complementary passes to the NVM Express Annual Member Meeting

**NVM Express entitlements:**

- SNIA will give annual consideration to host/co-locate the NVM Express Annual Member Meeting in conjunction with a SNIA Technical Symposium, and apply a shared cost model for NVM Express meetings
- Posting of the NVM Express Annual Member Meeting on the SNIA events page and in SNIA Matters (members newsletter)

**Storage Developer Conferences (SDC)**

**NVM Express entitlements:**

- Association logo displayed in Association Partner sponsorship category on event websites and promotional materials where sponsorships are mentioned
- Association logo featured in Sponsor section of the event onsite signage
- 2 complimentary conference program passes for SDC
- 1 tabletop exhibit space at SDC
- Social media promotion of partnership by SNIA
- Option for speaking opportunities. NVM Express has the opportunity to submit an NVMe track for SDC and SNIA may accept other talks with NVMe content. The normal call for paper process is to be followed. Selection of paper will be given preference if there is a good fit of the topic with the agenda.
- Option to host a Birds of a Feather program at SDC
- Discount code for NVM Express members at SDC

**SNIA entitlements:**

- Write-up on NVM Express upcoming events webpage for SDC
- 4 time inclusion in NVM Express newsletter to promote SDC
- Email blast (two) to NVM Express database (if applicable)
- Social media promotion of event
- Social media promotion of partnership by NVM Express

**Primary Alliance Agreement Contacts:**

SNIA:

- SNIA Technical Contact for NVM Express ([nvme-technical@snia.org](mailto:nvme-technical@snia.org))
- SNIA Marketing Contact for NVM Express ([nvme-marketing@snia.org](mailto:nvme-marketing@snia.org))

NVM Express:

- NVM Express Admin ([admin@nvmexpress.org](mailto:admin@nvmexpress.org))

### **Corresponding SNIA Document**

This document is the official SNIA alliance record.

The document was reviewed and approved by the SNIA Alliances Committee: 4/9/2020.

The document was reviewed and approved by the SNIA Technical Council: N/A.

The document was reviewed and approved by the SNIA Board of Directors: 4/24/2020.

### **Corresponding NVM Express Document**

This document is the official NVM Express alliance record.

The document was reviewed and approved by the NVM Express Board of Directors: 4/20/2020.

**Addendum A**  
**Work Register #1**  
**Initiated: September 2019**

**Activities**

The following activities may occur during the duration of this work register:

SNIA to publish the SNIA Computational Storage Architecture and Programming Model

SNIA to publish the SNIA Computational Storage Management standard

SNIA to publish the SNIA Computational Storage API standard

SNIA to publish an update to the SNIA Key Value API standard

NVMe may develop a Computational Storage namespace and command set specification

NVMe to publish the NVMe Key Value Command Set specification

**Limitations**

The SNIA, and NVM Express should preserve both interoperability and backward compatibility, except in major version releases.

**Milestones / Dates**

**SNIA Computational Storage Architecture and Programming Model:**

<b>Milestone/Deliverables</b>	<b>Timeframe</b>
Work in Progress release	2H2019
SNIA Computational Storage Architecture and Programming Model	1H2020

**SNIA Computational Storage Management:**

<b>Milestone/Deliverables</b>	<b>Timeframe</b>
Work in Progress release	
SNIA Computational Storage Management standard	

**SNIA Computational Storage API:**

<b>Milestone/Deliverables</b>	<b>Timeframe</b>
Work in Progress release	
SNIA Computational Storage API standard	

**SNIA Key Value API:**

<b>Milestone/Deliverables</b>	<b>Timeframe</b>
SNIA Key Value API standard	1H2020

**NVMe Computational Storage Command Set:**

<b>Milestone/Deliverables</b>	<b>Timeframe</b>
Introduce TPAR	2H2020
Ratified TP	2H2021

**NVMe Key Value Command Set specification:**

<b>Milestone/Deliverables</b>	<b>Timeframe</b>
Ratified TP	1H2020

**Access**

**NVMe-MI Swordfish support:**

The following NVM Express specifications will be shared:

- NVMe-MI Specification version 1.2

**Work Register Review Date**

The next review date is expected to be on or before September 2021.

**Additional Resources Identified / Points of Contact:**

SNIA:

- SNIA Technical Council Chairs ([tcchair@snia.org](mailto:tcchair@snia.org))

NVM Express:

- Peter Onufryk, Chair NVMe Technical ([peter.onufryk@intel.com](mailto:peter.onufryk@intel.com))

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