

SMI Program Report

May 2008



Please Forward Within Your Organization

The SNIA Storage Management Initiative (SMI, www.snia.org/smi/) exists to unify the storage industry on an extensible, interoperable, open, and highly functional interface for storage management. The SMI brings together the resources of the SNIA to deliver this interface, called the SMI Specification or SMI-S.

Report Contents

Report Contents	1
Overall Program Status	1
Individual Program Updates	2
SMI Technical Steering Group (TSG).....	2
Conformance Testing Program (CTP).....	2
SMI-Lab Program	2
SMI Marketing.....	3
SMI ANSI/ISO Standards.....	3
Calendar of Upcoming SMI-S Related Events	3
Key Program Milestones ♦	4
List of Vendors Conformant to SMI-S	5
Vendors with Products Conforming to SMI-S 1.2.....	5
Vendors with Products Conforming to SMI-S 1.1.....	5
Vendors with Products Conforming to SMI-S 1.0.....	5
SMI Key Contacts & Program Links.....	5

Overall Program Status

- SMI-S has reached another significant milestone by successfully completing the approval of SMI-S 1.1.1 as an ANSI standard. This will be the second version of SMI-S to be published as an ANSI standard. The next step for the ANSI standard (SMI-S 1.1.1) will be submission via INCITS for ISO standardization. For more information on publically released standards please go to http://www.snia.org/tech_activities/standards/curr_standards/smi.
- CTP has created an “Early Adopters” feature to formally recognize companies that are driving SMI-S to maturity. Companies are being recognized are for doing early testing of sections of SMI-S that have not been universally implemented yet. As an example, for SMI-S 1.2 two member companies, EMC and HDS are being recognized for their early testing on the following new profiles: Block Storage Views, Storage Server Asymmetry and Volume Composition. To learn more about the feature and the companies being recognized please go to http://www.snia.org/forums/smi/tech_programs/ctp/generalinfo/earlyadopters.html
- The SMI-Lab program has held three successful Plugfests this year with three more scheduled this year. Each of the Plugfests has been focused on specific areas such as scalability to resolve implementation issues and to drive implementations and the specification to greater robustness. For more information on upcoming Plugfests please go to http://www.snia.org/forums/smi/tech_programs/lab_program.

Individual Program Updates

SMI Technical Steering Group (TSG)

The SMI TSG and Technical Working Groups (TWG) for SMI-S have been working hard on completing current versions of SMI-S and scoping out the future versions of SMI-S.

- The TSG and TWGs have completed adding the content to SMI-S v1.4. The new content in SMI-S 1.4 includes Thin provisioning, Remote replication, SAS interconnects, partitioned tape libraries and much more. Once the new content has been integrated into SMI-S the TSG will conduct a review of SMI-S 1.4 and focus on resolving bugs as a result of the review.
- During the summer the TSG and TWGs will be conducting a detailed review of the SMI-S profiles. The goals of the review are to produce a tighter, more detailed more consistent profile definition and to also improve the XML definitions, which will lead to improved CTP testing. The second goal for the TSG and TWGs this summer is to add indications to the profiles.
- The TSG and TWGs are in the process of receiving new work items and requirements for SMI-S v1.5. The deadline for submitting new work items and requirements for SMI-S v1.5 is September 15, 2008. The new work items and requirements will be reviewed and accepted for SMI-S v1.5 work plan at the SNIA Technical Symposium in Chicago, IL the week of September 15, 2008.

Conformance Testing Program (CTP)

The Conformance Testing Program for SMI-S is run by the SMI Conformance Committee, which is made up of a dedicated set of volunteers from SMI Initiative member companies and the CTP program manager. This group has been very busy over the course of the last year.

- Development of the CTP Provider test suite for SMI-S 1.2 is wrapping up. The CTP-Provider test suite will cover Arrays, Storage Virtualizers, Fabric and NAS products. For a list of vendors that have already passed CTP testing for SMI-S 1.2, see http://www.snia.org/forums/smi/tech_programs/ctp/conformingproviders/. The CTP testing for 1.2 improved dramatically by changing the xml files that drive the test. Converting to the new files was a significant achievement and resulted in identifying a number of issues that were not identified by CTP in earlier versions of SMI-S.
- Currently the CTP-Provider test suite for SMI-S 1.3 is in the process of being developed. The test suite will include a number of new features such as memory reduction, instance sampling, restructuring of how indications are tested and improved support for multiple uses of certain classes. Early versions of the test suite will be available at the upcoming June Plugfest. Vendors who intend on running against the 1.3 CTP Provider tests are encouraged to take advantage of the plugfests (particularly the June, August and October plugfests) to influence how the test suites evolve and to get a head start on validating the tests. The test suite is scheduled to be released in 3QTR08.

Contact James Rigger in the SNIA-CTP Program Office at (719) 884-8901 or <mailto:snia-ctp-admin@snia.org> if you are interested in CTP testing of your company's products.

SMI-Lab Program

The SMI-Lab program manages the SMI interoperability lab at the SNIA Technology Center in Colorado Springs, CO. The Technology Center provides remote access to the companies' equipment participating in SMI-Lab and SMI-Lab Plugfests are held at the center. The SMI-Lab program conducts six Plugfests per year. One of the major activities at plugfests is validating the CTP SMI-Provider test suite. In addition, each plugfest includes activities that focus on testing topics important to the SMI community – for example: new profiles, interoperability, scalability, usability, or installation issues.

- The June 2008 plugfest from June 9th to 13th, 2008 will focus on indications and NAS.
 - One of the goals of the plugfest is to improve indications testing for CTP by defining the next generation for testing indications, validating indications support in CIMOMs and client SDKs, and developing best-practice documentation for developers. Indications are the event reporting mechanism in SMI-S.
 - The second goal of the plugfest is to validate the NAS SMI-Provider tests due to the NAS support being expanded from basic to full-functionality from SMI-S 1.2 to SMI-S 1.3. The NAS activities will include validation of the current CTP tests with implementations from NAS device

companies and sessions between client and device companies to exchange information about early implementation experience.

- The August 2008 plugfest from August 18th to 29th, 2008 will focus on validating CTP SMI-Provider v1.3 testing for arrays, fabric/switch, and NAS. Also there will be planning sessions for demonstrating companies' early implementations of WS-MAN. WS-MAN is an emerging, alternate transport protocol for connecting SMI-S and web services components.
- The October 2008 plugfest from October 27th to 31st, 2008 will focus on validating the remainder of SMI-S 1.3 profiles. – including the new SMI-S 1.3 profiles. The plugfest will include the validation of CTP indications based on work from the June plugfest.

There are a lot of advantages for companies participating in SMI-Lab such as early access to the SMI CTP test suites. Members can run the suite in the SNIA Technical Center lab or internally on their corporate systems. The SMI-Lab companies assist in validating that each generation of the CTP test suite conformance to the SMI-S standard. The experiences from the early access to CTP test suites helps assure participants that products will conform to SMI-S and the CTP test suite. For more information please go to http://www.snia.org/forums/smi/tech_programs/lab_program/ or contact Tom Mancuso directly at (719) 491- 2614.

SMI Marketing

The Marketing Committee has recently appointed a new chair, Roger Reich. The Marketing Committee will be concentrating on reviving and promoting the SMI Program. The initial focus for the market committee exists on five fronts:

1. Reestablish a consistent/valuable flow of information to the SMI Community about the SMI.
2. Reestablish a flow of information to the press/media.
3. Lift membership and participation.
4. Drive SMI-S requirements into customer RFQs.
5. Upgrade the SMI external web site.

If you would like to volunteer to assist with SMI's marketing plans please contact Roger roger.reich@olocity.com.

SMI ANSI/ISO Standards

The Standards Committee along with the assistance of the SMI Initiative is continuing to coordinate and manage the standardization of SMI-S versions as ANSI and ISO standards.

- SMI-S v1.0.3 has successfully completed being the first SNIA standard to be published as an ANSI and ISO standard.
- SMI-S v1.1.1 is in the process to be the next version of SMI-S to achieve ANSI and ISO standardization.

Calendar of Upcoming SMI-S Related Events

Please visit <http://www.snia.org/about/calendar> for an extensive list of industry events.

Dates	Location	Event
Jun 9 - 13, 2008	Colorado Springs, CO	SMI-Lab8 Plugfest #4 (IndicationsFest) https://www.snia.org/apps/SMI_Lab_Plugfest_Registration/register.php
Jul 21-25, 2008	San Jose, CA	SNIA 2008 Summer Symposium (SMI-S v1.4 and Indications) http://www.snia.org/events/summersymposium
Aug 25 - 29, 2008	Colorado Springs, CO	SMI-Lab8 Plugfest #5 (NAS and WS-MAN) https://www.snia.org/apps/SMI_Lab_Plugfest_Registration/register.php
Sept 15 – 18, 2008	Chicago, IL	SNIA Technical Symposium (SMI-S v1.5 work items) http://www.snia.org/members/eventcentral
Sept 22 – 25, 2008	San Jose, CA	SNIA 2008 Storage Developers Conference (SDC) http://www.snia.org/events/storage-developer2008
Oct 13-16, 2008	Dallas, Texas	Fall SNW http://www.snwusa.com
Oct 27 – 29, 2008	Frankfurt, Germany	Europe SNW http://www.snweurope.com
Oct 27 - 31, 2008	Colorado Springs, CO	SMI-Lab8 Plugfest #6 (SMI-S v1.3 profiles and Indications) https://www.snia.org/apps/SMI_Lab_Plugfest_Registration/register.php
Nov 10 – 13, 2008	San Diego, CA	SNIA Technical Symposium (SMI-S 1.5 content) http://www.snia.org/members/eventcentral

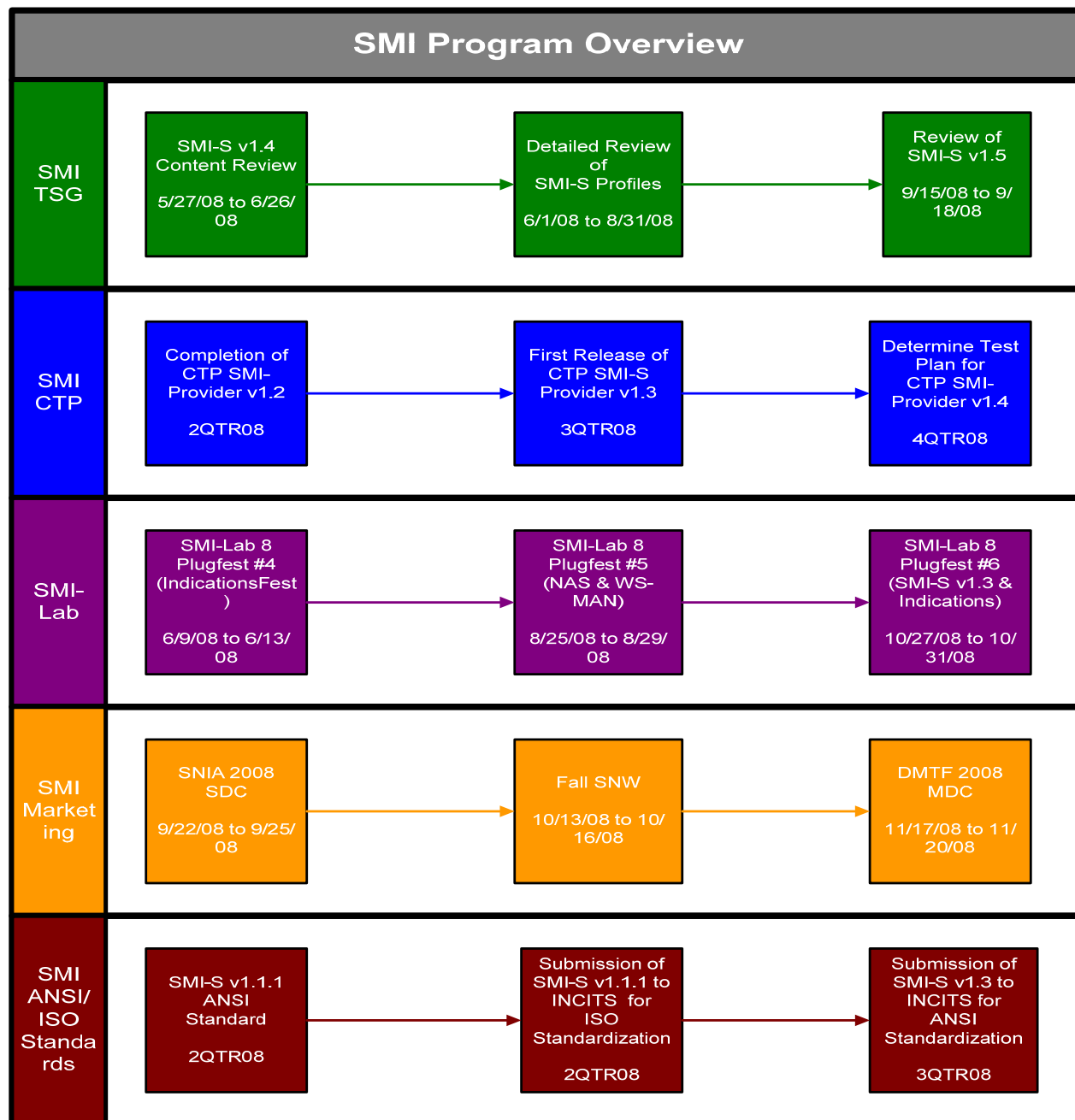
Nov 17 – 20,
2008

Santa Clara, CA

2008 Management Developers Conference (MDC)
<http://www.mandevcon.com>

Key Program Milestones ◆

The matrix below shows SMI-specification development milestones as they relate to all versions of the spec in the development or standardization pipeline. SNIA Members may access detailed production schedules for each version by visiting SMI-S Central at: <http://www.snia.org/members/smis/>.



List of Vendors Conformant to SMI-S

This portion of the program report lists the vendors that have passed SNIA-CTP SMI-Provider and SMI-Client conformance tests from SMI-S v1.0.2 to 1.2.0. Over the life of CTP 27 different companies have successfully run CTP against 52 different software products (clients and agents) covering over 500 device products. For more information on the statistic for CTP see http://www.snia.org/forums/smi/tech_programs/ctp/ctp_statistics. To learn more about SNIA-CTP and the vendor's products that have passed SNIA-CTP please visit: http://www.snia.org/forums/smi/tech_programs/ctp/.

Vendors with Products Conforming to SMI-S 1.2

EMC Corporation	Hitachi Limited
Hewlett-Packard Company	IBM
Hitachi Data Systems	NetApp

Vendors with Products Conforming to SMI-S 1.1

3PAR	IBM
ADIC	LSI Logic Corporation Engenio Storage Group
Brocade Communication Systems, Inc.	McDATA Corporation
Cisco Systems	NEC Corporation
EMC Corporation	NetApp
Emulex	Pillar Data Systems
Fujitsu Limited	QLogic
Hewlett-Packard Company	Quantum
Hitachi Data Systems	Xyratex
Hitachi Limited	

Vendors with Products Conforming to SMI-S 1.0

Brocade Communication Systems, Inc.	Hitachi Limited
Cisco Systems	IBM
CNT	LSI Logic Corporation / Engenio Storage Group
Dell Computer	McDATA Corporation
EMC Corporation	NetApp
Emulex	QLogic
Fujitsu Limited	Silicon Graphics
Hewlett-Packard Company	StorageTek
Hitachi Data Systems	Sun Microsystems, Inc.

SMI Key Contacts & Program Links

The Web sites and individuals listed below provide a careful path of the components and infrastructure of the SMI Program.

Conformance Testing Program	http://www.snia.org/ctp/
SMI-S Developers Group	http://groups.google.com/group/smi-s-developers-group
SMI Specification	http://www.snia.org/tech_activities/standards/curr_standards/smi/

SMI-Lab Program	http://www.snia.org/forums/smi/tech_programs/lab_program/
SMI-S Central	http://www.snia.org/members/smis/

SMI Governing Board

The SMI Governing Board is comprised of an elected set of volunteer governing members and a contingent of (non-voting) representatives from SMI related groups and SNIA staff. The SMI Governing Board establishes the strategic direction of the initiative, establishes SMI policies and procedures, and oversees SMI's various committees and taskforces.

Chairperson: Paul von Behren, Symantec smiboard-chair@snia.org

Co-Chairperson: Jerry Duggan, HP smiboard-chair@snia.org

Treasurer: Don Deel, EMC

Secretary: Mike Walker, IBM

Program Manager: Tom Mancuso (SNIA) tom.mancuso@snia.org

Conformance Testing Program (CTP)

CTP provides conformance test standards for the SNIA SMI Specification and assists in developing programs to support launch of SMI-S certification for companies developing products conformant to SMI-S.

Chairperson: Mike Walker, IBM smiconformance-chair@snia.org

Program Manager: James Rigger, SNIA james.rigger@snia.org

Website: <http://www.snia.org/ctp>

SMI-Lab Program (SMI-Lab)

The SMI-Lab program is an industry-wide collaborative program that helps companies accelerate the development and implementation of SMI-S based Client and Provider products from SNIA member companies.

Chairperson: Paul von Behren, Symantec smiimplement-chair@snia.org

Co-Chairperson: Eddie Houston, HP smiimplement-chair@snia.org

Website: http://www.snia.org/forums/smi/tech_programs/lab_program

Plugfest Registration Link: https://www.snia.org/apps/SMI_Lab_Plugfest_Registration/register.php

SMI Technical Steering Group (TSG)

The Storage Management Initiative (SMI) Technical Steering Group (TSG) is a sub-group of the SNIA Technical Council (TC) whose primary purpose is to provide a single storage management focus by guiding and managing the SNIA technical efforts for the creation, maintenance and evolution of a SNIA Storage Management Interface Specification (SMI-S) that will allow storage management systems to reliably and securely identify, monitor and control physical and logical resources, enabling multi-vendor management interoperability.

Chair: Steve Peters, HP

Website: www.snia.org/apps/org/workgroup/techcouncil/tsg_smi/

Technical Work Group	Title	Contact	Company	Email
Disk Resource Management TWG	Co-Chair	Steve Peters	HP	snia-drm-chair@snia.org
Disk Resource Management TWG	Co-Chair	Scott Baker	Olocity	snia-drm-chair@snia.org
Fibre Channel TWG	Chair	John Crandall	Brocade	snia-snmwg-fc-chair@snia.org
File Systems Management TWG	Co-Chair	Mike Walker	IBM	fsmtwg-chair@snia.org
File Systems Management TWG	Co-Chair	Gary Steffens	Pillar Data	fsmtwg-chair@snia.org
File Systems Management Regional TWG	Chair	Narsimha Reddy Challa	HP	fsmrtwg-chair@snia.org

Host TWG	Co-Chair	Duane Baldwin	IBM	hosttwg-chair@snia.org
Management Application TWG	Co-Chair	Duane Baldwin	IBM	maptwg-chair@snia.org
Management Application TWG	Co-Chair	Kurt Krems	Olocity	maptwg-chair@snia.org
Management Frameworks TWG	Chair	Don Deel	EMC	mftwg-chair@snia.org
Management Protocol TWG	Co-Chair	Steve Hand	Symantec	protocoltwg-chair@snia.org
Security TWG	Chair	Eric Hibbard	IBM	snia-security-chair@snia.org
SMI-S Core TWG	Co-Chair	John Crandall	Brocade	smiscoretwg-chair@snia.org
SMI-S Core TWG	Co-Chair	Paul von Behren	Symantec	smiscoretwg-chair@snia.org
Storage Media Library TWG	Co-Chair	Dr. Krishna Harathi	IBM	snia-sml-chair@snia.org
Storage Media Library TWG	Co-Chair	Steve Peters	HP	snia-sml-chair@snia.org