



Reviewer's Guide for the Storage Management Technical Specification (SMI-S) 1.7.0 Revision 5

Summary of Changes from V1.7.0 Revision 1 to V1.7.0 Revision 5

Disclaimer

This Reviewers' Guide is provided as a convenience to those reviewing SMI-S Version 1.7.0 Revision 5. This Reviewers' Guide is a good faith effort to identify the substantive changes that have been made since the IP review of SMI-S Version 1.7.0 Revision 1, but SNIA does not guarantee that all changes are identified. The obligations of SNIA Members are defined by the SNIA IP Policy and are not limited to those parts of the material that have changed since the last review. The SNIA does not represent that all substantive changes are listed or described fully and accurately in the Reviewers' Guide. The reviewing SNIA Member is fully responsible for its response, whether or not the Reviewers' Guide provides complete and accurate information regarding the substantive changes.

Changes in SMI-S 1.7.0 Revision 5

The specification is subdivided into eight parts. Currently, all parts are at the same version and revision level. All parts are Working Drafts.

Changes for each part since the last review are as follows:

All parts:

- Editorial notes and DRAFT material were hidden.
- USAGE text was revised to address code (now included in the front matter for all SNIA specifications)
- All recipes and their references were deleted.
- SMI-S Information Mode Annex: DMTF's CIM schema version was changed to V2.45.
- Instances of *subprofile* were changed to *profile*. In the annex, instances of *subprofile* were changed to *component profile* (TSG meeting voice vote)
- Profile versions and related text were updated. (TSG meeting voice vote)
- Indications have been replaced by DMTF Indications, and all affected clauses updated. (TSG meeting voice vote)
- Instances of *Experimental* within profiles already labeled as Experimental were removed to avoid confusion and redundancy. (Editorial change)
- CIM/XML was changed to CIM-XML (Response to ballot comments)

Part 1 Overview

- Multiple clauses
 - Term *WBEM server* used consistently.
- Functionality Matrix
 - Changed references from the Indication Profile to the Indications Profile in the Storage Management Technical Specification, Part 3 Common Profiles, 1.7.0 Rev 5, which now references the DMTF Indications.
- Dated Oct. 9, 2015

Part 2 Common Architecture

- Health and Fault Management
 - Table 1: OperationalStatus for Disk Drive, revised re operational status
 - Revised Array example and other text (CORE-SMIS-SCR-00084)
- Indications
 - Added as Clause 10, includes some material previously in Annex C (normative) Indication Filter Strings
 - References the DMTF Indications Profile, DSP 1054, version 1.2.2
- References
 - Five references were added to *DMTF references (Final)* section (to indicate most recent versions). One reference was added to *References under development* section.
 - Added link to the SNIA TLS Specification.
 - Deleted "V.1.0" from all references to the SNIA TLS Specification for Storage Systems in SMI-S v1.6.1 and later versions of SMI-S (TSG ballot)
- Security
 - Removed Experimental material in the Securityclause per voice vote in TSG.
- Standard Messages
 - Standard messages (in table format) remain in the document (after being removed in a previous revision, TSG meeting voice vote)
 - Changes applied to the Standard Message tables:
 - Promoted to experimental new alert standard messages for diagnostic tests on storage pools (SMIS-170-Draft-SCR00003)
 - Resolved duplicate use of standard messages in the Block Storage Messages section (TSG-SMIS-SCR00316.001)
 - Added alerts in Common Profile-Related Messages section (TSG-SMIS-SCR00315.001, SMIS-170-Draft-SCR00008)
 - Promoted the maturity level from DRAFT to EXPERIMENTAL for these revisions: Updated profiles to remove SNIA_ classes and use DMTF CIM_ classes. (TSG-SMIS-SCR00315.001, SMIS-170-Draft-SCR00008) in Common Profile-Related Messages section and Filesystem Messages section.
- Annex A (informative) Mapping CIM Objects to SNMP MIB Structures
 - Removed
- Annex B (normative) Compliance with the SNIA SMI Specification
 - Changed to Annex A
- Annex C (normative) Indication Filter Strings
 - Removed. Some material moved to new Indications profile
- Dated Oct. 22, 2015

Part 3 Common Profiles

- Multiple profiles (TSG-SMIS-SCR00315.001):
 - Promoted the maturity level from DRAFT to EXPERIMENTAL for these revisions: Update profiles to remove SNIA_ classes and use DMTF CIM_ classes in these profiles: Common, SAS Target Port, SB Target Ports, FC-SB-x Initiator Ports, Generic Initiator Ports, iSCSI Initiator Ports, FC Initiator Ports, SAS Initiator Ports, ATA Initiator Ports, SB Initiator Ports, FCoE Initiator Ports, Cascading, Server Profile, Experimental Indications, Proxy Server System Management, Operational Power, Indications
- ATA Initiator Ports
 - Deprecated this experimental profile (TSG-SMIS-SCR00318)

- Backend Ports
 - Removed this obsolete and deprecated profile (TSG-SMIS-SCR00318)
- Base Server Profile
 - Changed references from DSP1011 version 1.0.1 to DSP1011 version 1.0.2
- Cluster Profile
 - Removed this obsolete and deprecated profile (TSG-SMIS-SCR00318)
- Cascading Profile
 - Deleted the text of this profile (was deprecated) and added a reference to the last (non-deprecated) version of this profile, in SMI-S Version 1.4.0 Revision 6.
- Direct Attach (DA) Ports Profile
 - Promoted to Stable (TSG-SMIS-SCR00318)
- Extra Capacity Set
 - Removed this obsolete and deprecated profile (TSG-SMIS-SCR00318)
- FC Initiator Ports
 - Promoted to Stable (TSG-SMIS-SCR00318)
- FC Target Ports Profile
 - SMI Referenced Properties/Methods for CIM_FCPort Table, Row for NetworkAddresses (added): text changed to “8 unseparated upper case hex digits”
- FCoE Target Ports Profile
 - Moved within Part 3 to follow FC Target Ports Profile (CORE-SMIS-SCR-00084)
 - Text tweaked for FCoE, including test and figure referencing ProtocolControllerForPort (CORE-SMIS-SCR-00084)
- Generic Initiator Ports
 - Promoted to Stable (TSG-SMIS-SCR00318)
- Health Package
 - Promoted sections 25.1.8 (RECE) and 25.1.6 (TSG-SMIS-SCR00318)
- Indication Profile
 - Removed this obsolete and deprecated profile (TSG-SMIS-SCR00318)
- iSCSI Initiator Port Profile
 - Promoted to Stable (TSG-SMIS-SCR00318)
- iSCSI Target Ports Profile (SMIS-161-Errata-SCR00002)
 - Fixed typo: For CIM_ElementCapabilities, USAGE=CIM_iSCSICapabilities to System References
- Miscellaneous Security Profiles
 - Removed this obsolete and deprecated profile (TSG-SMIS-SCR00318)
- MultiSystem Profile
 - SMI Referenced Properties/Methods for CIM_RedundancySet table: RedundancyStatus row revised (SMIS-160-Errata-SCR00010)
- Parallel SCSI (SPI) Target Ports Profile
 - Removed per von Behren SMI-S V1.7r3 comments 2 and 3
- Power Supply Profile
 - Promoted to Stable (TSG-SMIS-SCR00318)
- Proxy Server System Management Profile
 - Added a reference to the last version of this profile in SMI-S Version 1.6.1 Revision 5
- Recipe Overview
 - Removed this obsolete and deprecated profile (TSG-SMIS-SCR00318)
- References
 - Updated some references here and within profiles, removed others (irrelevant)
 - Added *DMTF DSP1054 v1.2.2, Indications Profile* (and changed version to 1.2.2 throughout book)
 - Removed DSP0004, DSP0200, DSP0202, DSP0207

- SAS Initiator Ports Profile
 - Promoted to Stable (TSG-SMIS-SCR00318)
- Serial Attached SCSI (SAS) Target Port Profile (LSI/NetApp and HP implementations)
 - Promoted to Stable (TSG-SMIS-SCR00318)
- SATA Target Port Profile
 - Deprecated this experimental profile (TSG-SMIS-SCR00318)
- SPI Initiator Ports Profile
 - Deprecated this experimental profile (TSG-SMIS-SCR00318)
- SPI Target Ports Profile
 - Deprecated this experimental profile (TSG-SMIS-SCR00318)
 - Promoted to Stable (TSG-SMIS-SCR00318)
- Annex A (informative) SMI-S Information Mode
 - Removed statement about SNIA_ classes.
- Annex B Cross Profile Considerations
 - Added: content moved within Part 3 to Annex B. (CORE-SMIS-SCR-00084)
- Dated Oct. 9, 2015

Part 4 Block Devices

- Multiple files:
 - TSG-SMIS-SCR00315.001
 - Promoted the maturity level from DRAFT to EXPERIMENTAL for these revisions that update profiles to remove SNIA_ classes and use DMTF CIM_ classes in these profiles: Array, Block Services Package, Block Storage Views, CKD Block Services, Disk Drive Lite, Sparing, Erasure, Extent Composition, Masking and Mapping, Storage Server Asymmetry, Storage Virtualizer, Storage Element Protection, Replication Services, Pools from Volumes, Group Masking and Mapping, Storage Relocation, Thin Provisioning, Registry of Storage Extent Discriminators
 - TSG-SMIS-SCR00316.001
 - Promoted the changes from Draft to Experimental in SMI-S 1.7.0 for these revisions: Add additional alerts for *CIM*/block and file classes in these profiles: Array, Block Services Package, Replication Services
 - XML was changed to *CIM-XML* (Response to ballot comments)
- Array Profile (SMIS-170-Draft-SCR00004)
 - Added additional Mandatory Indication Filters to track modification of OperationalStatus and ElementName for the top-level CS
 - Fixes required for SCR00316 to resolve duplicate use of standard messages
- Block Server Performance Profile (SMIS-170-Draft-SCR00001.001):
 - Added support for Advanced Metrics
 - Updated and promoted the SNIA classes to CIM Classes
 - Made a minor adjustment to discovery of Rated Data
 - Marked the rated data properties experimental
 - Cleaned up references to Volume Management, which has been deprecated
 - In Summary of Statistics Support by Element table, revised legend for ReadIOTimeCounter and WriteIOTimeCounter for Top Level Computer System to be Optional (comments to SCR# SMIS-170-Draft-SCR00001)
 - Promoted Draft material to Experimental (SMIS-170-EXPERIMENTAL-SCR00001)
 - Corrected QueryStatisticalCollection to QueryStatisticsCollection

- Block Services Package
 - Added a new condition for keeping OperationalStatus on storage pools (SMIS-170-Draft-SCR00003)
 - Added additional Mandatory Indication Filters for Storage Pools, Storage Volumes and Logical Disks to track size and name changes (SMIS-170-Draft-SCR00004)
 - Added Alert indications from TP (SMIS-170-Draft-SCR00004)
 - Removed Experimental qualifier and dependency on Experimental Indications (SMIS-170-Draft-SCR00004)
 - AlertIndication DRM30 was marked as Mandatory (SMIS-170-Draft-SCR00004)
 - Removed RECIPE entry for unused recipe SMI_BlockServices_ExpandStorageElement (SMIS-150-Errata-SCR00061)
 - Promoted to experimental a new condition for keeping OperationalStatus on storage pools and updated the health section to reflect new OperationalStatus encodings (SMIS-170-Draft-SCR00003)
 - Promoted several sections to Stable (DRM-SMIS-SCR00254)
 - Added footnote to Table 15
- Block Services Resource Ownership Profile
 - Added reference to SMI-S Version 1.4 Revision 6.
- Block Services with Thin Provisioning (SMIS-170-Draft-SCR00004)
 - Added mandatory indications
- Copy Services Profile
 - Marked as Deperecatd (DRM-SMIS-SCR-00253.001)
- Disk Drive Profile
 - Removed this obsolete and already deprecated clause (DRM-SMIS-SCR00254)
- Disk Drive Lite (SMIS-170-Draft-SCR00004)
 - Added additional Mandatory Indication Filter to track modification of OperationalStatus
- Erasure Profile
 - Changed ErasureSetting to StorageErasureSetting, ErasureService to StorageErasureService ErasureCapabilities to StorageErasureCapabilities.
- Extent Composition Profile
 - Added footnotes to Table 292
- Extent Mapping Profile
 - Removed this obsolete and already deprecated clause (DRM-SMIS-SCR00254)
- Group Masking and Mapping (SMIS-170-Draft-SCR00004)
 - Made Alert Indication mandatory
 - Promoted to Stable (DRM-SMIS-SCR00254.000)
- LUN Creation Profile
 - Removed this obsolete and already deprecated clause (DRM-SMIS-SCR00254)
- LUN Mapping and Masking Profile
 - Removed this obsolete and already deprecated clause (DRM-SMIS-SCR00254)
- Masking and Mapping
 - Added additional Mandatory Indication Filter to track modification of masking objects StorageHardwareID, SAPAvailableForElement (SMIS-170-Draft-SCR00004)
 - Added alert if the Masking View changes(SMIS-170-Draft-SCR00004)
 - Added element and element description: 14.6.1 CIM_AssociatedPrivilege (TSG meeting voice vote)
- Pool Manipulation Capabilities, and Settings Profile
 - Removed this obsolete and already deprecated clause (DRM-SMIS-SCR00254)

- Replication Services
 - Promoted to Implemented (DRM-SMIS-SCR00253)
 - Made InstDeletion of StorageSynchronized mandatory (SMIS-170-Draft-SCR00004)
- References
 - Updated and added references
 - Added DMTF v1.2.2, Indications Profile (and changed references to V1.2.2 throughout book)
 - Removed irrelevant references: DSP0207, DSP0207
 - Added reference to DMTF DSP1102 Launch in Context Profile 1.0.0
- Storage Pool Diagnostics Profile
 - Added a new profile to cover diagnostic tests on storage pools (SMIS-170-Draft-SCR00003)
 - Promoted to experimental the new profile to cover diagnostic tests on storage pools (SMIS-170-Draft-SCR00003.002)
 - Table 671: corrected Version column for Diagnostic Job Control to be 1.0.0b
 - Table 683: Changed DIAG2 to DIAG0
- Storage Virtualizer Profile
 - Removed reference to Cascaing Profile, which has been removed.
 - Revised Figure 96: Storage Virtualizer System Instance to remove ProtocolControllerForPort and reference to SPC (TSG meeting voice vote)
- Thin Provisioning Profile
 - Promoted to Stable (DRM-SMIS-SCR00254)
 - AlertIndication DRM30 was marked as Mandatory (SMIS-170-Draft-SCR00004)
- Volume Management Profile
 - Added reference to SMI-S Version 1.6.1 in deprecated Volume Management Profile
- Annex A (informative) SMI-S Information Mode
 - Removed statement about SNIA_ classes
- Dated Oct. 22, 2015

Part 5 Filesystems

- Multiple profiles
 - Changed LocalAccessAvailable LocalAccessAvailableToFS, to respond to a DMTF change.
- File Export (SMIS-170-Draft-SCR00004)
 - Added mandatory indications for FileShare
- File Export Manipulation Profile (TSG-SMIS-SCR00317)
 - Added missing figure: FileShares and Simple Identity Management in Section 5.1.3.3.
 - Promoted all draft material to Experimental
 - Promoted to Stable (TSG-SMIS-SCR00319)
 - Changed requirement to Mandatory and description for ProtocolVersions property in Tables 33-36
 - Changed requirement to Mandatory for FileSharingProtocol property in Table 34
 - Added material associated with the DMTF Simple Identity Management Profile (DS1034 rev 1.1.0 as it pertains to ACL manipulation on file shares. (TSG-SMIS-SCR00317)
- File Server Manipulation Profile
 - Promoted to Stable (TSG-SMIS-SCR00319)
- Filesystem Manipulation Profile
 - Material related to ElementCapabilities (naming) in 9.1.3.1: Promoted to Stable (TSG-SMIS-SCR00319)
- Filesystem Profile (SMIS-170-Draft-SCR00004)
 - Added mandatory indications for LocalFileSystem
 - Material related to ElementCapabilities (naming) incl 8.1.2.3: Promoted to Stable (TSG-SMIS-SCR00319)

- Filesystem Quotas Profile
 - Fixed queries in CIM table 173
- NAS Head Profile
 - Promoted 12.1.3.8.1 to Stable (TSG-SMIS-SCR00319)
- TSG-SMIS-SCR00315.001
 - Promoted the maturity level from DRAFT to EXPERIMENTAL: Updated profiles to remove SNIA_ classes and use DMTF CIM_ classes
 - Revised CIM_AssociatedPrivilege; Added CIM_UserContact, CIM_Identity, CIM_AccountMapnagementService, CIM_AssignedIdentity
- References
 - Added DMTF DSP1054 v1.2.2, Indications Profile (and changed version to 1.2.2 throughout book)
 - Updated reference to DMTF DSP1054 Indications Profile
- Self-Contained NAS Profile
 - Promoted 13.1.3.1, 13.1.3. 2 (TSG-SMIS-SCR00319)
- Annex A SMI-S Information Model
 - Deleted “Most SMI-S Profiles are primarily based on the DMTF Final MOFs” per 5/22/15 TSG meeting consensus.
 - DMTF's CIM schema version changed to 2.45.0. (TSG meeting voice vote)
- References
 - Removed DSP0214.
 - Removed year from DSP1034
- Dated Oct. 9, 2015

Part 6 Fabric

- Multiple profiles:
 - Removed these Fabric profiles: Fabric Path Performance Profile, Fibre Channel Security Profile, Switch Configuration Data Profile, Extender Profile, and SAS Expander Profile. (OFFICIAL: FC-SMIS-SCR00074)
 - Promoted the maturity level from DRAFT to EXPERIMENTAL for removing SNIA_ classes and using CIM_ classes in these profiles: Fabric, Fabric Views, Switch, Blades, SAS Expander, FCoE Fabric (TSG-SMIS-SCR00315.001)
 - Incorrect reference, “(see Table 4 for more information about formats),” removed from several tables
- References
 - Added DMTF DSP1054 v1.2.2, Indications Profile (and changed to V1.2.2 throughout book)
 - Removed SPC-2
 - Moved SPC-3 reference from 2.2 to 2.1
- Dated Oct. 9, 2015

Part 7 Host Elements

- FC HBA Profile
 - Removed the profile content and added text re it being Deprecated. (CORE-SMIS-SCR-000)
- Host Discovered Resources (TSG-SMIS-SCR00315.001)
 - Promoted the maturity level from DRAFT to EXPERIMENTAL for update to remove SNIA_ classes and use DMTF CIM_ classes
- iSCSI Initiator Profile
 - Removed all occurrences of “(Host Hardware RAID Controller)”. (CORE-SMIS-SCR-000)

- Memory Configuration Profile (SMIS-170-Draft-SCR00006)
 - Updated due to class and property name changes in DMTF Multi-type Memory profile
 - Introduced staged request concept
 - Added use cases
 - Addressed comments from internal and partner reviews
 - Changed diagrams approved in Core TWG 3/23/15
- Persistent Memory Configuration Profile (SMIS-170-Draft-SCR00006)
 - Added new material (most of profile content) to manage NVDIMMs
 - Changed diagrams approved in Core TWG 3/23/15
- References
 - Added DMTF DSP1054 v1.2.2, Indications Profile (and changed version to 1.2.2 throughout book)
 - Updated DSP 1071, Multi-type System Memory Profile reference here and in profiles.
 - Added reference to DSP 1119, 1.0.0b Diagnostics Job Control Profile |
 - Removed reference to DSP 1119\
 - Removed 2.3.
- SB Multipath Management Profile
 - Promoted the maturity level from DRAFT to EXPERIMENTAL for update to remove SNIA_ classes and use DMTF CIM_ classes (TSG-SMIS-SCR00315.001)
 - Added reference to SMI-S Version 1.6.1 Revision 5. No content in this deprecated profile SB Multipath
- Annex A (informative) SMI-S Information Model
 - DMTF's CIM schema version changed to 2.45.0. (TSG meeting voice vote)
- Dated Oct. 9, 2015

Part 8 Media Libraries

- Multiple Profiles:
 - Per TSG voice vote, removed these profiles that were Experimental and using SNIA_ classes:
 - Media Movement Profile
 - Partitioned Tape Library Profile
 - Virtual Tape Library Profile
 - Virtual Tape Library Copy Profile
 - Library Views Profile
 - VTL Capacity
 - Reporting Profile
- References
 - Added DMTF DSP1054 v1.2.2, Indications Profile (and changed version to 1.2.2 throughout book)
 - Removed reference to DMTF DSP0200, CIM Operations over HTTP
- Storage Library profile
 - Simplified the use case for discovery of data path technology (CORE-SMIS-SCR-00084)
- Dated Oct. 9, 2015