

# Swordfish Working Draft Notice

**Version 1.0.7a**

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## SNIA Working Draft

**November 8, 2018**

**The following files are included in this Working Draft Release  
(Swordfish\_v1.0.7a.zip):**

- **Swordfish\_v1.0.7a\_WorkingDraft.pdf (this file)**
- **Swordfish\_v1.0.7a\_Schema.zip**
- **Swordfish\_v1.0.7a\_Specification.pdf**
- **Swordfish\_v1.0.7\_UserGuide.pdf**

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## Revision History

Revision	Date	Changes
V0.5	3/16/16	Initial work in progress release
V0.6	5/24/16	Updated to include content including replication for block services
V0.8	7/28/16	Updated to include content including filesystem schema, json schema
V0.9	8/30/16	<p>First draft of <i>Swordfish Scalable Storage Management API User's Guide</i>.  First draft of <i>Swordfish Scalable Storage Management API Specification</i>.  Changes to schema:</p> <ul style="list-style-type: none"> <li>• Clarifications to use of Collections vs ResourceCollections and appropriate notation of Read/Write on Collections</li> <li>• Some updates to how LineOfService is represented in ClassOfService (to simplify hierarchy)</li> <li>• Clarifications in File System schemas</li> </ul>
V1.0	9/19/16	<p>First Release of <i>Swordfish Scalable Storage Management API User's Guide</i>.  First Release of <i>Swordfish Scalable Storage Management API Specification</i>.  Schema changes:</p> <ul style="list-style-type: none"> <li>• Simplified StorageServices</li> <li>• Updated descriptions and long descriptions</li> <li>• Changed GeographicScope to FailureDomainScope</li> </ul>
V1.0.1	10/12/16	<p>Errata release v1.0.1.  Mockup Overview document updated for clarity.  Mockups updated to reflect changes in schema.  Spec and schema updates:</p> <ul style="list-style-type: none"> <li>• General clean up and formatting consistency</li> <li>• Clarify use of StorageGroup</li> <li>• Detail interactions between DefaultValue and Nullable in schema attributes</li> <li>• Set default values for Boolean attributes</li> <li>• Clarify appropriate EntitySet referencing</li> <li>• Improve descriptions for many schema attributes</li> <li>• Replace IsDefault with reference to ClassOfService in StoragePool and StorageService</li> <li>• Align Location with Redfish model</li> <li>• Change time values to conform to ISO 8601</li> <li>• Collapse TargetEndpointGroup and InitiatorEndpointGroup into EndpointGroup</li> <li>• Property and enumeration deleted from StorageReplicaInfo to remove redundancy with ReplicaSyncType</li> <li>• Add DefaultClassOfService link to StoragePool and StorageVolume in lieu of ClassOfService.IsDefault</li> <li>• Remove invalid measurement annotation from DataProtectionLoSCapabilities</li> <li>• Moved schedule to Redfish</li> </ul> <p>User's Guide:</p> <ul style="list-style-type: none"> <li>• General clean up and formatting consistency</li> <li>• A discussion of unused CoS and LoS entries in ServiceCatalog</li> <li>• Improve purpose for many use cases</li> </ul>

Revision	Date	Changes
1.0.2	11/1/16	<p>Errata release v1.0.2</p> <p>Specification and user's guide minor formatting fixes.</p> <p>Clarifications to specification language.</p> <p>Mockups updated to reflect changes in schema.</p> <p>Spec and schema updates:</p> <ul style="list-style-type: none"> <li>Change multiple collections' types from collections (arrays) to ResourceCollections to conform to Redfish usage guidelines: <ul style="list-style-type: none"> <li>Capacity.CapacitySource ProvidingVolumes, ProvidingPools and ProvidingDrives</li> <li>StorageService.StorageService StorageGroups, ClientEndpointGroups and ServerEndpointGroups</li> </ul> </li> <li>Change multiple collections' types from collections (arrays) to ResourceCollections to conform to Redfish usage guidelines and move NavigationProperties from Links section: <ul style="list-style-type: none"> <li>EndpointGroup Endpoints</li> <li>FileShare EthernetInterfaces</li> <li>StoragePool ClassesOfService</li> <li>StorageService ClassesOfService</li> </ul> </li> </ul>
1.0.2a	11/8/16	<p>Schema changes to 5 files to fix include directories to specify <a href="http://redfish.dmtf.org/schemas/swordfish/v1">http://redfish.dmtf.org/schemas/swordfish/v1</a> instead of <a href="http://redfish.dmtf.org/schemas/v1">http://redfish.dmtf.org/schemas/v1</a></p> <p>Updated schedule_v1 schema to 8601 format compliance.</p>
1.0.3	1/24/17	<p>Schema changes:</p> <ul style="list-style-type: none"> <li>Move complex types and enum to versioned namespace</li> <li>Schedule schema: add property</li> <li>json schema fix (Swordfish to swordfish)</li> </ul> <p>Specification enhancements, multiple areas</p> <p>User's guide: multiple new use cases and new document section</p>
1.0.4	4/25/17	<p>Errata release with minor updates to schema:</p> <ul style="list-style-type: none"> <li>Move FileShare collection</li> <li>Integrate DMTF and SNIA versions of Volume</li> <li>Fix incorrect property references and update descriptions.</li> </ul> <p>Update mockups.</p> <p>User's guide: Update cross-references.</p>
1.0.5	10/3/17	<p>Errata release with updates to schema:</p> <ul style="list-style-type: none"> <li>Simplifications to StorageGroups and EndpointGroups based on implementation feedback.</li> <li>Addition of Swordfish Message Registry</li> <li>Addition of performance metrics, added to block</li> <li>Add DMTF Volume changes: Dedicated Spare collection</li> </ul> <p>Fix inconsistencies in mockups.</p> <p>User's Guide:</p> <ul style="list-style-type: none"> <li>Add introductory material to actors and management domain</li> <li>Minor fixes and updates to use cases</li> </ul>

Revision	Date	Changes
1.0.6	2/13/18	<p>Specification:</p> <ul style="list-style-type: none"> <li>Updated Storage Systems model – added notion of Integrated Service Configuration in addition to (and named) Hosted Service Configuration.</li> <li>Added ComplexType common definition section.</li> <li>Added/updated common Redfish property definitions.</li> <li>Updates to conform to new SNIA templates.</li> </ul> <p>Errata release with updates to schema:</p> <ul style="list-style-type: none"> <li>Deprecated use of Swordfish Location schema in favor of Redfish Resource.Location</li> <li>Added support for PersistentMemory capacity source types</li> <li>New event message entries</li> <li>Moved enum and ComplexType definitions to unversioned namespaces (ensures proper json schema version generation from tools), cleaned up references to abstract types and unreferenced versions</li> </ul> <p>Removed mockups from release bundle. Refer to <a href="http://snia.org/swordfish">snia.org/swordfish</a> and <a href="http://swordfishmockups.com">swordfishmockups.com</a> for mockup availability.</p> <p>User's Guide:</p> <ul style="list-style-type: none"> <li>Add on-demand replication use cases</li> </ul>
1.0.7	10/12/18	<p>Specification:</p> <ul style="list-style-type: none"> <li>Updated Enhanced Spare Capacity Management Model</li> <li>Deprecated Remaining Capacity</li> <li>Added OpenAPI support: schema references and OpenAPI YAML files</li> <li>Added iSCSI properties for CHAP</li> <li>Event usage enhancements and guidance</li> <li>Volume schema updates – RAID Type enum (deprecating VolumeType usage), add ReplicaTargets</li> </ul> <p>Schema updates:</p> <ul style="list-style-type: none"> <li>Annotations enhancements: Capabilities designations, owning entities, Redfish.Required usage</li> <li>Clarified and updated ClassOfService IsDefault property usage</li> <li>Updated Capabilities location in hierarchy</li> <li>Fix cardinality issue of StorageReplicaInfo usage in StorageGroups and Volume</li> <li>Consolidate Client and Server Endpoint Groups into single Endpoint Group entity (deprecate usage of separate Client Endpoint Group and Server Endpoint Group)</li> <li>Add MappedVolume construct to StorageGroup – adds LUN info and other properties</li> </ul> <p>User's Guide:</p> <ul style="list-style-type: none"> <li>Editorial cleanup of JSON</li> </ul>
1.0.7a	11/8/2018	<p>Specification:</p> <ul style="list-style-type: none"> <li>Restored RAIDType property that was missing from 1.0.7</li> <li>Minor correction to schema versioning Deprecated Remaining Capacity</li> </ul>

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