ISO/IEC 24775-2

Edition 1.0 2014-10

INTERNATIONAL STANDARD

colour inside

Information technology – Storage management – Part 2: Common architecture

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 24775-2:2014
https://standards.iteh.ai/catalog/standards/sist/a8f8b133-9973-4fd1-8ebf-40a27cac4877/iso-iec-24775-2-2014

ISO/IEC 24775-2:2014-10(en)

THIS PUBLICATION IS COPYRIGHT PROTECTED
Copyright © 2014 ISO/IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about ISO/IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Central Office
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

About the IEC
The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications
The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

IEC Catalogue - webstore.iec.ch/catalogue
The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad.

IEC publications search - www.iec.ch/searchpub
The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,…). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished
Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and also once a month by email.

Electropedia - www.electropedia.org
The world's leading online dictionary of electronic and electrical terms containing more than 30 000 terms and definitions in English and French, with equivalent terms in 14 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary
More than 55 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

IEC Customer Service Centre - webstore.iec.ch/csc
If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: csc@iec.ch.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 24775-2:2014
https://standards.iteh.ai/catalog/standards/sist/e4e0e5e7-4f4e-4e5e-40a27cac4877/iso-iec-24775-2-2014

ISO/IEC 24775-2

Edition 1.0 2014-10

INTERNATIONAL STANDARD

colour inside

Information technology – Storage management – Part 2: Common architecture

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 24775-2:2014
https://standards.iteh.ai/catalog/standards/sist/a8f8b133-9973-4fd1-8ebf-40a27cac4877/iso-iec-24775-2-2014

INTERNATIONAL ELECTROTECHNICAL COMMISSION

PRICE CODE H

ICS 35.200

ISBN 978-2-8322-1893-8

Warning! Make sure that you obtained this publication from an authorized distributor.

FOREWORD 15

Introduction 17

1 Scope 19

2 Normative references 20

3 Terms, definitions, symbols, abbreviations, and conventions 22

3.1 Terms and definitions 22

3.2 Acronyms and abbreviations 29

3.3 Keywords 30

3.4 Conventions 31

4 Typographical Conventions 32

4.1 Maturity Model 32

4.2 Experimental Maturity Level 32

4.3 Implemented Maturity Level 32

4.4 Stable Maturity Level 33

4.5 Finalized Maturity Level 33

4.6 Deprecated Material 33

5 Transport and reference model 35

5.1 Introduction to transport and reference model 35

5.1.1 Overview 35

5.1.2 Language requirements 35

5.1.3 Communications requirements 35

5.1.4 XML Message Syntax and Semantics 35

5.2 Transport Stack 35

5.3 Reference model 37

5.3.1 Overview 37

5.3.2 Roles for Interface Constituents 37

5.3.3 Cascaded Agents 38

6 Health and Fault Management 39

6.1 Objectives 39

6.2 Overview 39

6.3 General concepts 39

6.4 Description of Health and Fault Management 40

6.4.1 General 40

6.4.2 Operational Status and Health State (Polling) 40

6.4.3 Standard Errors and Events 41

6.4.4 Error and Alert indications 41

6.4.5 Indications 41

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 24775-2:2014
https://standards.iteh.ai/catalog/standards/sist/a8f8b133-9973-4fd1-8ebf-40a27cac4877/iso-iec-24775-2-2014

6.4.6 Event Correlation and Fault Containment 41
6.4.7 Fault regions 44
6.4.8 Examples 46

7 Object Model General Information 50
7.1 Model overview (Key resources) 50
7.1.1 Overview 50
7.1.2 Introduction to CIM UML notation 50
7.2 Techniques 51
7.2.1 CIM fundamentals 51
7.2.2 Modeling profiles 53
7.2.3 CIM Naming 53

8 Correlatable and durable names 54
8.1 Overview 54
8.2 Guidelines for SCSI Logical Unit Names 55
8.3 Guidelines for FC-SB-2 device names 55
8.4 Guidelines for port names 56
8.5 Guidelines for storage system names 56
8.6 Standard formats for correlatable names 57
8.6.1 General 57
8.6.2 Standard formats for Logical Unit names 57
8.6.3 Standard formats for port names 59
8.6.4 Standard formats for fabric names 59
8.6.5 Standard formats for storage system names 59
8.6.6 Operating system device names 61
8.6.7 Case sensitivity 63
8.7 Testing equality of correlatable names 63
8.8 iSCSI names 63

9 Standard Messages 65
9.1 Overview 65
9.2 Required characteristics of Standard Messages 65
9.2.1 Declaring and producing Standard Messages 65
9.3 Message registry 67
9.3.1 Common Element Messages 67
9.3.2 Common Protocol Messages 77
9.3.3 Storage Messages 87
9.3.4 Fabric Messages 101
9.3.5 Host Messages 106
9.3.6 Media Library Messages 108

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 24775-2:2014
https://standards.iteh.ai/catalog/standards/sist/8b133-9973-4f11-8cbf-40a27cac4877/iso-iec-24775-2-2014

10 Service discovery 133
10.1 Objectives 133
10.2 Overview 133
10.3 SLP Messages 135
10.4 Scopes 136
10.5 Services Definition 137
10.5.1 General 137
10.5.2 Service Type 137
10.5.3 Service Attributes 137
10.6 User Agents (UA) 139
10.7 Service Agents (SAs) 140
10.8 Directory Agents (DAs) 140
10.9 Service Agent Server (SA Server) 140
10.9.1 General Information 140
10.9.2 SA Server (SAS) Implementation 141
10.9.3 SA Server (SAS) Clients 141
10.9.4 SA Server Configuration 142
10.9.5 SA Server Discovery 143
10.9.6 SAS Client Registration 143
10.10 Configurations 144
10.10.1 General 144
10.10.2 Multicast Configurations 144
10.10.3 No Multicast configuration 144
10.10.4 Multicast Islands 145
10.11 'Standard WBEM' Service Type Templates 146

11 Information Technology – Storage Management roles 150
11.1 Introduction to storage management roles 150
11.2 Information Technology – Storage Management Client 151
11.2.1 Overview 151
11.2.2 SLP functions 151
11.2.3 WBEM protocol functions 151
11.2.4 Security considerations 151
11.2.5 Lock management functions 151
11.3 Dedicated Information Technology – Storage Management Server 151
11.3.1 Overview 151
11.3.2 SLP functions 152
11.3.3 WBEM protocol functions 152
11.3.4 Security considerations 153
11.3.5 Lock management functions 153

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 24775-2:2014
https://standards.iteh.ai/catalog/standards/sist/a8f8b133-9973-4fd1-8ebf-40a27cac4877/iso-iec-24775-2-2014

11.4 General Purpose Information Technology – Storage Management Server 153
11.4.1 Overview 153
11.4.2 SLP functions 153
11.4.3 CIM-XML protocol functions 154
11.4.4 Lock management functions 154
11.4.5 Provider Subrole 154
11.5 Directory Server 154
11.5.1 General 154
11.5.2 SLP functions 154
11.5.3 CIM-XML protocol functions 155
11.5.4 Security considerations 155
11.5.5 Lock management functions 155
11.6 Combined roles on a single system 155
11.6.1 Overview 155
11.6.2 General Purpose Information Technology – Storage Management Server as a Profile Aggregator 155

12 Installation and upgrade 156
12.1 Overview 156
12.2 Role of the administrator 156
12.3 Goals 156
12.3.1 Non-disruptive installation and De-installation 156
12.3.2 Plug-and-Play 156
12.4 Server deployment 157
12.4.1 General 157
12.4.2 Controlled environment 157
12.4.3 Multiple CIMOM systems 157
12.4.4 Shared CIMOM 158
12.4.5 Uninstallation 159
12.4.6 Update 159
12.4.7 Reconfiguration 159
12.5 WBEM service support and related functions 159
12.5.1 Installation 159
12.5.2 Multiple CIM Servers on a Single Server System 160
12.5.3 Uninstallation/Upgrade 160
12.5.4 Reconfiguration 160
12.5.5 Failure 160
12.6 Client 160
12.6.1 Uninstallation 160
12.6.2 Reconfiguration 160
12.7 Directory Service 160

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 24775-2:2014
https://standards.iteh.ai/catalog/standards/sist/a8f8b133-9973-4fd1-8ebf-40a27cac4877/iso-iec-24775-2-2014

12.7.1 Installation 160
12.7.2 Uninstallation/Failure 161
12.8 Issues with Discovery mechanisms 161

13 Security 162
13.1 Objectives 162
13.2 Overview 162
13.2.1 General 162
13.2.2 General requirements for HTTP implementations 163
13.3 Description of SMI-S Security 164
13.3.1 General 164
13.3.2 Transport security 164
13.3.3 SSL 3.0 and TLS 165
13.3.4 Authentication 169
13.3.5 Indications 170
13.3.6 Service Discovery 171
13.3.7 HTTP Realms 172
13.4 Security Guidance 173
13.4.1 SSL 3.0 and TLS guidance 173
13.4.2 Authentication guidance 174
13.4.3 Authorization 178
13.4.4 Using IT Infrastructure Securely – Service Discovery 180

Annex A (informative) Mapping CIM objects to SNMP MIB structures 181
A.1 Purpose of this annex 181
A.2 CIM-to-MIB mapping overview 181
A.3 The SML MIB 181

Annex B (normative) Compliance with SMI-S 183
B.1 Compliance statement 183
B.2 How compliance of the architecture is declared 183
B.3 How compliance of the model is declared 183
B.4 The Server Profile and compliance 183
B.4.1 General 183
B.4.2 Example 183
B.5 Backward compatibility 184
B.5.1 General 184
B.5.2 Overview 185
B.5.3 Requirements 186
B.5.4 Implementation considerations 187
B.6 Rules for combining (autonomous) profiles 187
B.6.1 General 187

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 24775-2:2014
https://standards.iteh.ai/catalog/standards/sist/a8f8b133-9973-4fd1-8ebf-

B.6.2 Backward Compatibility Rules for combining profiles 187
B.6.3 Conditions for a new profile 188
B.7 Rules for vendor extensions 188
B.7.1 General 188
B.7.2 Objectives for vendor extension rules 188
B.7.3 Vendor extensions and compliance rules 189
B.7.4 Vendor extensions and backward compatibility rules 189
B.7.5 Vendor extensions and SMI-S Nullification 190
B.7.6 Vendor Extensions that Avoid Client Confusion 190

Annex C (normative) Indication filter strings 192
C.1 Overview 192
C.2 Instance creation 192
C.2.1 Filter string 192
C.2.2 Semantics 192
C.3 Instance deletion 192
C.3.1 Filter string 192
C.3.2 Semantics 192
C.4 Modification of any value in an array property 192
C.4.1 WQL string 192
C.4.2 CQL string 193
C.4.3 Semantics 193
C.5 Modification to either of two specific values in an array property 193
C.5.1 WQL string 193
C.5.2 CQL string 193
C.5.3 Semantics 193
C.6 Alert 193
C.6.1 Filter string 193
C.6.2 Semantic 193

Bibliography 194

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 24775-2:2014
https://standards.iteh.ai/catalog/standards/sist/a8f8b133-9973-4fd1-8ebf-40a27cac4877/iso-iec-24775-2-2014

Figure 1 – Experimental Maturity Level Tag 32
Figure 2 – Implemented Maturity Level Tag 33
Figure 3 – Stable Maturity Level Tag 33
Figure 4 – Deprecated Tag 34
Figure 5 – Transport Stack 36
Figure 6 – Reference Model 37
Figure 7 – Basic Fault Detection 40
Figure 8 – Health lifecycle 43
Figure 9 – Continuum 44
Figure 10 – Application Fault Region 45
Figure 11 – Array Instance 46
Figure 12 – Switch Example 48
Figure 13 – Lines that Connect Classes 50
Figure 14 – iSCSI Qualified Names (iqn) examples 64
Figure 15 – iSCSI EUI Name example 64
Figure 16 – iSCSI 64-bit NAA Name example 64
Figure 17 – iSCSI 128-bit NAA Name example 64
Figure 18 – SA Server Configuration 143
Figure 19 – Multicast Configuration 144
Figure 20 – No Multicast configuration 145
Figure 21 – Multicast Islands 146
Figure 22 – SMI_S Roles 150
Figure B.1 – Provider migration 185

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 24775-2:2014
https://standards.iteh.ai/catalog/standards/sist/a8f8b133-9973-4fd1-8ebf-40a27cac4877/iso-iec-24775-2-2014

Table 1 – OperationalStatus for Disk Drive 40
Table 2 – Standard formats for StorageVolume names 57
Table 3 – Standard formats for port names 59
Table 4 – Standard formats for storage system names 60
Table 5 – Standard operating system names for tape devices 62
Table 6 – LogicalDisk.Name for disk partitions 62
Table 7 – GenericDiskParittion.Name for disk partitions 62
Table 8 – Standard operating system names for unpartitioned disks 63
Table 9 – Example Standard Message Declaration 66
Table 10 – Example Standard Message Values 67
Table 11 – Redundancy Message Arguments 67
Table 12 – Redundancy Alert Information 68
Table 13 – Environmental Message Arguments 68
Table 14 – Environmental Alert Information 69
Table 15 – FRU Operation Message Arguments 69
Table 16 – FRU Operation Alert Information 69
Table 17 – Password change Message Arguments 70
Table 18 – Password change Alert Information 70
Table 19 – User or Account Operation Message Arguments 70
Table 20 – User or Account Operation Alert Information 71
Table 21 – User Login Message Arguments 71
Table 22 – User Login Alert Information 71
Table 23 – Proxy Agent Device Communication Message Arguments 72
Table 24 – Proxy Agent Device Communication Alert Information 72
Table 25 – Port Status Changed Message Arguments 72
Table 26 – Port Status Changed Alert Information 73
Table 27 – Datacheck Error Message Arguments 73
Table 28 – Datacheck Error Alert Information 73
Table 29 – User Login Failure Message Arguments 74
Table 30 – User Login Failure Alert Information 74
Table 31 – Drive not responding Message Arguments 74
Table 32 – Drive not responding Alert Information 75
Table 33 – Cooling Fan Failure Alert Information 75
Table 34 – Power Supply Failure Alert Information 75
Table 35 – Drive Power Consumption Alert Information 76
Table 36 – Drive Voltage Alert Information 76
Table 37 – Predictive Failure Alert Information 76
Table 38 – Diagnostics Required Alert Information 77
Table 39 – Authorization Failure Message Arguments 77
Table 40 – Error Properties for Authorization Failure 77

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 24775-2:2014
https://standards.iteh.ai/catalog/standards/sist/a8f8b133-9973-4fd1-8ebf-40a27cac4877/iso-iec-24775-2-2014

Table 41 – Operation Not Supported Message Arguments 78
Table 42 – Property Not Found Message Arguments 78
Table 43 – Invalid Query Message Arguments 79
Table 44 – Parameter Error Message Arguments 79
Table 45 – Error Properties for Parameter Error 79
Table 46 – Query Syntax Error Message Arguments 80
Table 47 – Error Properties for Query Syntax Error 80
Table 48 – Query Too Expensive Message Arguments 80
Table 49 – Error Properties for Query Too Expensive 80
Table 50 – Class or Property Invalid in Query Message Arguments 81
Table 51 – Error Properties for Class or Property Invalid in Query 81
Table 52 – Invalid Join in Query Message Arguments 81
Table 53 – Error Properties for Invalid Join in Query 82
Table 54 – Unexpected Hardware Fault Message Arguments 82
Table 55 – Error Properties for Unexpected Hardware Fault 82
Table 56 – Too busy to respond Message Arguments 82
Table 57 – Shutdown Started Message Arguments 83
Table 58 – Shutdown Started Alert Information 83
Table 59 – Component overheat Message Arguments 83
Table 60 – Error Properties for Component overheat 83
Table 61 – Component overheat Alert Information 84
Table 62 – Device Failover Message Arguments 84
Table 63 – Functionality is not licensed Message Arguments 84
Table 64 – Error Properties for Functionality is not licensed 84
Table 65 – Invalid Property Combination during instance creation or modification Message Arguments 85
Table 66 – Error Properties for Invalid Property Combination during instance creation or modification 85
Table 67 – Property Not Found Message Arguments 86
Table 68 – Error Properties for Property Not Found 86
Table 69 – Proxy Can Not Connect Message Arguments 86
Table 70 – Error Properties for Proxy Can Not Connect 86
Table 71 – Not Enough Memory Message Arguments 87
Table 72 – Error Properties for Not Enough Memory 87
Table 73 – Error Properties for Object Already Exists 87
Table 74 – Device Not ready Message Arguments 88
Table 75 – Error Properties for Device Not ready 88
Table 76 – Error Properties for Internal Bus Error 88
Table 77 – Error Properties for DMA Overflow 89
Table 78 – Error Properties for Firmware Logic Error 89

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 24775-2:2014
https://standards.iteh.ai/catalog/standards/sist/a8f8b133-9973-4fd1-8ebf-40a27cac4877/iso-iec-24775-2-2014

Table 79 – Front End Port Error Message Arguments 89
Table 80 – Front End Port Error Alert Information 89
Table 81 – Back End Port Error Message Arguments 90
Table 82 – Back End Port Error Alert Information 90
Table 83 – Remote Mirror Error Message Arguments 90
Table 84 – Error Properties for Remote Mirror Error 90
Table 85 – Remote Mirror Error Alert Information 91
Table 86 – Error Properties for Cache Memory Error 91
Table 87 – Error Properties for Unable to Access Remote Device 91
Table 88 – Error Reading Data Alert Information 92
Table 89 – Error Writing Data Alert Information 92
Table 90 – Error Validating Write (CRC) Alert Information 92
Table 91 – Error Properties for Copy Operation Failed 93
Table 92 – Error Properties for RAID Operation Failed 93
Table 93 – Error Properties for Invalid RAID Type 93
Table 94 – Error Properties for Invalid Storage Element Type 94
Table 95 – Error Properties for Configuration Change Failed 94
Table 96 – Error Properties for Buffer Overrun 94
Table 97 – Stolen Capacity Message Arguments 95
Table 98 – Error Properties for Stolen Capacity 95
Table 99 – Invalid Extent passed Message Arguments 95
Table 100 – Error Properties for Invalid Extent passed 95
Table 101 – Error Properties for Invalid Deletion Attempted 96
Table 102 – Error Properties for Job Failed to Start 96
Table 103 – Job was Halted Message Arguments 96
Table 104 – Invalid State Transition Message Arguments 97
Table 105 – Error Properties for Invalid State Transition 97
Table 106 – Invalid SAP for Method Message Arguments 97
Table 107 – Error Properties for Invalid SAP for Method 97
Table 108 – Resource Not Available Message Arguments 98
Table 109 – Error Properties for Resource Not Available 98
Table 110 – Resource Limit Exceeded Message Arguments 98
Table 111 – Error Properties for Resource Limit Exceeded 99
Table 112 – Thin Provision Capacity Warning Message Arguments 99
Table 113 – Thin Provision Capacity Warning Alert Information 99
Table 114 – Thin Provision Capacity Critical Message Arguments 100
Table 115 – Thin Provision Capacity Critical Alert Information 100
Table 116 – Thin Provision Capacity Okay Message Arguments 100
Table 117 – Thin Provision Capacity Okay Alert Information 100
Table 118 – Masking Group Membership Changed Message Arguments 101

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 24775-2:2014
https://standards.iteh.ai/catalog/standards/sist/a8f8b133-9973-4fd1-8ebf-40a27cac4877/iso-iec-24775-2-2014

Table 119 – Masking Group Membership Changed Alert Information 101
Table 120 – Zone Database Changed Message Arguments 101
Table 121 – Zone Database Changed Alert Information 102
Table 122 – ZoneSet Activated Message Arguments 102
Table 123 – ZoneSet Activated Alert Information 102
Table 124 – Error Properties for Session Locked 102
Table 125 – Error Properties for Session Aborted 103
Table 126 – Switch Status Changed Message Arguments 103
Table 127 – Switch Status Changed Alert Information 103
Table 128 – Fabric Merge/Segmentation Message Arguments 104
Table 129 – Fabric Merge/Segmentation Alert Information 104
Table 130 – Switch Added/Removed Message Arguments 104
Table 131 – Switch Added/Removed Alert Information 105
Table 132 – Fabric Added/Removed Message Arguments 105
Table 133 – Fabric Added/Removed Alert Information 105
Table 134 – Security Policy change Message Arguments 105
Table 135 – Security Policy change Alert Information 106
Table 136 – Required Firmware Version Message Arguments 106
Table 137 – Required Firmware Version Alert Information 106
Table 138 – Rec om ended Firmware Version Message Arguments 107
Table 139 – Rec om ended Firmware Version Alert Information 107
Table 140 – Controller OK Message Arguments 107
Table 141 – Controller OK Alert Information 107
Table 142 – Controller not OK Message Arguments 107
Table 143 – Controller not OK Alert Information 108
Table 144 – Bus rescan complete Alert Information 108
Table 145 – Disk initialize Failed Message Arguments 108
Table 146 – Disk initialize Failed Alert Information 108
Table 147 – Read Warning Alert Information 109
Table 148 – Write Warning Alert Information 109
Table 149 – Hard Error Alert Information 109
Table 150 – Media Alert Information 110
Table 151 – Read Failure Alert Information 110
Table 152 – Write Failure Alert Information 110
Table 153 – Media Life Alert Information 111
Table 154 – Not Data Grade Alert Information 111
Table 155 – Write Protect Alert Information 111
Table 156 – No Removal Alert Information 112
Table 157 – Cleaning Media Alert Information 112
Table 158 – Unsupported Format Alert Information 112

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 24775-2:2014
https://standards.iteh.ai/catalog/standards/sist/a8f8b133-9973-4fd1-8ebf-40a27cac4877/iso-iec-24775-2-2014

Table 159 – Recoverable Snapped Tape Alert Information 113
Table 160 – Unrecoverable Snapped Tape Alert Information 113
Table 161 – Memory Chip In Cartridge Failure Alert Information 113
Table 162 – Forced Eject Alert Information 114
Table 163 – Read Only Format Alert Information 114
Table 164 – Directory Corrupted On Load Alert Information 114
Table 165 – Nearing Media Life Alert Information 115
Table 166 – Clean Now Alert Information 115
Table 167 – Clean Periodic Alert Information 115
Table 168 – Expired Cleaning Media Alert Information 116
Table 169 – Invalid Cleaning Media Alert Information 116
Table 170 – Retention Requested Alert Information 116
Table 171 – Dual-Port Interface Error Alert Information 117
Table 172 – Drive Maintenance Alert Information 117
Table 173 – Hardware A Alert Information 117
Table 174 – Hardware B Alert Information 118
Table 175 – Interface Alert Information 118
Table 176 – Eject Media Alert Information 118
Table 177 – Download Failure Alert Information 119
Table 178 – Loader Hardware A Alert Information 119
Table 179 – Loader Stray Media Alert Information 119
Table 180 – Loader Hardware B Alert Information 120
Table 181 – Loader Door Alert Information 120
Table 182 – Loader Hardware C Alert Information 120
Table 183 – Loader Magazine Alert Information 121
Table 184 – Loader Predictive Failure Alert Information 121
Table 185 – Load Statistics Alert Information 121
Table 186 – Media Directory Invalid at Unload Alert Information 122
Table 187 – Media System area Write Failure Alert Information 122
Table 188 – Media System Area Read Failure Alert Information 122
Table 189 – No Start of Data Alert Information 123
Table 190 – Loading Failure Alert Information 123
Table 191 – Library Hardware A Alert Information 123
Table 192 – Library Hardware B Alert Information 124
Table 193 – Library Hardware C Alert Information 124
Table 194 – Library Hardware D Alert Information 124
Table 195 – Library Diagnostic Required Alert Information 125
Table 196 – Library Interface Alert Information 125
Table 197 – Failure Prediction Alert Information 125
Table 198 – Library Maintenance Alert Information 126

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 24775-2:2014
https://standards.iteh.ai/catalog/standards/sist/a8f8b133-9973-4fd1-8ebf-40a27cac4877/iso-iec-24775-2-2014