

INTERNATIONAL
STANDARD

ISO/IEC
24775-2

Second edition
2021-03

**Information technology — Storage
management —**

**Part 2:
Common Architecture**

**iTeh STANDARD PREVIEW
(standards.iteh.ai)**

[ISO/IEC PRF 24775-2](https://standards.iteh.ai/catalog/standards/sist/4c8a0d0b-3fd9-42b3-b021-0fa6ae705f41/iso-iec-prf-24775-2)

<https://standards.iteh.ai/catalog/standards/sist/4c8a0d0b-3fd9-42b3-b021-0fa6ae705f41/iso-iec-prf-24775-2>



Reference number
ISO/IEC 24775-2:2021(E)

© ISO/IEC 2021

iTeh STANDARD PREVIEW (standards.iteh.ai)

[ISO/IEC PRF 24775-2](https://standards.iteh.ai/catalog/standards/sist/4c8a0d0b-3fd9-42b3-b021-0fa6ae705f41/iso-iec-prf-24775-2)
<https://standards.iteh.ai/catalog/standards/sist/4c8a0d0b-3fd9-42b3-b021-0fa6ae705f41/iso-iec-prf-24775-2>



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of document should be noted (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents) or the IEC list of patent declarations received (see <http://patents.iec.ch>).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

iTeh STANDARD PREVIEW

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html. [ISO/IEC PRF 24775-2](https://standards.iteh.ai/catalog/standards/sist/4c8a0d0b-3fd9-42b3-b021-1a46793d1f1e/iso-iec-24775-2)

<https://standards.iteh.ai/catalog/standards/sist/4c8a0d0b-3fd9-42b3-b021-1a46793d1f1e/iso-iec-24775-2>

This document was prepared by SNIA (as Storage Management Technical Specification, Part 2 Common Architecture, Version 1.8.0, Revision 5) and drafted in accordance with its editorial rules. It was adopted, under the JTC 1 PAS procedure, by Joint Technical Committee ISO/IEC JTC 1, *Information technology*.

This second edition cancels and replaces the first edition (ISO/IEC 24775-2:2014), which has been technically revised.

The main changes compared to the previous edition are as follows:

- USAGE text was revised to address code (now included in the front matter for all SNIA specifications)
- All recipes and their references were deleted.
- 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).

ISO/IEC 24775-2:2021(E)

- Annex: SMI-S Information Model.
- The CIM schema version was changed to 2.51 for V1.8.0 Rev3.
- 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 Security clause 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).
<https://standards.iteh.ai/catalog/standards/sist/4c8a0d0b-3fd9-42b3-b021-61abac705441/iso-iec-prf-24775-2>
 - 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 Structure 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.

A list of all parts in the ISO/IEC 24775 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

INTENDED AUDIENCE

This document is intended for use by individuals and companies engaged in developing, deploying, and promoting interoperable multi-vendor SANs through the Storage Networking Industry Association (SNIA) organization.

CHANGES TO THE SPECIFICATION

Each publication of this specification is uniquely identified by a three-level identifier, comprised of a version number, a release number and an update number. The current identifier for this specification is version 1.8.0. Future publications of this specification are subject to specific constraints on the scope of change that is permissible from one publication to the next and the degree of interoperability and backward compatibility that should be assumed between products designed to different publications of this standard. The SNIA has defined three levels of change to a specification:

- **Major Revision:** A major revision of the specification represents a substantial change to the underlying scope or architecture of the SMI-S API. A major revision results in an increase in the version number of the version identifier (e.g., from version 1.x.x to version 2.x.x). There is no assurance of interoperability or backward compatibility between releases with different version numbers.
- **Minor Revision:** A minor revision of the specification represents a technical change to existing content or an adjustment to the scope of the SMI-S API. A minor revision results in an increase in the release number of the specification's identifier (e.g., from x.1.x to x.2.x). Minor revisions with the same version number preserve interoperability and backward compatibility.
- **Update:** An update to the specification is limited to minor corrections or clarifications of existing specification content. An update will result in an increase in the third component of the release identifier (e.g., from x.x.1 to x.x.2). Updates with the same version and minor release levels preserve interoperability and backward compatibility.

<https://standards.iso.org/iso/iec-prf-24775-2>
ISO/IEC PRF 24775-2
TYPOGRAPHICAL CONVENTIONS
<https://standards.iso.org/iso/iec-prf-24775-2>

Maturity Level

In addition to informative and normative content, this specification includes guidance about the maturity of emerging material that has completed a rigorous design review but has limited implementation in commercial products. This material is clearly delineated as described in the following sections. The typographical convention is intended to provide a sense of the maturity of the affected material, without altering its normative content. By recognizing the relative maturity of different sections of the standard, an implementer should be able to make more informed decisions about the adoption and deployment of different portions of the standard in a commercial product.

This specification has been structured to convey both the formal requirements and assumptions of the SMI-S API and its emerging implementation and deployment lifecycle. Over time, the intent is that all content in the specification will represent a mature and stable design, be verified by extensive implementation experience, assure consistent support for backward compatibility, and rely solely on content material that has reached a similar level of maturity. Unless explicitly labeled with one of the subordinate maturity levels defined for this specification, content is assumed to satisfy these requirements and is referred to as "Finalized". Since much of the evolving specification

content in any given release will not have matured to that level, this specification defines three subordinate levels of implementation maturity that identify important aspects of the content's increasing maturity and stability. Each subordinate maturity level is defined by its level of implementation experience, its stability and its reliance on other emerging standards. Each subordinate maturity level is identified by a unique typographical tagging convention that clearly distinguishes content at one maturity model from content at another level.

Experimental Maturity Level

No material is included in this document unless its initial architecture has been completed and reviewed. Some content included in this document has complete and reviewed design, but lacks implementation experience and the maturity gained through implementation experience. This content is included in order to gain wider review and to gain implementation experience. This material is referred to as “Experimental”. It is presented here as an aid to implementers who are interested in likely future developments within the SMI specification. The contents of an Experimental profile may change as implementation experience is gained. There is a high likelihood that the changed content will be included in an upcoming revision of the specification. Experimental material can advance to a higher maturity level as soon as implementations are available. Figure 1 is a sample of the typographical convention for Experimental content.

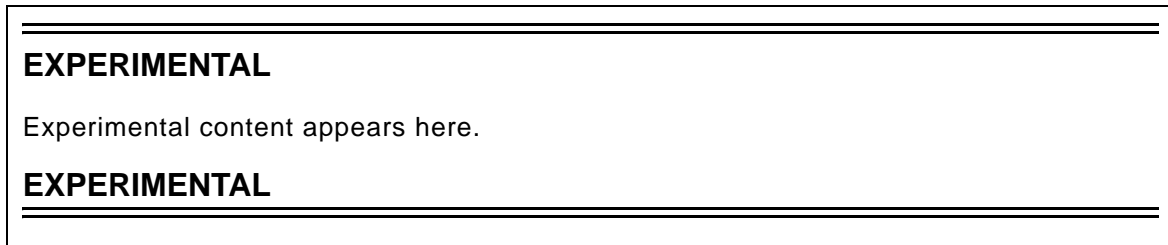


Figure 1 - Experimental Maturity Level Tag

Implemented Maturity Level

Profiles for which initial implementations have been completed are classified as “Implemented”. This indicates that at least two different vendors have implemented the profile, including at least one provider implementation. At this maturity level, the underlying architecture and modeling are stable, and changes in future revisions will be limited to the correction of deficiencies identified through additional implementation experience. Should the material become obsolete in the future, it must be deprecated in a minor revision of the specification prior to its removal from subsequent releases. Figure 2 is a sample of the typographical convention for Implemented content.

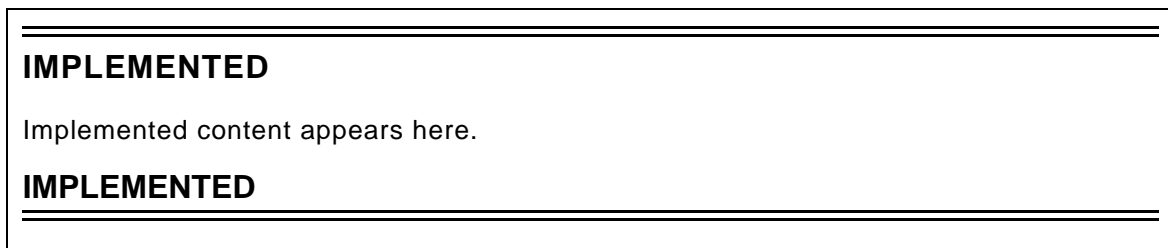


Figure 2 - Implemented Maturity Level Tag

Stable Maturity Level

Once content at the Implemented maturity level has garnered additional implementation experience, it can be tagged at the Stable maturity level. Material at this maturity level has been implemented by three different vendors, including both a provider and a client. Should material that has reached this maturity level become obsolete, it may only be deprecated as part of a minor revision to the specification. Material at this maturity level that has been deprecated may only be removed from the specification as part of a major revision. A profile that has reached this maturity level is guaranteed to preserve backward compatibility from one minor specification revision to the next. As a result, Profiles at or above the Stable

maturity level shall not rely on any content that is Experimental. Figure 3 is a sample of the typographical convention for Implemented content.

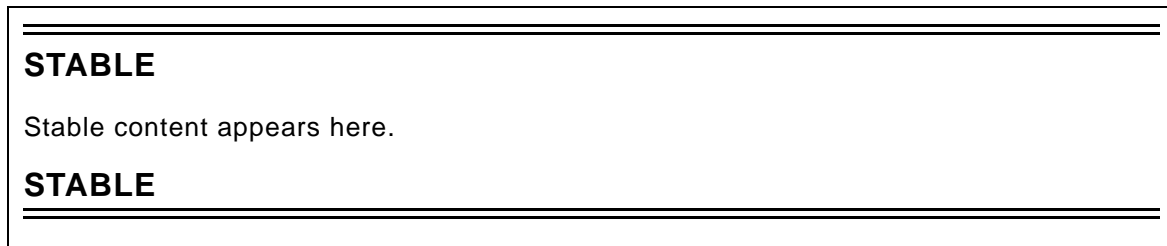


Figure 3 - Stable Maturity Level Tag

Finalized Maturity Level

Content that has reached the highest maturity level is referred to as “Finalized.” In addition to satisfying the requirements for the Stable maturity level, content at the Finalized maturity level must solely depend upon or refine material that has also reached the Finalized level. If specification content depends upon material that is not under the control of the SNIA, and therefore not subject to its maturity level definitions, then the external content is evaluated by the SNIA to assure that it has achieved a comparable level of completion, stability, and implementation experience. Should material that has reached this maturity level become obsolete, it may only be deprecated as part of a major revision to the specification. A profile that has reached this maturity level is guaranteed to preserve backward compatibility from one minor specification revision to the next. Over time, it is hoped that all specification content will attain this maturity level. Accordingly, there is no special typographical convention, as there is with the other, subordinate maturity levels. Unless content in the specification is marked with one of the typographical conventions defined for the subordinate maturity levels, it should be assumed to have reached the Finalized maturity level.

[ISO/IEC PRF 24775-2](https://standards.iteh.ai/catalog/standards/sist/4c8a0d0b-3fd9-42b3-b021-0f6ae705f41/iso-iec-prf-24775-2)

Deprecated Material [https://standards.iteh.ai/catalog/standards/sist/4c8a0d0b-3fd9-42b3-b021-](https://standards.iteh.ai/catalog/standards/sist/4c8a0d0b-3fd9-42b3-b021-0f6ae705f41/iso-iec-prf-24775-2)

Non-Experimental material can be deprecated in a subsequent revision of the specification. Sections identified as “Deprecated” contain material that is obsolete and not recommended for use in new development efforts. Existing and new implementations may still use this material, but shall move to the newer approach as soon as possible. The maturity level of the material being deprecated determines how long it will continue to appear in the specification. Implemented content shall be retained at least until the next revision of the specialization, while Stable and Finalized material shall be retained until the next major revision of the specification. Providers shall implement the deprecated elements as long as it appears in the specification in order to achieve backward compatibility. Clients may rely on deprecated elements, but are encouraged to use non-deprecated alternatives when possible.

Deprecated sections are documented with a reference to the last published version to include the deprecated section as normative material and to the section in the current specification with the replacement. Figure 4 contains a sample of the typographical convention for deprecated content.



Figure 4 - Deprecated Tag

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO/IEC PRF 24775-2](https://standards.iteh.ai/catalog/standards/sist/4c8a0d0b-3fd9-42b3-b021-0fa6ae705f41/iso-iec-prf-24775-2)
<https://standards.iteh.ai/catalog/standards/sist/4c8a0d0b-3fd9-42b3-b021-0fa6ae705f41/iso-iec-prf-24775-2>

Contents

List of Figures	15
List of Tables	17
Foreword	23
1 Scope	25
2 Normative references	27
2.1 General	27
2.2 Approved references	27
2.3 DMTF references (Final)	27
2.4 IETF references	28
2.5 References under development	29
2.6 Other references	29
3 Terms, definitions, symbols, abbreviations, and conventions	31
3.1 Terms and definitions	31
3.2 Acronyms and abbreviations	37
3.3 Keywords	37
3.4 Conventions	38
4 Transport and Reference Model	41
4.1 Introduction	41
4.1.1 Overview	41
4.1.2 Language Requirements	41
4.1.3 Communications Requirements	41
4.1.4 XML Message Syntax and Semantics	41
4.2 Transport Stack	42
4.3 Reference Model	42
4.3.1 Overview	42
4.3.2 Roles for Interface Constituents	43
4.3.3 Cascaded Agents	43
5 Health and Fault Management	45
5.1 Objectives	45
5.2 Overview	45
5.3 Terms	45
5.4 Description of Health and Fault Management	46
5.4.1 Operational Status and Health State (Polling)	46
5.4.2 Standard Errors and Events	47
5.4.3 Indications	47
5.4.4 Event Correlation and Fault Containment	47
5.4.5 Fault Regions	50
5.4.6 Examples	52
6 Object Model General Information	55
6.1 Model Overview (Key Resources)	55
6.1.1 Overview	55
6.1.2 Introduction to CIM UML Notation	55
6.2 Techniques	56
6.2.1 CIM Fundamentals	56
6.2.2 Modeling Profiles	58
6.2.3 CIM Naming	58
7 Correlatable and Durable Names	59

7.1	Overview	59
7.2	Guidelines for SCSI Logical Unit Names	60
7.3	Guidelines for FC-SB-2 Device Names.....	60
7.4	Guidelines for Port Names	61
7.5	Guidelines for Storage System Names	61
7.6	Standard Formats for Correlatable Names	62
7.6.1	General.....	62
7.6.2	Standard Formats for Logical Unit Names	63
7.6.3	Standard Formats for Port Names.....	64
7.6.4	Standard Formats for Fabric Names	65
7.6.5	Standard Formats for Storage System Names.....	65
7.6.6	Operating System Device Names	67
7.6.7	Case Sensitivity	68
7.7	Testing Equality of correlatable Names	68
7.8	iSCSI Names.....	69
8	Standard Messages.....	71
8.1	Overview	71
8.2	Registries for Standard Messages	71
8.3	SNIA Standard Messages.....	71
8.3.1	Common Profile-related Messages	71
8.3.2	Block Storage Messages.....	85
8.3.3	Fabric Messages.....	118
8.3.4	Filesystem Messages.....	123
8.3.5	Host Messages.....	135
8.3.6	Media Library Messages	138
9	Service Discovery.....	171
9.1	Objectives	171
9.2	Overview	171
9.3	SLP Messages.....	173
9.4	Scopes	174
9.5	Services Definition	175
9.5.1	SLP Terms.....	175
9.5.2	Service Type.....	175
9.5.3	Service Attributes	175
9.6	User Agents (UA)	175
9.7	Service Agents (SAs)	176
9.8	Directory Agents (DAs)	177
9.9	Service Agent Server (SA Server)	177
9.9.1	General Information.....	177
9.9.2	SA Server (SAS) Implementation	177
9.9.3	SA Server (SAS) Clients.....	178
9.9.4	SA Server Configuration.....	178
9.9.5	SA Server Discovery	180
9.9.6	SAS Client Registration	180
9.10	Configurations	180
9.10.1	Overview.....	180
9.10.2	Multicast Configurations	180
9.10.3	No Multicast configuration	181
9.10.4	Multicast Islands.....	182
10	Indications	185

10.1	Indications profile	185
10.1.1	Profile Support.....	185
10.1.2	Creating a client defined indication and subscription	185
10.1.3	ListenerDestination.....	185
10.2	Indication Filter Strings.....	185
10.2.1	Definition Syntax.....	185
10.2.2	Instance Creation	186
10.2.3	Instance Deletion.....	186
10.2.4	Modification of any value in an array property.....	186
10.2.5	Modification to either of Two Specific values in an Array Property.....	186
10.2.6	Alert.....	187
11	SMI-S Roles	189
11.1	Introduction	189
11.2	SMI-S Client	190
11.2.1	Overview.....	190
11.2.2	SLP Functions	190
11.2.3	Generic Operations	190
11.2.4	Security Considerations.....	190
11.2.5	Lock Management Functions	190
11.3	Dedicated SMI-S Server	190
11.3.1	Overview.....	190
11.3.2	SLP Functions.....	191
11.3.3	Generic Operations	191
11.3.4	Security Considerations.....	192
11.3.5	Lock Management Functions	192
11.4	General Purpose SMI-S Server	192
11.4.1	Overview.....	192
11.4.2	SLP Functions	192
11.4.3	Generic Operations	193
11.4.4	Lock Management Functions	193
11.4.5	Provider Sub-role.....	193
11.5	Directory Server	193
11.5.1	SLP Functions	193
11.5.2	Generic Operations	193
11.5.3	Security Considerations.....	193
11.5.4	Lock Management Functions	194
11.6	Combined Roles on a Single System.....	194
11.6.1	Overview.....	194
11.6.2	General Purpose SMI-S Server as a Profile Aggregator.....	194
12	Installation and Upgrade.....	195
12.1	Introduction	195
12.2	Role of the Administrator.....	195
12.3	Goals.....	195
12.3.1	Non-Disruptive Installation and De-installation.....	195
12.3.2	Plug-and-Play.....	195
12.4	Server Deployment	196
12.4.1	General.....	196
12.4.2	Controlled Environment.....	196
12.4.3	Multiple WBEM Server systems	196
12.4.4	Shared WBEM Server	197
12.4.5	Uninstallation	198

- 12.4.6 Update 198
- 12.4.7 Reconfiguration 198
- 12.5 WBEM Service Support & Related Functions 198
 - 12.5.1 Installation 198
 - 12.5.2 Multiple WBEM Servers on a Single Server System 199
 - 12.5.3 Uninstallation/Upgrade 199
 - 12.5.4 Reconfiguration 199
 - 12.5.5 Failure..... 199
- 12.6 Client 199
 - 12.6.1 Uninstallation 199
 - 12.6.2 Reconfiguration 199
- 12.7 Directory Service 199
 - 12.7.1 Installation 199
 - 12.7.2 Uninstallation/Failure 200
- 12.8 Issues with Discovery Mechanisms 200
- 13 Security 201
 - 13.1 Requirements 201
 - 13.1.1 Overview 201
 - 13.1.2 General Requirements for HTTP Implementations 202
 - 13.2 Description of SMI-S Security 202
 - 13.2.1 Security Scope 202
 - 13.2.2 Transport Security 203
 - 13.2.3 Authentication 203
 - 13.2.4 Service Discovery 204
- Annex A (informative) SMI-S Information Model 207
- Annex B (normative) Compliance with the SNIA SMI Specification 209

ITeH STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC PRF 24775-2
<https://standards.iteh.ai/catalog/standards/sist/4c8a0d0b-3fd9-42b3-b021-0fa6ae705f41/iso-iec-prf-24775-2>

LIST OF FIGURES

Figure 1 - Experimental Maturity Level Tag	8
Figure 2 - Implemented Maturity Level Tag	8
Figure 3 - Stable Maturity Level Tag	9
Figure 4 - Deprecated Tag	9
Figure 5 - Reference Model	42
Figure 6 - Basic Fault Detection	46
Figure 7 - Health Lifecycle	49
Figure 8 - Continuum	50
Figure 9 - Application Fault Region	51
Figure 10 - Switch Example	53
Figure 11 - Lines that Connect Classes	55
Figure 12 - iSCSI Qualified Names (iqn) Examples	69
Figure 13 - iSCSI EUI Name Example	69
Figure 14 - iSCSI 64-bit NAA Name Example	70
Figure 15 - iSCSI 128-bit NAA Name Example	70
Figure 16 - SA Server Configuration	180
Figure 17 - Multicast Configuration	181
Figure 18 - No Multicast configuration	182
Figure 19 - Multicast Islands	183
Figure 20 - SMI-S Roles	189
Figure B.1 Provider Migration	211

<https://standards.iteh.ai/catalog/standards/sist/4c8a0d0b-3fd9-42b3-b021-0fa6ae705f41/iso-iec-prf-24775-2>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO/IEC PRF 24775-2](https://standards.iteh.ai/catalog/standards/sist/4c8a0d0b-3fd9-42b3-b021-0fa6ae705f41/iso-iec-prf-24775-2)
<https://standards.iteh.ai/catalog/standards/sist/4c8a0d0b-3fd9-42b3-b021-0fa6ae705f41/iso-iec-prf-24775-2>

LIST OF TABLES

Table 1 - OperationalStatus for Disk Drive	46
Table 2 - Standard Formats for StorageVolume Names	63
Table 3 - Standard Formats for Port Names.....	64
Table 4 - Standard Formats for Storage System Names.....	66
Table 5 - Standard Operating System Names for Tape Devices.....	67
Table 6 - LogicalDisk.Name for disk partitions	68
Table 7 - GenericDiskParittion.Name for disk partitions	68
Table 8 - Standard Operating System Names for Unpartitioned Disks	68
Table 9 - Redundancy Message Arguments	71
Table 10 - Redundancy Alert Information	72
Table 11 - Environmental Message Arguments.....	72
Table 12 - Environmental Alert Information	73
Table 13 - FRU Operation Message Arguments	73
Table 14 - FRU Operation Alert Information	74
Table 15 - Password change Message Arguments	74
Table 16 - Password change Alert Information.....	74
Table 17 - User or Account Operation Message Arguments	75
Table 18 - User or Account Operation Alert Information.....	75
Table 19 - User Login Message Arguments	76
Table 20 - User Login Alert Information.....	76
Table 21 - Proxy Agent Device Communication Message Arguments	76
Table 22 - Proxy Agent Device Communication Alert Information.....	77
Table 23 - Port Status Changed Message Arguments	77
Table 24 - Port Status Changed Alert Information.....	78
Table 25 - Datacheck Error Message Arguments.....	78
Table 26 - Datacheck Error Alert Information	78
Table 27 - User Login Failure Message Arguments	79
Table 28 - User Login Failure Alert Information.....	79
Table 29 - Drive not responding Message Arguments	80
Table 30 - Drive not responding Alert Information	80
Table 31 - Fan Failure Alert Information	80
Table 32 - Power Supply Failure Alert Information	81
Table 33 - Drive Power Consumption Alert Information	81
Table 34 - Drive Voltage Alert Information.....	81
Table 35 - Predictive Failure Alert Information	82
Table 36 - Diagnostics Required Alert Information	82
Table 37 - Drive is responding Message Arguments.....	82
Table 38 - Drive is responding Alert Information	83
Table 39 - Cooling Fan Issues Cleared Alert Information.....	83
Table 40 - Power Supply Issues Cleared Message Arguments	83
Table 41 - Power Supply Issues Cleared Alert Information	84
Table 42 - Controller Failure Message Arguments	84
Table 43 - Controller Failure Alert Information.....	84
Table 44 - Controller Issues Cleared Message Arguments	84
Table 45 - Controller Issues Cleared Alert Information.....	85
Table 46 - Device Not ready Message Arguments	85
Table 47 - Error Properties for Device Not ready	86
Table 48 - Error Properties for Internal Bus Error.....	86