

# SMI Program Report

## August 2008



**Please Forward Within Your Organization**

The SNIA Storage Management Initiative (SMI, [www.snia.org/smi/](http://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.

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## Overall Program Status

- In July the SNIA Technical Council approved SMI-S 1.1.1 for submission to the International Organization for Standardization (ISO).
- Storage Management Specification Development Status:
  - SMI-S v1.2...Errata for Corrected Technical Position under review by Technical Council.
  - SMI-S v1.3...Errata mode
  - SMI-S v1.4...Developing Final Draft
  - SMI-S v1.5...Developing Initial Draft
- The SMI is gearing up for both SMI Committee and SMI Governing Board elections. Employees of SMI-member companies are eligible to run for any available seat. Specific details will be e-mailed by the SMI Secretary in October. If your company is not a member of the SMI and you would like more information about becoming a member please contact Tom Mancuso at [tom.mancuso@snia.org](mailto:tom.mancuso@snia.org).
- The SMI Technical Development Committee will roll-out a new SMI-S production schedule format during the SMI-S Technical Track on Monday at September Technical Symposium (<http://www.snia.org/events/technicalsymposium/>). The new format will enable stakeholders to better anticipate resource conflicts while reducing the level of scheduling detail and complexity.

- The Conformance Testing Program continues to formally recognize companies that are driving SMI-S to maturity. These companies are being recognized are for doing early testing of sections of SMI-S that have not been universally implemented yet. 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](http://www.snia.org/forums/smi/tech_programs/ctp/generalinfo/earlyadopters.html)

## Program Updates

### SMI Technical Steering Group (TSG)

- Implementation Draft of SMI-S v1.4 is now available to developers via SMI-S Central
- Scoping for 1.5 in progress with closure at the September Technical Symposium
- Performing content reviews on existing profiles to tighten the spec
- If you are planning to attend the next SMI-S Technical Symposium in September please visit: <http://www.snia.org/events/technicalsymposium/>

### Conformance Testing Program (CTP)

The last couple of months saw 2 major releases of the SMI-Provider 1.2 test suite. The releases covered the functional areas of Array, Fabric, NAS and Storage Virtualizer composed of 22 profiles. Seven companies have tested either Array or Fabric related products with the 1.2 test. Those companies are: Brocade Communications Systems, EMC Corporation, Hewlett-Packard Company, Hitachi Data Systems, Hitachi Limited, IBM and NetApp.

Other functional areas are available for testing, so please contact the Program Manager, James Rigger, at [james.rigger@snia.org](mailto:james.rigger@snia.org) if you have software you would like to test which is not covered by the functional areas listed above.

The committee is also glad to announce that DataDirect Networks completed their first testing of the SMI-S in June by testing with the SMI-Provider 1.1 test suite. This is DataDirect's first test with the CTP and we are happy to have them on board.

Please see <http://www.snia.org/ctp> for a full history of the companies that have tested and what they have tested.

The committee is currently working on the CTP-Provider test suite for SMI-S 1.3. The 1.3 test suite is stronger and more user friendly than previous releases. The test is being made stronger through the improvement, by the SMI authors, of input data as well as refinement of the test flow. Current work focus for this release includes debugging and finalizing the new features of the test as well as validating the test in the SMI lab with actual implementations.

One of the new features in CTP for 1.3 is a documented interface for including vendor contributed code for special purpose test modules. The inclusion of vendor contributed code will be beneficial to the CTP in that it will help to strengthen testing while also driving down development costs. Both IBM and EMC are assisting in the development of this interface.

Vendors who intend to utilize the 1.3 CTP Provider tests are encouraged to take advantage of the SMI plugfests. The August and October 08 plugfests, in particular, will be used to finalize and validate this version of the test.

The initial release of the test suite is scheduled for the third quarter of 2008, just in time for the SNIA's fall Storage Networking World.

The Conformance Testing Program for SMI-S is run by the SMI Conformance Committee. This committee is composed of a dedicated set of volunteers from the SMI Initiative member companies and the CTP program manager. This committee is responsible for producing the testing methodologies and test suites that are used to validate conformance of software products to the SMI-S.

This committee has 2 regularly scheduled conference calls each week. The first is the committee business meeting. It is held on Tuesdays at 1:00 P.M. Pacific and lasts for approximately 2 hours. Please see [www.snia.org/apps/org/workgroup/smiconformance/](http://www.snia.org/apps/org/workgroup/smiconformance/) if you are interested in joining this call.

The second is the weekly bug and operations call. This meeting concerns the issues associated with tracking SMI-Provider test suite issues and educating users about use of the test suite. This meeting is held on Tuesdays at 11:00 A.M. Pacific and lasts for approximately 1 hour. The telephone number is 866-704-2476 using a pass code of 238029.

Please contact James Rigger, Manager / Conformance Testing Program at (719) 884-8901 or [james.rigger@snia.org](mailto:james.rigger@snia.org) if you have any questions about the Conformance Testing Program or are interested in CTP testing of your company's products.

### SMI-Lab Program

The SMI Implementation Committee oversees the SMI's interoperability lab (SMI-Lab) at the SNIA Technology Center in Colorado Springs, CO. The Technology Center enables SMI-Lab participants to remotely access other participating vendors' equipment to perform interoperability testing. Face-2-Face plugfests are also held at the SNIA Technology Center and offer SMI-S vendors the ability to directly interact with each other in a vendor-neutral setting. 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 focused on indications (events). One of the challenges is that some details of indications interoperability are handled in the middleware used by application and provider developers. We tested basic indications using all the middleware used in new and recent SMI-S developments. The results of this testing will help refine CTP, clarify SMI-S, and create best practices documentation.
- The August 2008 plugfest from August 25th to 29th, 2008 will focus on SLP discovery. Full use of SLP involves use of non-SMI-S components; this activity will provide best practice documentation for end-users on optimal configuration of SLP for use with SMI-S. Plans at this plugfest include validating CTP SMI-Provider v1.3 testing for arrays, Fabric/Switch, and Virtual Tape Libraries. This event is also joint plugfest with DMTF's Server Management Forum.
- The October 2008 plugfest from October 27th to 31st, 2008 will include the following activities:
  - Validating the remainder of SMI-S 1.3 profiles. – including the new SMI-S 1.3 profiles.
  - Validation of CTP indications based on work from the June plugfest
  - Fabric ScaleFest - testing fabric and switch profile scalability
  - Host Profiles - recent implementations of several profiles related to hosts/servers - HBA, Host Discovered Resources, and Multipath Management
- The February 2009 plugfest is planned to focus on recipes - including new CTP interfaces for client contributed recipes
- The March 2009 plugfest is planned to focus on Alert Indications.
- The April 2009 plugfest is planned to revisit ScaleFest - scalability and performance in larger configurations. This plugfest will add "client pull operations", a new CIM feature that provides flow control for large payloads, allowing better memory management.

There are many advantages for companies participating in SMI-Lab including 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. 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/](http://www.snia.org/forums/smi/tech_programs/lab_program/) or contact Tom Mancuso directly at (719) 491- 2614.

### SMI Marketing

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](mailto: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.

- The SNIA Technical Council has approved submitting SMI-S v1.1.1 for ISO standardization.

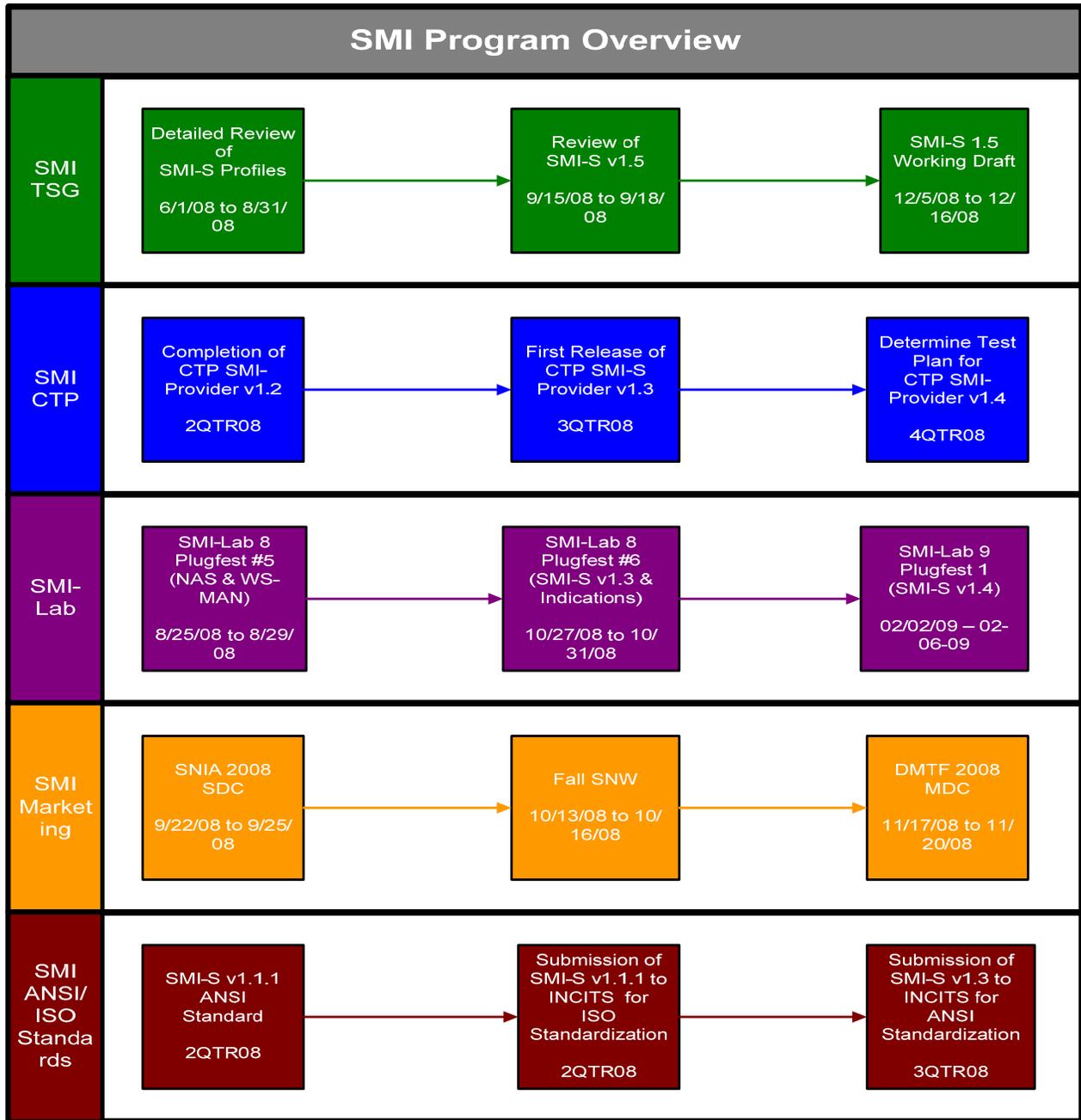
## Calendar of Upcoming SMI-S Related Events

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

Dates	Location	Event
Aug 25 - 29, 2008	Colorado Springs, CO	SMI-Lab8 Plugfest #5 (NAS and WS-MAN) <a href="https://www.snia.org/apps/SMI_Lab_Plugfest_Registration/register.php">https://www.snia.org/apps/SMI_Lab_Plugfest_Registration/register.php</a>
Sept 15 – 18, 2008	Chicago, IL	SNIA Technical Symposium (SMI-S v1.5 work items) <a href="http://www.snia.org/members/eventcentral">http://www.snia.org/members/eventcentral</a>
Sept 22 – 25, 2008	San Jose, CA	SNIA 2008 Storage Developers Conference (SDC) <a href="http://www.snia.org/events/storage-developer2008">http://www.snia.org/events/storage-developer2008</a>
Oct 13-16, 2008	Dallas, Texas	Fall SNW <a href="http://www.snwusa.com">http://www.snwusa.com</a>
Oct 27 – 29, 2008	Frankfurt, Germany	Europe SNW <a href="http://www.snweurope.com">http://www.snweurope.com</a>
Oct 27 - 31, 2008	Colorado Springs, CO	SMI-Lab8 Plugfest #6 (SMI-S v1.3 profiles and Indications) <a href="https://www.snia.org/apps/SMI_Lab_Plugfest_Registration/register.php">https://www.snia.org/apps/SMI_Lab_Plugfest_Registration/register.php</a>
Nov 10 – 13, 2008	San Diego, CA	SNIA Technical Symposium (SMI-S 1.5 content) <a href="http://www.snia.org/members/eventcentral">http://www.snia.org/members/eventcentral</a>
Nov 17 – 20, 2008	Santa Clara, CA	2008 Management Developers Conference (MDC) <a href="http://www.mandevcon.com">http://www.mandevcon.com</a>

## 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](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/](http://www.snia.org/forums/smi/tech_programs/ctp/).

### Vendors with Products Conforming to SMI-S 1.2

Brocade	
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
Data Direct	NetApp
EMC Corporation	Pillar Data Systems
Emulex	QLogic
Fujitsu Limited	Quantum
Hewlett-Packard Company	Xyratex
Hitachi Data Systems	
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	<a href="http://www.snia.org/ctp/">http://www.snia.org/ctp/</a>
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SMI-S Developers Group	<a href="http://groups.google.com/group/smi-s-developers-group">http://groups.google.com/group/smi-s-developers-group</a>
SMI Specification	<a href="http://www.snia.org/tech_activities/standards/curr_standards/smi/">http://www.snia.org/tech_activities/standards/curr_standards/smi/</a>
SMI-Lab Program	<a href="http://www.snia.org/forums/smi/tech_programs/lab_program/">http://www.snia.org/forums/smi/tech_programs/lab_program/</a>
SMI-S Central	<a href="http://www.snia.org/members/smis/">http://www.snia.org/members/smis/</a>

**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](mailto:smiboard-chair@snia.org)
- Co-Chairperson: Jerry Duggan, HP [smiboard-chair@snia.org](mailto:smiboard-chair@snia.org)
- Treasurer: Don Deel, EMC
- Secretary: Mike Walker, IBM
- Vincent Franceschini, HDS
- Roger Reich, Olocity

**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](mailto:smiconformance-chair@snia.org)
- Program Manager: James Rigger, SNIA [james.rigger@snia.org](mailto: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](mailto:smiimplement-chair@snia.org)
- Co-Chairperson: Eddie Houston, HP [smiimplement-chair@snia.org](mailto:smiimplement-chair@snia.org)
- Website: [http://www.snia.org/forums/smi/tech\\_programs/lab\\_program](http://www.snia.org/forums/smi/tech_programs/lab_program)
- Plugfest Registration Link: [https://www.snia.org/apps/SMI\\_Lab\\_Plugfest\\_Registration/register.php](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/](http://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	<a href="mailto:snia-drm-chair@snia.org">snia-drm-chair@snia.org</a>
Disk Resource Management TWG	Co-Chair	Scott Baker	Olocity	<a href="mailto:snia-drm-chair@snia.org">snia-drm-chair@snia.org</a>
Fibre Channel TWG	Chair	John Crandall	Brocade	<a href="mailto:snia-snmwg-fc-chair@snia.org">snia-snmwg-fc-chair@snia.org</a>
File Systems Management TWG	Co-Chair	Mike Walker	IBM	<a href="mailto:fsmtwg-chair@snia.org">fsmtwg-chair@snia.org</a>
File Systems Management TWG	Co-	Gary Steffens	Pillar	<a href="mailto:fsmtwg-chair@snia.org">fsmtwg-chair@snia.org</a>

	Chair		Data	
<b>File Systems Management Regional TWG</b>	Chair	Narsimha Reddy Challa	HP	fsmrtwg-chair@snia.org
<b>Host TWG</b>	Co-Chair	Duane Baldwin	IBM	hosttwg-chair@snia.org
<b>Management Application TWG</b>	Co-Chair	Duane Baldwin	IBM	maptwg-chair@snia.org
<b>Management Application TWG</b>	Co-Chair	Kurt Krems	Olocity	maptwg-chair@snia.org
<b>Management Frameworks TWG</b>	Chair	Don Deel	EMC	mftwg-chair@snia.org
<b>Management Protocol TWG</b>	Co-Chair	Steve Hand	Symantec	protocoltwg-chair@snia.org
<b>Security TWG</b>	Chair	Eric Hibbard	HDS	<a href="mailto:snia-security-chair@snia.org">snia-security-chair@snia.org</a>
<b>SMI-S Core TWG</b>	Co-Chair	John Crandall	Brocade	smiscoretwg-chair@snia.org
<b>SMI-S Core TWG</b>	Co-Chair	Paul von Behren	Symantec	smiscoretwg-chair@snia.org
<b>Storage Media Library TWG</b>	Co-Chair	Dr. Krishna Harathi	IBM	snia-sml-chair@snia.org
<b>Storage Media Library TWG</b>	Co-Chair	Steve Peters	HP	snia-sml-chair@snia.org