

**DATA
STORAGE
SECURITY
SUMMIT**

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**SNIA's Position and
Response to Data
Storage Security Industry
Requirements**

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In the beginning...



- ❑ Storage was just part of a system
- ❑ SCSI referred to a specific type of cable
- ❑ It was a limited and treasured element
- ❑ Removable media required a briefcase
- ❑ Sharing storage resources and data was a dream

- ❑ Seems like a simpler time

...and then Everything Changed



- ❑ Storage moved out from behind servers and out of data centers
- ❑ Media types exploded
- ❑ Hyper-interconnectivity became the norm
- ❑ Security discovered storage
- ❑ Destroying data become important
- ❑ Data breaches became major events

SNIA Security...the Early Days

Roots of SNIA Security Program



- ❑ SNIA formed a Security Technical Work Group (TWG) & started working on Storage Security
 - ❑ Very little awareness of security in the storage & SAN industries....
 - ❑ So started creating educational resources
 - ❑ SNW Tutorials
 - ❑ SNIA Technical Seminar Series booklets
 - ❑ SAN Risk Assessments
 - ❑ Best Practices
- ❑ Storage Security Industry Forum (SSIF) formed later to complement to TWG

Courtesy of Roger Cummings

SNIA Security Summits



- ❑ SNIA organized the first Storage Security Summit in 2002
 - ❑ Held @ SNIA Tech Center, Colorado Springs
 - ❑ Brought key storage technical people and security experts together for the first time
- ❑ Started a twice yearly schedule in 2005
- ❑ The last Summit was held in 2008

Courtesy of Roger Cummings

SNIA Security Vision & Mission

(Approved by BoD in 2007)



❑ **Vision (SNIA desired future state):**

The security vision of the SNIA is to enhance information assurance, optimize security investments while maintaining present operational effectiveness in the disparate technologies and standards that work together to form today's storage ecosystems.

❑ **Mission (what SNIA is trying to achieve):**

The security mission of the SNIA is to produce high quality educational, technical and engineering collateral that influences the design, use, and management of storage networking technology to better protect and secure information.

This may include participation in standards development, educational seminars, best practice documents, conferences, videos, and other activities to advance the SNIA security vision.

SNIA Security Goals

(Approved by BoD in 2007)



- ❑ **Goal #1:** Assist the SNIA membership in better understanding Information Assurance and how it applies to the storage ecosystem.
- ❑ **Goal #2:** Identify and incorporate prudent security mechanisms in all SNIA technical specifications.
- ❑ **Goal #3:** Continue striving to become a recognized expert/authority in data/information security

SNIA Security...Recent

- ❑ Peer Reviewed Tutorials Focused on
 - ❑ Storage Security Best Practices
 - ❑ Encryption/Key Management
 - ❑ EU Data Protection (Privacy)
 - ❑ Emerging Standards
- ❑ Presented at SNIA Events (e.g., DSI)
- ❑ Speakers and materials at non-SNIA events

Public Materials



- ❑ Industry press releases
- ❑ Articles in industry trade rags
- ❑ Whitepapers
- ❑ Chapters in books (e.g., ABA books)
- ❑ Webinars

- ❑ ISO/IEC 24775 (Storage management)
- ❑ ISO/IEC 17826 (Cloud data management interface)
- ❑ ISO/IEC 27040:2015 (Storage security)
- ❑ ISO/IEC 20648 (TLS Specification for Storage Systems)
- ❑ ISO/IEC 27050 (eDiscovery)

Current Activities (1)



- ❑ Expanding on ISO/IEC 27040:2015 (Storage security)
 - ❑ Comprehensive index for the standard
 - ❑ Whitepapers
 - ❑ Sanitization
 - ❑ Encryption and Key Management
 - ❑ Fibre Channel Security (draft)
 - ❑ Data Protection (draft)

Current Activities (2)



- ❑ Key Management Conformance Testing
 - ❑ Collaboration with OASIS KMIP TC
 - ❑ Formal testing of implementations
 - ❑ Publication of conformance results

SNIA Security...Moving Forward

Morphing Threat Landscape



- ❑ Rapidly evolving threats
- ❑ Organized crime
- ❑ Nation states

Changing Technology Landscape



- ❑ Virtualization
- ❑ Federated Infrastructure
- ❑ Cloud Computing
- ❑ Big Data and Analytics
- ❑ Internet of Things (IoT)

- ❑ Social Infrastructure and Smart Cities

Summary



- ❑ SNIA has a rich heritage in data and storage security
- ❑ Past SNIA Security Summits
 - ❑ Identified unique threats to storage ecosystems
 - ❑ Identified potential mitigation strategies and best practices
 - ❑ Facilitated an industry response
- ❑ This Summit lays the groundwork for future SNIA security work

Call to Arms



- ❑ Storage is on the cusp of becoming the last line of defense for data
- ❑ Continued vigilance is needed by both vendors and users to ensure that storage is not the weak link
- ❑ Help us identify the challenges and potential solutions

Thank You