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Edition 1.0 2014-10

INTERNATIONAL STANDARD



**Information technology – Storage management –
Part 3: Common profiles**



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

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

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CONTENTS

FOREWORD.....	35
Introduction	37
1 Scope	39
2 Normative references	39
3 Terms, definitions and abbreviations.....	41
3.1 Terms and definitions.....	41
3.2 Abbreviations	41
4 Profile introduction.....	42
4.1 Profile overview.....	42
4.1.1 General.....	42
4.1.2 Terminology.....	43
4.2 Format for Profile Specifications	43
5 Typographical Conventions.....	46
5.1 Maturity Model.....	46
5.2 Experimental Maturity Level.....	46
5.3 Implemented Maturity Level.....	46
5.4 Stable Maturity Level.....	47
5.5 Finalized Maturity Level	47
5.6 Deprecated Material.....	47
6 Recipe overview	49
6.1 Recipe concepts.....	49
6.2 Recipe Pseudo Code conventions	49
6.2.1 Overview	49
6.2.2 General Syntax.....	49
6.2.3 CIM related variable and methods	50
6.2.4 Data structure.....	51
6.2.5 Operations.....	51
6.2.6 Control operations	52
6.2.7 Functions.....	52
6.2.8 Exception handling	53
6.2.9 Built-in functions	53
6.2.10 Extrinsic method calls.....	54
7 Generic Target Ports Profile.....	55
7.1 Synopsis.....	55
7.2 Description	55
7.3 Implementation.....	55
7.3.1 General.....	55
7.3.2 Modeling SCSI/SB Logical Units	57
7.4 Methods of the Profile	57
7.4.1 Extrinsic methods	57
7.4.2 Intrinsic methods	58
7.5 Use Cases.....	58
7.6 CIM Elements.....	58
7.6.1 General.....	58
7.6.2 CIM_DeviceSAPImplementation	58
7.6.3 CIM_HostedAccessPoint.....	59
7.6.4 CIM_LogicalPort.....	59
7.6.5 CIM_ProtocolEndpoint	59
7.6.6 CIM_SystemDevice (Port).....	60
8 Parallel SCSI (SPI) Target Ports Profile.....	61

8.1	Synopsis.....	61
8.2	Description	61
8.3	Implementation.....	61
8.4	Health and Fault Management.....	62
8.5	Methods – Extrinsic Methods of this Subprofile	62
8.6	CIM elements	62
8.6.1	General.....	62
8.6.2	CIM_DeviceSAPImplementation	62
8.6.3	CIM_HostedAccessPoint.....	63
8.6.4	CIM_SCSIProtocolEndpoint	63
8.6.5	CIM_SPIPort	64
8.6.6	CIM_SystemDevice (Port).....	64
9	FC Target Ports Profile.....	66
9.1	Synopsis.....	66
9.2	Description	66
9.3	Implementation.....	66
9.3.1	General.....	66
9.3.2	SMI-S 1.0 backwards compatibility	66
9.4	Durable Names and Correlatable IDs of the Subprofile	67
9.5	Health and Fault Management.....	67
9.6	Supported Profiles and Packages.....	67
9.7	Extrinsic Methods of this Subprofile	67
9.8	Client Considerations and Recipes	67
9.9	CIM Elements.....	68
9.9.1	General.....	68
9.9.2	CIM_DeviceSAPImplementation	68
9.9.3	CIM_FCPort	69
9.9.4	CIM_HostedAccessPoint.....	70
9.9.5	CIM_ProtocolControllerForPort	70
9.9.6	CIM_SCSIProtocolEndpoint	70
9.9.7	CIM_SystemDevice (Port).....	71
10	iSCSI Target Ports Subprofile	72
10.1	Synopsis.....	72
10.2	Description	72
10.3	Implementation.....	72
10.3.1	General.....	72
10.3.2	Mapping and Masking considerations	74
10.3.3	Settings	75
10.3.4	Durable Names and Correlatable IDs of the Subprofile	75
10.4	Health and Fault Management.....	75
10.5	Supported Subprofiles and Packages.....	76
10.6	Methods of this Subprofile.....	76
10.6.1	General.....	76
10.6.2	CreateiSCSINode	76
10.6.3	DeleteiSCSINode	77
10.6.4	CreateiSCSIProtocolEndpoint	77
10.6.5	DeleteiSCSIProtocolEndpoint	79
10.6.6	BindiSCSIProtocolEndpoint.....	79
10.7	Client Considerations and Recipes	80
10.7.1	Discover the iSCSI Target Port capabilities	80
10.7.2	Identify the iSCSI Nodes in a target system	81
10.7.3	Identify the iSCSI Ports on a given iSCSI node	81
10.7.4	Identify the iSCSI sessions existing on an iSCSI node	82
10.7.5	Create an iSCSI Target Node on an iSCSI Network Entity	83

10.7.6	Create an iSCSI Target Port on an iSCSI target node	84
10.7.7	Add a Network Portal to a Target Port	85
10.7.8	Determine the health of Nodes in a target system	87
10.7.9	Determine the health of a Session on a target system.....	87
10.7.10	Configure the default settings for Sessions created in a target computer system ..	88
10.7.11	Configure default settings for Connections on Network Portals used by an iSCSIProtocolEndpoint.....	89
10.7.12	Get the statistics for a Session on a target system	89
10.7.13	Configure Enable/disable header and data digest	89
10.8	CIM Elements.....	90
10.8.1	General.....	90
10.8.2	CIM_BindsTo (TCPProtocolEndpoint to IPProtocolEndpoint).....	92
10.8.3	CIM_BindsTo (iSCSIProtocolEndpoint to TCPProtocolEndpoint)	92
10.8.4	CIM_ConcreteDependency	93
10.8.5	CIM_DeviceSAPImplementation (EthernetPort to IPProtocolEndpoint).....	93
10.8.6	CIM_DeviceSAPImplementation (EthernetPort to iSCSIProtocolEndpoint).....	93
10.8.7	CIM_ElementCapabilities (iSCSIConfigurationCapabilities to System).....	94
10.8.8	CIM_ElementCapabilities (iSCSIConfigurationCapabilities to iSCSIConfigurationService).....	94
10.8.9	CIM_ElementSettingData (iSCSIConnectionSettings to TCPProtocolEndpoint).....	94
10.8.10	CIM_ElementSettingData (iSCSIConnectionSettings to iSCSIProtocolEndpoint) ..	95
10.8.11	CIM_ElementSettingData (iSCSIConnectionSettings to SCSIProtocolController)	95
10.8.12	CIM_ElementSettingData (iSCSIConnectionSettings to System)	95
10.8.13	CIM_ElementSettingData (iSCSIConnectionSettings to iSCSIProtocolEndpoint).....	96
10.8.14	CIM_ElementStatisticalData (iSCSIConnectionStatistics to SCSIProtocolController)	96
10.8.15	CIM_ElementStatisticalData (iSCSIConnectionFailures to SCSIProtocolController) ...	96
10.8.16	CIM_ElementStatisticalData (iSCSIConnectionStatistics to iSCSIConnection).....	97
10.8.17	CIM_EndpointOfNetworkPipe (iSCSIConnection to TCPProtocolEndpoint).....	97
10.8.18	CIM_EndpointOfNetworkPipe (iSCSIConnection to iSCSIProtocolEndpoint)	98
10.8.19	CIM_EthernetPort	98
10.8.20	CIM_HostedAccessPoint (System to IPProtocolEndpoint)	98
10.8.21	CIM_HostedAccessPoint (System to TCPProtocolEndpoint)	99
10.8.22	CIM_HostedAccessPoint (System to iSCSIProtocolEndpoint)	99
10.8.23	CIM_HostedCollection	99
10.8.24	CIM_HostedService	100
10.8.25	CIM_IPProtocolEndpoint.....	100
10.8.26	CIM_MemberOfCollection.....	100
10.8.27	CIM_NetworkPipeComposition	101
10.8.28	CIM_SAPAvailableForElement	101
10.8.29	CIM_SCSIProtocolController	101
10.8.30	CIM_SystemDevice (System to EthernetPort)	102
10.8.31	CIM_SystemDevice (System to SCSIProtocolController)	102
10.8.32	CIM_SystemSpecificCollection	102
10.8.33	CIM_TCPProtocolEndpoint	103
10.8.34	CIM_iSCSICapabilities.....	103
10.8.35	CIM_iSCSIConfigurationCapabilities	104
10.8.36	CIM_iSCSIConfigurationService	104
10.8.37	CIM_iSCSIConnection	104
10.8.38	CIM_iSCSIConnectionSettings	105
10.8.39	CIM_iSCSIConnectionStatistics	106
10.8.40	CIM_iSCSIProtocolEndpoint.....	106
10.8.41	CIM_iSCSIConnection.....	107
10.8.42	CIM_iSCSIConnectionFailures.....	108
10.8.43	CIM_iSCSIConnectionSettings.....	108
10.8.44	CIM_iSCSIConnectionStatistics	109

11	Serial Attached SCSI (SAS) Target Port Subprofile	110
11.1	Synopsis.....	110
11.2	Description	110
11.2.1	General.....	110
11.2.2	Health and Fault Management	111
11.3	Methods	111
11.3.1	Extrinsic Methods of this Subprofile	111
11.3.2	Intrinsic Methods of this Subprofile	111
11.4	Client considerations and Recipes.....	111
11.5	CIM Elements.....	112
11.5.1	General.....	112
11.5.2	CIM_ConcreteComponent.....	112
11.5.3	CIM_DeviceSAPImplementation	112
11.5.4	CIM_HostedAccessPoint.....	113
11.5.5	CIM_SASPort	113
11.5.6	CIM_SCSIProtocolEndpoint	114
11.5.7	CIM_SystemDevice (Port).....	114
11.5.8	CIM_SystemDevice (SAS PHY).....	115
11.5.9	SNIA_SASPHY	115
12	Serial ATA (SATA) Target Ports Profile.....	116
12.1	Synopsis.....	116
12.2	Description	116
12.2.1	General.....	116
12.2.2	Health and Fault Management	117
12.3	Methods of this Subprofile.....	117
12.4	Client considerations and Recipes.....	117
12.5	CIM elements	118
12.5.1	General.....	118
12.5.2	CIM_ATAPort	118
12.5.3	CIM_ATAProtocolEndpoint	119
12.5.4	CIM_DeviceSAPImplementation	119
12.5.5	CIM_HostedAccessPoint.....	119
12.5.6	CIM_SystemDevice (Port).....	120
13	SB Target Ports Profile.....	121
13.1	Synopsis.....	121
13.2	Description	121
13.3	Implementation.....	121
13.4	Health and Fault Management Consideration.....	122
13.5	Cascading Considerations	122
13.6	Methods of the Profile	123
13.6.1	Extrinsic Methods of the Profile	123
13.6.2	Intrinsic Methods of the Profile	123
13.7	Client Considerations and Recipes	123
13.8	CIM Elements.....	123
13.8.1	General.....	123
13.8.2	CIM_DeviceSAPImplementation	124
13.8.3	CIM_FCPort	124
13.8.4	CIM_HostedAccessPoint.....	125
13.8.5	CIM_SystemDevice (Port).....	125
13.8.6	SNIA_SBProtocolEndpoint.....	125
14	Direct Attach (DA) Ports Profile	128
14.1	Description	128
14.2	Health and Fault Management.....	128
14.3	Supported Profiles and Packages.....	128

14.4	Extrinsic Methods.....	128
14.5	Client Considerations and Recipes.....	129
14.6	Registered Name and Version.....	129
14.7	CIM Elements.....	129
14.7.1	General.....	129
14.7.2	CIM_DAPort.....	129
14.7.3	CIM_DeviceSAPImplementation.....	130
14.7.4	CIM_HostedAccessPoint.....	130
14.7.5	CIM_SCSIProtocolEndpoint.....	130
14.7.6	CIM_SystemDevice (Port).....	131
15	Generic Initiator Ports Profile.....	132
15.1	Synopsis.....	132
15.2	Description.....	132
15.3	Implementation.....	132
15.3.1	General.....	132
15.3.2	Remote Device Models.....	133
15.3.3	Health and Fault Management Considerations.....	136
15.3.4	Cascading Considerations.....	136
15.4	Methods.....	136
15.4.1	Extrinsic Methods of this Profile.....	136
15.4.2	Intrinsic Methods of this Profile.....	136
15.5	Use Cases.....	136
15.6	CIM Elements.....	137
15.6.1	General.....	137
15.6.2	CIM_ConnectivityCollection.....	137
15.6.3	CIM_DeviceSAPImplementation.....	138
15.6.4	CIM_ElementStatisticalData (Port Statistics).....	138
15.6.5	CIM_HostedAccessPoint (Initiator).....	138
15.6.6	CIM_HostedAccessPoint (Target).....	139
15.6.7	CIM_HostedCollection (Connectivity Collection).....	139
15.6.8	CIM_LogicalPort.....	139
15.6.9	CIM_MemberOfCollection (Connectivity Collection).....	140
15.6.10	CIM_ProtocolEndpoint (Initiator).....	140
15.6.11	CIM_ProtocolEndpoint (Target).....	141
15.6.12	CIM_SystemDevice (Initiator Ports).....	141
15.6.13	SNIA_LogicalPortStatistics.....	142
16	Parallel SCSI (SPI) Initiator Ports Profile.....	143
16.1	Synopsis.....	143
16.2	Description.....	143
16.3	Implementation.....	143
16.3.1	General.....	143
16.3.2	Health and Fault Management Considerations.....	143
16.3.3	Cascading Considerations.....	144
16.4	Methods.....	144
16.4.1	Extrinsic Methods of this Profile.....	144
16.4.2	Intrinsic Methods of this Profile.....	144
16.5	Detailed Use Cases and Recipes.....	144
16.6	CIM Elements.....	144
16.6.1	General.....	144
16.6.2	CIM_ConnectivityCollection.....	145
16.6.3	CIM_DeviceSAPImplementation.....	145
16.6.4	CIM_ElementStatisticalData (Port Statistics).....	146
16.6.5	CIM_HostedAccessPoint (Initiator).....	146
16.6.6	CIM_HostedAccessPoint (Target).....	146

16.6.7	CIM_HostedCollection (Connectivity Collection)	147
16.6.8	CIM_MemberOfCollection (Connectivity Collection)	147
16.6.9	CIM_SCSIInitiatorTargetLogicalUnitPath	148
16.6.10	CIM_SCSIProtocolEndpoint (Initiator)	148
16.6.11	CIM_SCSIProtocolEndpoint (Target)	149
16.6.12	CIM_SPIPort	149
16.6.13	CIM_SystemDevice (Initiator Ports)	150
16.6.14	SNIA_LogicalPortStatistics	150
17	iSCSI Initiator Port Profile	152
17.1	Synopsis	152
17.2	Description	152
17.3	Implementation	152
17.3.1	General	152
17.3.2	Health and Fault Management Considerations	153
17.3.3	Cascading Considerations	153
17.4	Methods	153
17.4.1	Extrinsic Methods of this Profile	153
17.4.2	Intrinsic Methods of this Profile	153
17.5	Detailed Use Cases and Recipes	154
17.6	CIM Elements	154
17.6.1	General	154
17.6.2	CIM_BindsTo (Host Hardware RAID Controller)	155
17.6.3	CIM_DeviceSAPImplementation (IPProtocolEndpoint to EthernetPort)	155
17.6.4	CIM_DeviceSAPImplementation (iSSIProtocolEndpoint to EthernetPort)	155
17.6.5	CIM_EthernetPort (Host Hardware RAID Controller)	156
17.6.6	CIM_HostedAccessPoint (System to IPProtocolEndpoint)	156
17.6.7	CIM_HostedAccessPoint (System to TCPProtocolEndpoint)	156
17.6.8	CIM_HostedAccessPoint (System to iSCSIProtocolEndpoint)	157
17.6.9	CIM_IPProtocolEndpoint (Host Hardware RAID Controller)	157
17.6.10	CIM_LogicalDevice (Host Hardware RAID Controller)	158
17.6.11	CIM_SystemDevice (System to EthernetPort)	158
17.6.12	CIM_SystemDevice (System to LogicalDevice)	158
17.6.13	CIM_TCPProtocolEndpoint (Host Hardware RAID Controller)	159
17.6.14	CIM_iSCSIProtocolEndpoint (Host Hardware RAID Controller)	159
18	FC Initiator Ports Profile	161
18.1	Synopsis	161
18.2	Description	161
18.3	Implementation	161
18.3.1	General	161
18.3.2	Port Statistics	162
18.3.3	Logical Port Group (FC Node)	162
18.3.4	Health and Fault Management Considerations	163
18.3.5	Cascading Considerations	163
18.4	Methods	163
18.4.1	Extrinsic Methods of this Profile	163
18.4.2	Intrinsic Methods of this Profile	163
18.5	Use Cases – Get the statistics for each FC port	163
18.6	CIM Elements	164
18.6.1	General	164
18.6.2	CIM_ConnectivityCollection	165
18.6.3	CIM_DeviceSAPImplementation	165
18.6.4	CIM_ElementStatisticalData (Port Statistics)	166
18.6.5	CIM_FCPort	166
18.6.6	CIM_FCPortStatistics	168

18.6.7	CIM_HostedAccessPoint (Initiator)	168
18.6.8	CIM_HostedAccessPoint (Target)	169
18.6.9	CIM_HostedCollection (Connectivity Collection)	169
18.6.10	CIM_MemberOfCollection (Connectivity Collection)	170
18.6.11	CIM_ProtocolControllerForPort	170
18.6.12	CIM_SCSIInitiatorTargetLogicalUnitPath	170
18.6.13	CIM_SCSIProtocolController	171
18.6.14	CIM_SCSIProtocolEndpoint (Initiator)	171
18.6.15	CIM_SCSIProtocolEndpoint (Target)	172
18.6.16	CIM_SystemDevice (Initiator Ports)	172
19	SAS Initiator Ports Profile	174
19.1	Synopsis	174
19.2	Description	174
19.2.1	General	174
19.2.2	Health and Fault Management Considerations	175
19.3	Methods of the profile	175
19.4	Client Considerations and Recipes	175
19.5	CIM Elements	175
19.5.1	General	175
19.5.2	CIM_ATAProtocolEndpoint (Initiator)	176
19.5.3	CIM_BindsTo	176
19.5.4	CIM_ConcreteComponent	177
19.5.5	CIM_ConnectivityCollection	177
19.5.6	CIM_DeviceSAPImplementation	177
19.5.7	CIM_ElementStatisticalData (PHY Statistics)	178
19.5.8	CIM_ElementStatisticalData (Port Statistics)	178
19.5.9	CIM_HostedAccessPoint (Initiator)	178
19.5.10	CIM_HostedAccessPoint (Target)	179
19.5.11	CIM_HostedCollection (Connectivity Collection)	179
19.5.12	CIM_MemberOfCollection (Connectivity Collection)	179
19.5.13	CIM_SASPort	180
19.5.14	CIM_SCSIInitiatorTargetLogicalUnitPath	180
19.5.15	CIM_SCSIProtocolEndpoint (Initiator)	181
19.5.16	CIM_SCSIProtocolEndpoint (Target)	181
19.5.17	CIM_SystemDevice (Initiator PHY)	182
19.5.18	CIM_SystemDevice (Initiator Ports)	182
19.5.19	SNIA_LogicalPortStatistics	183
19.5.20	SNIA_SASPHY	183
19.5.21	SNIA_SASPhyStatistics	184
20	ATA Initiator Ports Profile	185
20.1	Synopsis	185
20.2	Description	185
20.3	Implementation	185
20.3.1	General	185
20.3.2	Health and Fault Management Consideration	186
20.3.3	Cascading Considerations	186
20.4	Methods of the Profile	186
20.4.1	Extrinsic Methods of the Profile	186
20.4.2	Intrinsic Methods of this Profile	186
20.5	Client Considerations and Recipes	186
20.6	CIM Elements	187
20.6.1	General	187
20.6.2	CIM_ATAInitiatorTargetLogicalUnitPath	187
20.6.3	CIM_ATAPort	188

20.6.4	CIM_ATAProtocolEndpoint (Initiator)	188
20.6.5	CIM_ATAProtocolEndpoint (Target).....	189
20.6.6	CIM_ConnectivityCollection	190
20.6.7	CIM_DeviceSAPImplementation	190
20.6.8	CIM_ElementStatisticalData (Port Statistics)	190
20.6.9	CIM_HostedAccessPoint (Initiator)	191
20.6.10	CIM_HostedAccessPoint (Target).....	191
20.6.11	CIM_HostedCollection (Connectivity Collection).....	191
20.6.12	CIM_MemberOfCollection (Connectivity Collection)	192
20.6.13	CIM_SystemDevice (Initiator Ports)	192
20.6.14	SNIA_LogicalPortStatistics	193
21	FC-SB-x Initiator Ports Profile	194
21.1	Synopsis.....	194
21.2	Description	194
21.3	Implementation.....	194
21.3.1	General.....	194
21.3.2	Health and Fault Management Considerations	195
21.3.3	Cascading Considerations	195
21.4	Methods	195
21.4.1	Extrinsic Methods of the Profile.....	195
21.4.2	Intrinsic Methods of this Profile	195
21.5	Client Considerations and Recipes	195
21.6	CIM Elements.....	196
21.6.1	General.....	196
21.6.2	CIM_ConnectivityCollection	196
21.6.3	CIM_DeviceSAPImplementation	197
21.6.4	CIM_ElementStatisticalData (Port Statistics)	197
21.6.5	CIM_FCPort	198
21.6.6	CIM_HostedAccessPoint (Initiator)	199
21.6.7	CIM_HostedAccessPoint (Target).....	199
21.6.8	CIM_HostedCollection (Connectivity Collection).....	199
21.6.9	CIM_MemberOfCollection (Connectivity Collection)	200
21.6.10	CIM_SystemDevice (Initiator Ports)	200
21.6.11	SNIA_LogicalPortStatistics	200
21.6.12	SNIA_SBInitiatorTargetLogicalUnitPath.....	201
21.6.13	SNIA_SBProtocolEndpoint (Initiator)	201
21.6.14	SNIA_SBProtocolEndpoint (Target).....	202
22	Backend Ports Subprofile	203
23	FCoE Initiator Ports Profile	204
23.1	Synopsis.....	204
23.2	Description	204
23.3	Implementation.....	204
23.3.1	General.....	204
23.3.2	Relationship to Storage HBA Profile	205
23.3.3	Optional target model	205
23.3.4	Port Statistics	205
23.3.5	Logical Port Group (FC Node).....	205
23.3.6	Health and Fault Management Considerations	206
23.3.7	Cascading Considerations	206
23.4	Methods	206
23.4.1	Extrinsic Methods of this Profile	206
23.4.2	Intrinsic Methods of this Profile	206
23.5	Detailed Use Cases and Recipes	207
23.6	CIM Elements.....	207

23.6.1	General.....	207
23.6.2	CIM_ConnectivityCollection	208
23.6.3	CIM_DeviceSAPImplementation	208
23.6.4	CIM_ElementStatisticalData (Port Statistics)	209
23.6.5	CIM_EthernetPort.....	209
23.6.6	CIM_FCPort	209
23.6.7	CIM_FCPortStatistics	210
23.6.8	CIM_HostedAccessPoint (Initiator)	211
23.6.9	CIM_HostedAccessPoint (Target).....	212
23.6.10	CIM_HostedCollection (Connectivity Collection).....	212
23.6.11	CIM_HostedCollection (FC Node).....	212
23.6.12	CIM_HostedDependency (NetworkPort to FCPort)	213
23.6.13	CIM_LogicalPortGroup.....	213
23.6.14	CIM_MemberOfCollection (Connectivity Collection)	213
23.6.15	CIM_MemberOfCollection (FC Node)	214
23.6.16	CIM_ProtocolEndpoint (Initiator)	214
23.6.17	CIM_ProtocolEndpoint (Target)	215
23.6.18	CIM_SCSIInitiatorTargetLogicalUnitPath.....	215
23.6.19	CIM_SCSIProtocolEndpoint (Initiator).....	216
23.6.20	CIM_SCSIProtocolEndpoint (Target).....	216
23.6.21	CIM_SystemDevice (Ethernet Port)	217
23.6.22	CIM_SystemDevice (Initiator Ports)	217
24	Access Points Subprofile.....	218
24.1	Description	218
24.2	Health and Fault Management Considerations.....	219
24.3	Cascading Considerations	219
24.4	Supported Subprofiles and Packages.....	219
24.5	Methods of this Profile.....	219
24.6	Client Considerations and Recipes	220
24.7	Registered Name and Version	220
24.8	CIM Elements.....	220
24.8.1	General.....	220
24.8.2	CIM_HostedAccessPoint.....	220
24.8.3	CIM_RemoteServiceAccessPoint	220
24.8.4	CIM_SAPAvailableForElement	221
25	Cascading Subprofile	222
25.1	Introduction to cascading subprofile.....	222
25.2	Description	222
25.2.1	Overview	222
25.2.2	Instance Diagrams	223
25.3	Health and Fault Management Considerations.....	229
25.3.1	Reporting Health of Leaf Systems, Resources and Object Managers	229
25.3.2	Cascading Indications of Health.....	230
25.4	Cascading Considerations	230
25.5	Supported Subprofiles and Packages.....	230
25.6	Methods of this Subprofile.....	230
25.6.1	General.....	230
25.6.2	Allocate.....	230
25.6.3	Deallocate	231
25.7	Client Considerations and Recipes	232
25.7.1	Recipe MPCP01: Determining Resources used by cascading Profiles.....	232
25.7.2	Recipe MPCP02: Monitoring the existence of Cascading Profiles	232
25.7.3	OPTIONAL: Recipe MPCP03: Allocation of Leaf Resources	232
25.7.4	OPTIONAL: Recipe MPCP04: Deallocation of Leaf Resources.....	232

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25.7.5	Recipe MPCP05: Monitoring the existence of "Stitching" between Profiles	232
25.7.6	Supported SNIA_CascadingCapabilities Patterns	232
25.8	Registered Name and Version	232
25.9	CIM Elements.....	233
25.9.1	General.....	233
25.9.2	CIM_ComputerSystem (Leaf System).....	235
25.9.3	CIM_Dependency (Object Managers).....	235
25.9.4	CIM_Dependency (Profile to Object Manager)	236
25.9.5	CIM_Dependency (Systems)	236
25.9.6	CIM_ElementCapabilities	236
25.9.7	CIM_ElementConformsToProfile (Leaf)	237
25.9.8	CIM_HostedCollection (Allocated Resources)	237
25.9.9	CIM_HostedCollection (Remote Resources)	238
25.9.10	CIM_HostedService (Allocation Service)	238
25.9.11	CIM_HostedService (Object Manager)	239
25.9.12	CIM_LogicalDisk	239
25.9.13	CIM_LogicalIdentity (General)	240
25.9.14	CIM_LogicalIdentity (LogicalDisk).....	241
25.9.15	CIM_LogicalIdentity (StorageVolume)	241
25.9.16	CIM_MemberOfCollection (Allocated Resources)	241
25.9.17	CIM_MemberOfCollection (Remote Resources).....	242
25.9.18	CIM_Namespace (Leaf).....	242
25.9.19	CIM_NamespaceInManager (Leaf).....	243
25.9.20	CIM_ObjectManager (Leaf).....	243
25.9.21	CIM_RegisteredProfile (Leaf).....	243
25.9.22	CIM_RemoteServiceAccessPoint (Leaf).....	244
25.9.23	CIM_SAPAvailableForElement	244
25.9.24	CIM_StorageVolume.....	245
25.9.25	CIM_SystemDevice (Leaf Devices)	246
25.9.26	SNIA_AllocatedResources.....	246
25.9.27	SNIA_AllocationService	247
25.9.28	SNIA_CascadingCapabilities	248
25.9.29	SNIA_RemoteResources	248
26	Health Package	250
26.1	Description	250
26.1.1	General.....	250
26.1.2	Error Reporting Mechanism	250
26.1.3	Event Reporting Mechanism	251
26.1.4	Standard Events.....	251
26.1.5	Reporting Health	252
26.1.6	Computer System Operational Status.....	252
26.1.7	Event Reporting.....	253
26.1.8	Fault Region	253
26.1.9	RelatedElementCausingError.....	253
26.1.10	HealthState	254
26.2	Health and Fault Management Considerations.....	254
26.3	Cascading Considerations	254
26.4	Supported Subprofiles and Packages.....	254
26.5	Client Considerations and Recipes	254
26.6	Registered Name and Version	254
26.7	CIM Elements.....	254
26.7.1	General.....	254
26.7.2	CIM_ComputerSystem	255
26.7.3	CIM_LogicalDevice	255

26.7.4	CIM_RelatedElementCausingError	256
27	Job Control Subprofile	257
27.1	Description	257
27.1.1	General.....	257
27.1.2	Instance Diagram	257
27.1.3	MethodResult	258
27.1.4	OperationalStatus for Jobs	259
27.1.5	JobState for Jobs	259
27.1.6	Determining How Long a Job Remains after Execution	260
27.2	Health and Fault Management.....	260
27.3	Cascading Considerations	260
27.4	Support Subprofiles and Packages.....	260
27.5	Methods of the Profile	261
27.5.1	Job Modification	261
27.5.2	Getting Error Conditions from Jobs	261
27.5.3	Suspending, Killing or Terminating a Job.....	261
27.6	Client Considerations and Recipes	262
27.7	Registered Name and Version	263
27.8	CIM Elements.....	263
27.8.1	General.....	263
27.8.2	CIM_AffectedJobElement.....	264
27.8.3	CIM_AssociatedJobMethodResult	264
27.8.4	CIM_ConcreteJob	264
27.8.5	CIM_MethodResult.....	266
27.8.6	CIM_OwningJobElement.....	267
28	Location Subprofile.....	268
28.1	Description	268
28.1.1	General.....	268
28.1.2	Instance Diagram	268
28.2	Health and Fault Management Considerations.....	268
28.3	Cascading Considerations	268
28.4	Supported Subprofiles and Packages.....	268
28.5	Methods of the Profile	268
28.6	Client Considerations and Recipes	268
28.7	Registered Name and Version	268
28.8	CIM Elements.....	269
28.8.1	General.....	269
28.8.2	CIM_Location	269
28.8.3	CIM_PhysicalElementLocation.....	269
29	Extra Capacity Set Subprofile.....	270
30	Cluster Subprofile	271
31	Multiple Computer System Subprofile	272
31.1	Description	272
31.1.1	General.....	272
31.1.2	Top Level System.....	272
31.1.3	Non-Top-Level Systems.....	273
31.1.4	Types of RedundancySets	273
31.1.5	Multiple Tiers of Systems	273
31.1.6	Associations between ComputerSystems and other Logical Elements.....	274
31.1.7	Associations between ComputerSystems and PhysicalPackages and Products..	275
31.1.8	Storage Systems without Multiple Systems	276
31.1.9	Durable Names and Correlatable IDs of the Subprofile	276
31.2	Health and Fault Management Considerations.....	276
31.3	Cascading Considerations	276

31.4	Supported Subprofiles and Packages.....	276
31.5	Methods of the Profile	276
31.6	Client Considerations and Recipes	276
31.6.1	General.....	276
31.6.2	Find Top-level Computer Systems	276
31.6.3	Find the Top-level Computer System for any LogicalDevice.....	276
31.7	Registered Name and Version	279
31.8	CIM Elements.....	279
31.8.1	General.....	279
31.8.2	CIM_ComponentCS	279
31.8.3	CIM_ComputerSystem (Non-Top-Level System)	280
31.8.4	CIM_ConcretelDentity.....	280
31.8.5	CIM_IsSpare	280
31.8.6	CIM_MemberOfCollection	281
31.8.7	CIM_RedundancySet	281
32	Physical Package Package	282
32.1	Description	282
32.1.1	General.....	282
32.1.2	Well Defined Subcomponents	282
32.1.3	Multiple Product Identities	283
32.2	Health and Fault Management Considerations.....	284
32.3	Cascading Considerations	284
32.4	Supported Subprofiles and Packages.....	284
32.5	Methods of this Profile.....	284
32.6	Client Considerations and Recipes	284
32.6.1	Find Asset Information	284
32.6.2	Finding Product information	284
32.6.3	Finding Asset information.....	285
32.7	Registered Name and Version	285
32.8	CIM Elements.....	285
32.8.1	General.....	285
32.8.2	CIM_Container	285
32.8.3	CIM_LogicalIDentity.....	286
32.8.4	CIM_PhysicalElementLocation.....	286
32.8.5	CIM_PhysicalPackage (Component)	287
32.8.6	CIM_PhysicalPackage (System)	287
32.8.7	CIM_Product (Component)	288
32.8.8	CIM_Product (System)	288
32.8.9	CIM_ProductParentChild.....	289
32.8.10	CIM_ProductPhysicalComponent (Component)	289
32.8.11	CIM_ProductPhysicalComponent (System).....	289
32.8.12	CIM_SystemPackaging (Component).....	290
32.8.13	CIM_SystemPackaging (System)	290
33	Power Supply Profile	291
33.1	Synopsis.....	291
33.2	Description	291
33.3	Implementation.....	291
33.3.1	General.....	291
33.3.2	Health and Fault Management Consideration	291
33.3.3	Cascading Considerations	291
33.4	Methods	291
33.5	Use Cases.....	291
33.6	CIM Elements.....	292
33.6.1	General.....	292

33.6.2	CIM_ElementCapabilities	292
33.6.3	CIM_IsSpare	293
33.6.4	CIM_MemberOfCollection	294
33.6.5	CIM_OwningCollectionElement.....	294
33.6.6	CIM_PowerSupply.....	294
33.6.7	CIM_RedundancySet	295
33.6.8	CIM_SuppliesPower.....	296
33.6.9	CIM_SystemDevice.....	296
34	Fan Profile	297
34.1	Synopsis.....	297
34.2	Description	297
34.3	Implementation.....	297
34.3.1	Health and Fault Management Consideration.....	297
34.3.2	Cascading Considerations	297
34.4	Methods	297
34.5	Use Cases.....	297
34.6	CIM Elements.....	298
34.6.1	General.....	298
34.6.2	CIM_AssociatedCooling	298
34.6.3	CIM_AssociatedSensor	299
34.6.4	CIM_ElementCapabilities	299
34.6.5	CIM_EnabledLogicalElementCapabilities	299
34.6.6	CIM_Fan.....	300
34.6.7	CIM_IsSpare	301
34.6.8	CIM_MemberOfCollection	301
34.6.9	CIM_NumericSensor	301
34.6.10	CIM_OwningCollectionElement	302
34.6.11	CIM_RedundancySet.....	302
34.6.12	CIM_Sensor	303
34.6.13	CIM_SystemDevice.....	303
35	Sensors Profile	304
35.1	Synopsis.....	304
35.2	Description	304
35.3	Implementation.....	304
35.3.1	General.....	304
35.3.2	Health and Fault Management Consideration.....	304
35.3.3	Cascading Considerations	304
35.4	Methods	304
35.5	Use Cases.....	304
35.6	CIM Elements.....	304
35.6.1	General.....	304
35.6.2	CIM_AssociatedSensor	305
35.6.3	CIM_ElementCapabilities	305
35.6.4	CIM_EnabledLogicalElementCapabilities	306
35.6.5	CIM_NumericSensor	306
35.6.6	CIM_Sensor	307
35.6.7	CIM_SystemDevice.....	308
36	Base Server Profile.....	310
36.1	Synopsis.....	310
36.2	Description	310
36.3	Implementation.....	310
36.3.1	General.....	310
36.3.2	HBA Instrumentation	311
36.3.3	Host Hardware RAID Instrumentation	311

36.3.4	Storage Enclosure Instrumentation	311
36.3.5	Health and Fault Management Consideration	311
36.3.6	Cascading Considerations	311
36.4	Methods	311
36.5	Use Cases	311
36.6	CIM Elements	311
36.6.1	General	311
36.6.2	CIM_ComputerSystem	312
36.6.3	CIM_ComputerSystemPackage	312
36.6.4	CIM_ElementCapabilities	313
36.6.5	CIM_EnabledLogicalElementCapabilities	313
36.6.6	CIM_HostedService	313
36.6.7	CIM_PhysicalPackage	314
36.6.8	CIM_ServiceAffectsElement	315
36.6.9	CIM_TimeService	315
37	Media Access Device Profile	316
37.1	Synopsis	316
37.2	Description	316
37.2.1	General	316
37.2.2	Location Indicator	316
37.2.3	Media Access Device Online/Offline	316
37.3	Implementation	317
37.3.1	Health and Fault Management Consideration	317
37.3.2	Cascading Considerations	317
37.3.3	Hot swap insertion or Removal of Drives	318
37.4	Methods	318
37.4.1	Request State Change	318
37.5	Use Cases	318
37.6	CIM Elements	318
37.6.1	General	318
37.6.2	CIM_EnabledLogicalElementCapabilities	319
37.6.3	CIM_HostedAccessPoint	319
37.6.4	CIM_MediaAccessDevice	319
37.6.5	CIM_PhysicalPackage	320
37.6.6	CIM_ProtocolEndpoint	320
37.6.7	CIM_Realizes	321
37.6.8	CIM_SAPAvailableForElement	321
37.6.9	CIM_SystemDevice	321
38	Storage Enclosure Profile	323
38.1	Synopsis	323
38.2	Description	323
38.2.1	General	323
38.2.2	Guidelines related to Referencing Profiles	323
38.2.3	Examples of Storage Enclosure Configurations	325
38.3	Implementation	326
38.3.1	Health and Fault Management Consideration	326
38.3.2	Cascading Considerations	326
38.3.3	Enclosure Elements	326
38.3.4	Storage Elements	326
38.3.5	Physical Assets	327
38.4	Methods	328
38.4.1	Extrinsic Methods of the Profile	328
38.4.2	Intrinsic Methods of this Profile	329
38.5	Use Cases	329

38.6	CIM Elements.....	329
38.6.1	General.....	329
38.6.2	CIM_ConfigurationReportingService	329
38.6.3	CIM_HostedService	330
39	Software Subprofile	331
39.1	Description	331
39.2	Health and Fault Management Considerations	331
39.3	Cascading Considerations	331
39.4	Supported Subprofiles, and Packages.....	331
39.5	Methods of the Profile	331
39.6	Client Considerations and Recipes	332
39.7	Registered Name and Version	332
39.8	CIM Elements.....	332
39.8.1	General.....	332
39.8.2	CIM_InstalledSoftwareIdentity.....	332
39.8.3	CIM_SoftwareIdentity	332
40	Software Inventory Profile	334
40.1	Synopsis.....	334
40.2	Description	334
40.2.1	General.....	334
40.2.2	Relationship to the SMI-S Software Profile	334
40.3	Implementation.....	335
40.3.1	General.....	335
40.3.2	Software Installation and Update	335
40.3.3	Health and Fault Management Consideration	335
40.3.4	Cascading Considerations	335
40.4	Methods	335
40.5	Use Cases.....	335
40.6	CIM Elements.....	335
40.6.1	General.....	335
40.6.2	CIM_ElementSoftwareIdentity.....	336
40.6.3	CIM_HostedAccessPoint.....	336
40.6.4	CIM_HostedCollection.....	337
40.6.5	CIM_InstalledSoftwareIdentity.....	337
40.6.6	CIM_MemberOfCollection	337
40.6.7	CIM_OrderedComponent	337
40.6.8	CIM_OrderedDependency	338
40.6.9	CIM_SAPAvailableForElement	338
40.6.10	CIM_SoftwareIdentity.....	338
40.6.11	CIM_SoftwareIdentityResource	339
40.6.12	CIM_SystemSpecificCollection	339
41	Server Profile.....	341
41.1	Description	341
41.1.1	Model Overview.....	341
41.1.2	Use of model fields to Populate the SLP template	341
41.1.3	Support for Indications	343
41.1.4	Security Background	343
41.2	Health and Fault Management.....	343
41.3	Cascading Considerations	343
41.4	Supported Subprofiles and Packages.....	343
41.5	Methods of the Profile	343
41.6	Client Considerations and Recipes – Segregate a SAN Device Type	343
41.7	Registered Name and Version	345
41.8	CIM Elements.....	345

41.8.1	General.....	345
41.8.2	CIM_CIMXMLCommunicationMechanism.....	346
41.8.3	CIM_CommMechanismForManager	346
41.8.4	CIM_HostedAccessPoint.....	347
41.8.5	CIM_HostedService	347
41.8.6	CIM_Namespace.....	347
41.8.7	CIM_NamespaceInManager	348
41.8.8	CIM_ObjectManager	348
41.8.9	CIM_ObjectManagerCommunicationMechanism.....	349
41.8.10	CIM_System.....	350
42	Profile Registration Profile	351
42.1	Synopsis.....	351
42.2	Description	351
42.3	Implementation.....	351
42.3.1	General.....	351
42.3.2	ElementConformsToProfile Association	352
42.3.3	Associations between Autonomous and Component Profile.....	353
42.3.4	The SMI-S Registered Profile.....	353
42.3.5	Health and Fault Management Consideration	355
42.3.6	Cascading Considerations	355
42.4	Methods	355
42.5	Use Cases.....	355
42.5.1	Using the CIM Server Model to Determine SNIA Profiles Supported.....	355
42.5.2	Recipe Assumptions.....	356
42.5.3	Find Servers Supporting a Given Profile	356
42.5.4	Enumerate Profiles Supported by a Given CIM Server	358
42.5.5	Identify the ManagedElement Defined by a Profile	360
42.5.6	Determine the SNIA Version of a Profile	360
42.5.7	Find all Profiles on a Server	361
42.6	CIM Elements.....	362
42.6.1	General.....	362
42.6.2	CIM_ElementConformsToProfile (Associates Domain object (e.g. System) to RegisteredProfile).....	363
42.6.3	CIM_ElementConformsToProfile (Associates RegisteredProfiles for SMI-S and domain profiles)	363
42.6.4	CIM_ElementSoftwareIdentity (Profile and SW identity)	364
42.6.5	CIM_ElementSoftwareIdentity (Subprofile and SW identity)	364
42.6.6	CIM_Product	364
42.6.7	CIM_ProductSoftwareComponent.....	364
42.6.8	CIM_ReferencedProfile	365
42.6.9	CIM_RegisteredProfile (Domain Registered Profile)	365
42.6.10	CIM_RegisteredProfile (The SMI-S Registered Profile).....	366
42.6.11	CIM_RegisteredSubProfile.....	367
42.6.12	CIM_SoftwareIdentity.....	367
42.6.13	CIM_SubProfileRequiresProfile	368
43	Indication Profile	369
43.1	Description	369
43.1.1	General.....	369
43.1.2	IndicationFilter Names.....	371
43.1.3	Basic Indication Classes and Association	371
43.1.4	Life Cycle Indications	373
43.1.5	AlertIndications.....	374
43.1.6	Indication Delivery	375
43.1.7	Instrumentation Requirements	375

This is a preview of "ISO/IEC 24775-3:2014". [Click here to purchase the full version from the ANSI store.](#)

43.2	Health and Fault Management Considerations	379
43.2.1	Elements Reporting Health	379
43.2.2	Health State Transformations and Dependencies.....	379
43.2.3	Standard Errors Produced.....	379
43.2.4	Cause and effect associations	379
43.2.5	Indication Correlation	379
43.3	Cascading Considerations	379
43.4	Supported Profiles, Subprofiles and Packages.....	379
43.5	Methods of the Profile	379
43.5.1	Extrinsic Methods of the Profile.....	379
43.5.2	Intrinsic Methods of the Profile	379
43.6	Client Considerations and Recipes	383
43.6.1	Use of Profile Specific Recipes	383
43.6.2	General Client Considerations	383
43.6.3	Discovery of Implementation variations.....	383
43.6.4	Client Defined Filters	384
43.6.5	Creation of IndicationFilter and ListenerDestination Instances	384
43.6.6	Creation of IndicationSubscription Instances	384
43.6.7	Determine if the indication subscription requested already exists.....	384
43.6.8	Listenable Instance Notification.....	385
43.6.9	Life Cycle Event Subscription Description.....	385
43.6.10	Subscription for alert indications	386
43.6.11	Listenable Interface Modification Notification.....	386
43.6.12	Subscribe for Lifecycle Events where OperationalStatus Changes	386
43.7	Registered Name and Version	387
43.8	CIM Elements.....	387
43.8.1	General.....	387
43.8.2	CIM_AlertIndication	387
43.8.3	CIM_IndicationFilter (client defined).....	389
43.8.4	CIM_IndicationFilter (pre-defined).....	390
43.8.5	CIM_IndicationSubscription.....	391
43.8.6	CIM_InstCreation	392
43.8.7	CIM_InstDeletion.....	392
43.8.8	CIM_InstModification.....	393
43.8.9	CIM_ListenerDestinationCIMXML (Indication Handler).....	394
44	Experimental Indication Profile	395
44.1	Description	395
44.1.1	General.....	395
44.1.2	Basic Indication Classes and Association	396
44.1.3	AlertingManagedElement encoding in AlertIndication Instances	396
44.1.4	Instrumentation Requirements	396
44.1.5	Semi-Fixed Client Specific Indication Filters	399
44.1.6	Filter Collections.....	400
44.1.7	Indication Configuration Services.....	403
44.2	Fault Management Considerations	405
44.2.1	Indication Correlation	405
44.3	Cascading Considerations	406
44.4	Supported Profiles, Subprofiles and Packages.....	406
44.5	Methods of the Profile	407
44.5.1	Extrinsic Methods of the Profile.....	407
44.5.2	Intrinsic Methods of the Profile	410
44.6	Client Considerations and Recipes	413
44.6.1	General.....	413
44.6.2	Testing a Listener Destination.....	413

This is a preview of "ISO/IEC 24775-3:2014". [Click here to purchase the full version from the ANSI store.](#)

44.6.3	Discovering predefined indicationFilters of an implementation	414
44.6.4	Creating a subscription to a predefined IndicationFilter	415
44.6.5	Creating a client defined indication and subscription	415
44.6.6	Creating a semi-fixed indication filter	416
44.6.7	Creating a FilterCollection	416
44.7	Registered Name and Version	417
44.8	CIM Elements.....	417
44.8.1	General.....	417
44.8.2	CIM_AlertIndication	418
44.8.3	CIM_ElementCapabilities (Indication Config Service to Capabilities)	420
44.8.4	CIM_FilterCollection (Client Defined)	420
44.8.5	CIM_FilterCollectionSubscription (Filter Collection Subscription)	420
44.8.6	CIM_HostedCollection (Hosted Filter Collection)	421
44.8.7	CIM_HostedService (Indication Config Service to System)	421
44.8.8	CIM_IndicationFilter (client defined)	422
44.8.9	CIM_IndicationFilter (pre-defined)	423
44.8.10	CIM_IndicationSubscription	424
44.8.11	CIM_InstCreation	424
44.8.12	CIM_InstDeletion.....	425
44.8.13	CIM_InstModification.....	426
44.8.14	CIM_ListenerDestinationCIMXML (Indication Handler)	427
44.8.15	CIM_ListenerDestinationWSManagement (WS-Man Indication Handler).....	427
44.8.16	CIM_MemberOfCollection (Filter Collection to Filters).....	428
44.8.17	SNIA_IndicationConfigurationCapabilities	428
44.8.18	SNIA_IndicationConfigurationService	429
45	Object Manager Adapter Subprofile	430
45.1	Description	430
45.1.1	General.....	430
45.1.2	Instance Diagram	430
45.2	Health and Fault Management.....	430
45.3	Cascading Considerations	430
45.4	Supported Subprofiles and Packages.....	430
45.5	Methods of the Profile	430
45.6	Client Considerations and Recipes	431
45.7	Registered Name and Version	431
45.8	CIM Elements.....	431
45.8.1	General.....	431
45.8.2	CIM_CommMechanismForObjectManagerAdapter	431
45.8.3	CIM_ObjectManagerAdapter.....	431
46	Proxy Server System Management Subprofile.....	433
46.1	Description	433
46.1.1	General.....	433
46.1.2	Relationship to Server Profile.....	433
46.1.3	Model.....	433
46.1.4	Creation Considerations.....	434
46.2	Health and Fault Management Consideration.....	435
46.3	Cascading Considerations	435
46.4	Supported Profiles, Subprofiles, and Packages.....	435
46.5	Methods of the Profile	435
46.5.1	General.....	435
46.5.2	AddSystem	435
46.5.3	DiscoverSystems.....	436
46.5.4	RemoveSystem	437
46.6	Client Considerations and Recipes	437

This is a preview of "ISO/IEC 24775-3:2014". [Click here to purchase the full version from the ANSI store.](#)

46.6.1	General.....	437
46.6.2	Use Case 1: Add Device	438
46.6.3	Use Case 2: Remove Device	438
46.7	Registered Name and Version	438
46.8	CIM Elements.....	438
46.8.1	General.....	438
46.8.2	CIM_HostedService	439
46.8.3	SNIA_SystemRegistrationCapabilities	439
46.8.4	SNIA_SystemRegistrationService	440
47	Device Credentials Subprofile	441
47.1	Description	441
47.1.1	General.....	441
47.1.2	Instance Diagram	441
47.2	Health and Fault Management Considerations	441
47.3	Cascading Considerations	441
47.4	Supported Subprofiles and Packages.....	441
47.5	Extrinsic Methods of this Profile	441
47.6	Client Considerations and Recipes	441
47.7	Registered Name and Version	441
47.8	CIM Elements.....	442
47.8.1	General.....	442
47.8.2	CIM_HostedService	442
47.8.3	CIM_SharedSecret.....	442
47.8.4	CIM_SharedSecretIsShared	442
47.8.5	CIM_SharedSecretService	443
48	Miscellaneous Security Profiles.....	444
49	Operational Power Profile.....	445
49.1	Synopsis.....	445
49.2	Description	445
49.3	Implementation.....	445
49.3.1	Model Overview.....	445
49.3.2	Element Types	446
49.3.3	Power Metric Attributes	449
49.3.4	Bulk Retrieval	450
49.3.5	Default Manifest Collection.....	450
49.3.6	Client Defined Manifest Collection	450
49.3.7	Capabilities Support for Operational Power Profile	451
49.3.8	Health and Fault Management Consideration	452
49.3.9	Cascading Considerations	452
49.4	Methods of the Profile	452
49.4.1	Extrinsic Methods of the Profile	452
49.4.2	Intrinsic Methods of this Profile	457
49.5	Use Cases – Client Considerations and Recipes	457
49.6	CIM Elements.....	457
49.6.1	General.....	457
49.6.2	CIM_ComputerSystem (Optional Element)	459
49.6.3	CIM_DiskDrive (Optional Element)	459
49.6.4	CIM_ElementCapabilities	459
49.6.5	CIM_ElementStatisticalData (Optional Element Stats)	459
49.6.6	CIM_ElementStatisticalData (Top Level System Stats)	459
49.6.7	CIM_Fan (Optional Element).....	460
49.6.8	CIM_HostedCollection (Client Defined).....	460
49.6.9	CIM_HostedCollection (Default).....	460
49.6.10	CIM_HostedCollection (System to StatisticsCollection).....	461

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49.6.11	CIM_HostedService	461
49.6.12	CIM_LogicalModule (Optional Element)	461
49.6.13	CIM_MemberOfCollection (Member of client defined collection)	462
49.6.14	CIM_MemberOfCollection (Member of power statistics collection).....	462
49.6.15	CIM_MemberOfCollection (Member of pre-defined collection)	462
49.6.16	CIM_PowerSource (Optional Element)	463
49.6.17	CIM_PowerSupply (Optional Element)	463
49.6.18	CIM_Processor (Optional Element)	463
49.6.19	CIM_StatisticsCollection	463
49.6.20	SNIA_OperationalPowerManifest (Client Defined)	463
49.6.21	SNIA_OperationalPowerManifest (Provider Support)	464
49.6.22	SNIA_OperationalPowerManifestCollection (Client Defined).....	465
49.6.23	SNIA_OperationalPowerManifestCollection (Provider Defined)	466
49.6.24	SNIA_OperationalPowerStatisticalData (Optional Element Stats).....	466
49.6.25	SNIA_OperationalPowerStatisticalData (Top Level System Stats).....	467
49.6.26	SNIA_OperationalPowerStatisticsCapabilities	467
49.6.27	SNIA_OperationalPowerStatisticsService.....	468
50	Cross Profile Considerations	470
50.1	Overview	470
50.2	HBA model	470
50.3	Switch Model.....	471
50.3.1	General.....	471
50.3.2	Recipes	471
50.4	Array Model.....	475
50.5	Storage Virtualization Model	477
50.6	Fabric Topology (HBA, Switch, Array)	478
50.6.1	General.....	478
50.6.2	Logical Device Composition	479
Annex A	(informative) SMI-S Information Model.....	525
Bibliography	527

This is a preview of "ISO/IEC 24775-3:2014". [Click here to purchase the full version from the ANSI store.](#)

Figure 1 - Experimental Maturity Level Tag	46
Figure 2 - Implemented Maturity Level Tag	47
Figure 3 - Stable Maturity Level Tag	47
Figure 4 - Deprecated Tag	48
Figure 5 - Generic Target Port Classes	55
Figure 6 - LogicalPort Class Hierarchy	56
Figure 7 - Generic Target with LUN Masking	57
Figure 8 - SPI Target Port Instance Diagram	61
Figure 9 - FC Target Port Instance Diagram	67
Figure 10 - iSCSI Target Ports Subprofile Instance Diagram	74
Figure 11 - Serial Attached SCSI (SAS) Target Port Instance Diagram	110
Figure 12 - SATA Target Port Instance Diagram	117
Figure 13 - SB Target Port Instance Diagram	122
Figure 14 - DA Port Instance Diagram	128
Figure 15 - Generic Initiator Port Model	132
Figure 16 - Optional Connectivity Collection Model	133
Figure 17 - Optional Full-Path Model	133
Figure 18 - HBA and Disk Model	134
Figure 19 - HBA and Tape or Optical Devices	135
Figure 20 - Port Statistics	135
Figure 21 - Port Statistics Hierarchy	136
Figure 22 - SPI Initiator Port Instance Diagram	143
Figure 23 - iSCSI Initiator Port Instance Diagram	153
Figure 24 - Fibre Channel Initiator Instance Diagram	162
Figure 25 - FC Node Model	162
Figure 26 - SAS Initiator Port Model	174
Figure 27 - ATA Initiator Port Class Diagram	185
Figure 28 - Fibre Channel Initiator Instance Diagram	194
Figure 29 - FCoE Initiator Instance Diagram	204
Figure 30 - Optional Target Element Model	205
Figure 31 - Logical Port Group Model	206
Figure 32 - System-wide Remote Access Point	218
Figure 33 - Access Point Instance Diagram	219
Figure 34 - Instance Diagram for Logical Topology	223
Figure 35 - Resource Allocation/Deallocation Instance Diagram	225
Figure 36 - Cascading Server Topology	226
Figure 37 - Instance Diagram for Cascading with Resource Ownership	227
Figure 38 - Instance Diagram for Cascading with Credential Management Subprofile	228
Figure 39 - Modeling of Cascading Capabilities	229
Figure 40 - Job Control Subprofile Model	257
Figure 41 - Storage Configuration	262
Figure 42 - Location Instance	268
Figure 43 - Two Redundant Systems Instance Diagram	272
Figure 44 - Multiple Redundancy Tier Instance Diagram	273
Figure 45 - System Level Numbers	274
Figure 46 - Physical Package Package Mandatory Classes	282
Figure 47 - Modeling for well defined subcomponents	283
Figure 48 - Physical Package Package with Optional Classes	284
Figure 49 - Media Access Device Class Diagram	317

This is a preview of "ISO/IEC 24775-3:2014". [Click here to purchase the full version from the ANSI store.](#)

Figure 50 - Enclosure with Two Arrays	325
Figure 51 - Model for Disk in Enclosure	328
Figure 52 - Software Instance Diagram	331
Figure 53 - Server Model	341
Figure 54 - Profile Registration Model	352
Figure 55 - Associations between RegisteredProfile instances	353
Figure 56 - Model for SMI-S Registered Profile	354
Figure 57 - Model for Provider Versions	354
Figure 58 - Indication Profile and Namespaces	369
Figure 59 - Indication Profile Instance Diagram	372
Figure 60 - Indication Profile Instance Diagram	396
Figure 61 - Anatomy of IndicationIdentifier	397
Figure 62 - Predefined Filter Collections	401
Figure 63 - Client Defined Filter Collections	402
Figure 64 - Indication Configuration Service Classes	404
Figure 65 - ObjectManagerAdapter Subprofile Model	430
Figure 66 - Proxy Server System Management Model	434
Figure 67 - DeviceCredentials Subprofile Model	441
Figure 68 - Operational Power Profile Summary	446
Figure 69 - Model for Element Types	447
Figure 70 - Classes related to Top-level System Power Statistics	448
Figure 71 - System Diagram	470
Figure 72 - Host Bus Adapter Model	470
Figure 73 - Switch Model	471
Figure 74 - Array Instance	476
Figure 75 - Virtualization Instance	477
Figure 76 - Fabric Topology	478

This is a preview of "ISO/IEC 24775-3:2014". [Click here to purchase the full version from the ANSI store.](#)

Table 1 - Profile Components	44
Table 2 - Modeling of Common Storage Devices in CIM	57
Table 3 - CIM Elements for Generic Target Ports	58
Table 4 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation	58
Table 5 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint	59
Table 6 - SMI Referenced Properties/Methods for CIM_LogicalPort	59
Table 7 - SMI Referenced Properties/Methods for CIM_ProtocolEndpoint	60
Table 8 - SMI Referenced Properties/Methods for CIM_SystemDevice (Port)	60
Table 9 - Related Profiles for SPI Target Ports	61
Table 10 - SPIPort OperationalStatus	62
Table 11 - CIM Elements for SPI Target Ports	62
Table 12 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation	63
Table 13 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint	63
Table 14 - SMI Referenced Properties/Methods for CIM_SCSIProtocolEndpoint	64
Table 15 - SMI Referenced Properties/Methods for CIM_SPIPort	64
Table 16 - SMI Referenced Properties/Methods for CIM_SystemDevice (Port)	65
Table 17 - Related Profiles for FC Target Ports	66
Table 18 - FCPort OperationalStatus	67
Table 19 - CIM Elements for FC Target Ports	68
Table 20 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation	69
Table 21 - SMI Referenced Properties/Methods for CIM_FCPort	69
Table 22 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint	70
Table 23 - SMI Referenced Properties/Methods for CIM_ProtocolControllerForPort	70
Table 24 - SMI Referenced Properties/Methods for CIM_SCSIProtocolEndpoint	71
Table 25 - SMI Referenced Properties/Methods for CIM_SystemDevice (Port)	71
Table 26 - iSCSI Terminology and SMI-S Class Names	72
Table 27 - EthernetPort OperationalStatus	75
Table 28 - CIM Elements for iSCSI Target Ports	90
Table 29 - SMI Referenced Properties/Methods for CIM_BindsTo (TCPProtocolEndpoint to IPProtocolEndpoint)	92
Table 30 - SMI Referenced Properties/Methods for CIM_BindsTo (iSCSIProtocolEndpoint to TCPProtocolEndpoint)	93
Table 31 - SMI Referenced Properties/Methods for CIM_ConcreteDependency	93
Table 32 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation (EthernetPort to IPProtocolEndpoint)	93
Table 33 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation (EthernetPort to iSCSIProtocolEndpoint)	94
Table 34 - SMI Referenced Properties/Methods for CIM_ElementCapabilities (iSCSIConfigurationCapabilities to System)	94
Table 35 - SMI Referenced Properties/Methods for CIM_ElementCapabilities (iSCSIConfigurationCapabilities to iSCSIConfigurationService)	94
Table 36 - SMI Referenced Properties/Methods for CIM_ElementSettingData (iSCSIConnectionSettings to TCPProtocolEndpoint)	95
Table 37 - SMI Referenced Properties/Methods for CIM_ElementSettingData (iSCSIConnectionSettings to iSCSIProtocolEndpoint)	95
Table 38 - SMI Referenced Properties/Methods for CIM_ElementSettingData (iSCSIConnectionSettings to iSCSIProtocolController)	95
Table 39 - SMI Referenced Properties/Methods for CIM_ElementSettingData (iSCSIConnectionSettings to System)	96
Table 40 - SMI Referenced Properties/Methods for CIM_ElementSettingData (iSCSIConnectionSettings to iSCSIProtocolEndpoint)	96
Table 41 - SMI Referenced Properties/Methods for CIM_ElementStatisticalData (iSCSIConnectionSettings to iSCSIProtocolController)	96
Table 42 - SMI Referenced Properties/Methods for CIM_ElementStatisticalData (iSCSIConnectionSettings to iSCSIProtocolController)	97

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Table 43 - SMI Referenced Properties/Methods for CIM_ElementStatisticalData (iSCSIStatistics to iSCSI)	97
Table 44 - SMI Referenced Properties/Methods for CIM_EndpointOfNetworkPipe (iSCSIConnection to TCPProtocolEndpoint).....	97
Table 45 - SMI Referenced Properties/Methods for CIM_EndpointOfNetworkPipe (iSCSI to iSCSIProtocolEndpoint)	98
Table 46 - SMI Referenced Properties/Methods for CIM_EthernetPort.....	98
Table 47 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (System to IPProtocolEndpoint).....	99
Table 48 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (System to TCPProtocolEndpoint)	99
Table 49 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (System to iSCSIProtocolEndpoint).....	99
Table 50 - SMI Referenced Properties/Methods for CIM_HostedCollection.....	100
Table 51 - SMI Referenced Properties/Methods for CIM_HostedService.....	100
Table 52 - SMI Referenced Properties/Methods for CIM_IPProtocolEndpoint	100
Table 53 - SMI Referenced Properties/Methods for CIM_MemberOfCollection	101
Table 54 - SMI Referenced Properties/Methods for CIM_NetworkPipeComposition.....	101
Table 55 - SMI Referenced Properties/Methods for CIM_SAPAvailableForElement.....	101
Table 56 - SMI Referenced Properties/Methods for CIM_SCSIProtocolController.....	102
Table 57 - SMI Referenced Properties/Methods for CIM_SystemDevice (System to EthernetPort)	102
Table 58 - SMI Referenced Properties/Methods for CIM_SystemDevice (System to SCSIProtocolController)	102
Table 59 - SMI Referenced Properties/Methods for CIM_SystemSpecificCollection.....	103
Table 60 - SMI Referenced Properties/Methods for CIM_TCPProtocolEndpoint	103
Table 61 - SMI Referenced Properties/Methods for CIM_iSCSICapabilities	103
Table 62 - SMI Referenced Properties/Methods for CIM_iSCSIConfigurationCapabilities.....	104
Table 63 - SMI Referenced Properties/Methods for CIM_iSCSIConfigurationService	104
Table 64 - SMI Referenced Properties/Methods for CIM_iSCSIConnection.....	105
Table 65 - SMI Referenced Properties/Methods for CIM_iSCSIConnectionSettings.....	105
Table 66 - SMI Referenced Properties/Methods for CIM_iSCSILoginStatistics.....	106
Table 67 - SMI Referenced Properties/Methods for CIM_iSCSIProtocolEndpoint	107
Table 68 - SMI Referenced Properties/Methods for CIM_iSCSIStatistics.....	107
Table 69 - SMI Referenced Properties/Methods for CIM_iSCSIStatisticsFailures	108
Table 70 - SMI Referenced Properties/Methods for CIM_iSCSIStatisticsSettings	108
Table 71 - SMI Referenced Properties/Methods for CIM_iSCSIStatistics.....	109
Table 72 - Related Profiles for SAS Target Ports	110
Table 73 - SASPort OperationalStatus	111
Table 74 - CIM Elements for SAS Target Ports	112
Table 75 - SMI Referenced Properties/Methods for CIM_ConcreteComponent.....	112
Table 76 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation	113
Table 77 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint.....	113
Table 78 - SMI Referenced Properties/Methods for CIM_SASPort	114
Table 79 - SMI Referenced Properties/Methods for CIM_SCSIProtocolEndpoint	114
Table 80 - SMI Referenced Properties/Methods for CIM_SystemDevice (Port).....	115
Table 81 - SMI Referenced Properties/Methods for CIM_SystemDevice (SAS PHY).....	115
Table 82 - SMI Referenced Properties/Methods for SNIA_SASPHY.....	115
Table 83 - Related Profiles for SATA Target Ports	116
Table 84 - ATAPort OperationalStatus.....	117
Table 85 - CIM Elements for SATA Target Ports.....	118
Table 86 - SMI Referenced Properties/Methods for CIM_ATAPort	118
Table 87 - SMI Referenced Properties/Methods for CIM_ATAPortEndpoint.....	119
Table 88 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation	119

This is a preview of "ISO/IEC 24775-3:2014". [Click here to purchase the full version from the ANSI store.](#)

Table 89 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint.....	120
Table 90 - SMI Referenced Properties/Methods for CIM_SystemDevice (Port).....	120
Table 91 - Related Profiles for SB Target Ports.....	121
Table 92 - FCPort OperationalStatus.....	122
Table 93 - CIM Elements for SB Target Ports.....	123
Table 94 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation	124
Table 95 - SMI Referenced Properties/Methods for CIM_FCPort.....	124
Table 96 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint.....	125
Table 97 - SMI Referenced Properties/Methods for CIM_SystemDevice (Port)	125
Table 98 - SMI Referenced Properties/Methods for SNIA_SBProtocolEndpoint.....	126
Table 99 - CIM Elements for DA Target Ports	129
Table 100 - SMI Referenced Properties/Methods for CIM_DAPort	129
Table 101 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation	130
Table 102 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint.....	130
Table 103 - SMI Referenced Properties/Methods for CIM_SCSIProtocolEndpoint	131
Table 104 - SMI Referenced Properties/Methods for CIM_SystemDevice (Port)	131
Table 105 - CIM Elements for Generic Initiator Ports	137
Table 106 - SMI Referenced Properties/Methods for CIM_ConnectivityCollection.....	137
Table 107 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation	138
Table 108 - SMI Referenced Properties/Methods for CIM_ElementStatisticalData (Port Statistics)	138
Table 109 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (Initiator).....	138
Table 110 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (Target).....	139
Table 111 - SMI Referenced Properties/Methods for CIM_HostedCollection (Connectivity Collection)	139
Table 112 - SMI Referenced Properties/Methods for CIM_LogicalPort	140
Table 113 - SMI Referenced Properties/Methods for CIM_MemberOfCollection (Connectivity Collection)	140
Table 114 - SMI Referenced Properties/Methods for CIM_ProtocolEndpoint (Initiator)	140
Table 115 - SMI Referenced Properties/Methods for CIM_ProtocolEndpoint (Target).....	141
Table 116 - SMI Referenced Properties/Methods for CIM_SystemDevice (Initiator Ports)	142
Table 117 - SMI Referenced Properties/Methods for SNIA_LogicalPortStatistics.....	142
Table 118 - SPIPort OperationalStatus.....	143
Table 119 - CIM Elements for SPI Initiator Ports	144
Table 120 - SMI Referenced Properties/Methods for CIM_ConnectivityCollection.....	145
Table 121 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation	146
Table 122 - SMI Referenced Properties/Methods for CIM_ElementStatisticalData (Port Statistics)	146
Table 123 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (Initiator).....	146
Table 124 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (Target).....	147
Table 125 - SMI Referenced Properties/Methods for CIM_HostedCollection (Connectivity Collection)	147
Table 126 - SMI Referenced Properties/Methods for CIM_MemberOfCollection (Connectivity Collection)	148
Table 127 - SMI Referenced Properties/Methods for CIM_SCSIInitiatorTargetLogicalUnitPath	148
Table 128 - SMI Referenced Properties/Methods for CIM_SCSIProtocolEndpoint (Initiator)	148
Table 129 - SMI Referenced Properties/Methods for CIM_SCSIProtocolEndpoint (Target)	149
Table 130 - SMI Referenced Properties/Methods for CIM_SPIPort.....	150
Table 131 - SMI Referenced Properties/Methods for CIM_SystemDevice (Initiator Ports)	150
Table 132 - SMI Referenced Properties/Methods for SNIA_LogicalPortStatistics.....	151
Table 133 - Related Profiles for iSCSI Initiator Ports	152
Table 134 - EthernetPort OperationalStatus.....	153
Table 135 - CIM Elements for iSCSI Initiator Ports.....	154
Table 136 - SMI Referenced Properties/Methods for CIM_BindsTo (Host Hardware RAID Controller)	155
Table 137 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation (IPProtocolEndpoint to EthernetPort).....	155

This is a preview of "ISO/IEC 24775-3:2014". [Click here to purchase the full version from the ANSI store.](#)

Table 138 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation (iSSIProtocolEndpoint to EthernetPort)	156
Table 139 - SMI Referenced Properties/Methods for CIM_EthernetPort (Host Hardware RAID Controller)	156
Table 140 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (System to IPProtocolEndpoint)	156
Table 141 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (System to TCPProtocolEndpoint)	157
Table 142 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (System to iSCSIProtocolEndpoint)	157
Table 143 - SMI Referenced Properties/Methods for CIM_IPProtocolEndpoint (Host Hardware RAID Controller)	157
Table 144 - SMI Referenced Properties/Methods for CIM_LogicalDevice (Host Hardware RAID Controller)	158
Table 145 - SMI Referenced Properties/Methods for CIM_SystemDevice (System to EthernetPort)	158
Table 146 - SMI Referenced Properties/Methods for CIM_SystemDevice (System to LogicalDevice)	159
Table 147 - SMI Referenced Properties/Methods for CIM_TCPProtocolEndpoint (Host Hardware RAID Controller)	159
Table 148 - SMI Referenced Properties/Methods for CIM_iSCSIProtocolEndpoint (Host Hardware RAID Controller)	160
Table 149 - Related Profiles for FC Initiator Ports	161
Table 150 - FCPort OperationalStatus	163
Table 151 - CIM Elements for FC Initiator Ports	164
Table 152 - SMI Referenced Properties/Methods for CIM_ConnectivityCollection	165
Table 153 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation	166
Table 154 - SMI Referenced Properties/Methods for CIM_ElementStatisticalData (Port Statistics)	166
Table 155 - SMI Referenced Properties/Methods for CIM_FCPort	167
Table 156 - SMI Referenced Properties/Methods for CIM_FCPortStatistics	168
Table 157 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (Initiator)	169
Table 158 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (Target)	169
Table 159 - SMI Referenced Properties/Methods for CIM_HostedCollection (Connectivity Collection)	169
Table 160 - SMI Referenced Properties/Methods for CIM_MemberOfCollection (Connectivity Collection)	170
Table 161 - SMI Referenced Properties/Methods for CIM_ProtocolControllerForPort	170
Table 162 - SMI Referenced Properties/Methods for CIM_SCSIInitiatorTargetLogicalUnitPath	171
Table 163 - SMI Referenced Properties/Methods for CIM_SCSIProtocolController	171
Table 164 - SMI Referenced Properties/Methods for CIM_SCSIProtocolEndpoint (Initiator)	172
Table 165 - SMI Referenced Properties/Methods for CIM_SCSIProtocolEndpoint (Target)	172
Table 166 - SMI Referenced Properties/Methods for CIM_SystemDevice (Initiator Ports)	173
Table 167 - SASPort OperationalStatus	175
Table 168 - CIM Elements for SAS Initiator Ports	175
Table 169 - SMI Referenced Properties/Methods for CIM_ATAProtocolEndpoint (Initiator)	176
Table 170 - SMI Referenced Properties/Methods for CIM_BindsTo	177
Table 171 - SMI Referenced Properties/Methods for CIM_ConcreteComponent	177
Table 172 - SMI Referenced Properties/Methods for CIM_ConnectivityCollection	177
Table 173 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation	178
Table 174 - SMI Referenced Properties/Methods for CIM_ElementStatisticalData (PHY Statistics)	178
Table 175 - SMI Referenced Properties/Methods for CIM_ElementStatisticalData (Port Statistics)	178
Table 176 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (Initiator)	179
Table 177 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (Target)	179
Table 178 - SMI Referenced Properties/Methods for CIM_HostedCollection (Connectivity Collection)	179
Table 179 - SMI Referenced Properties/Methods for CIM_MemberOfCollection	

This is a preview of "ISO/IEC 24775-3:2014". [Click here to purchase the full version from the ANSI store.](#)

(Connectivity Collection)	180
Table 180 - SMI Referenced Properties/Methods for CIM_SASPort	180
Table 181 - SMI Referenced Properties/Methods for CIM_SCSIInitiatorTargetLogicalUnitPath	181
Table 182 - SMI Referenced Properties/Methods for CIM_SCSIProtocolEndpoint (Initiator)	181
Table 183 - SMI Referenced Properties/Methods for CIM_SCSIProtocolEndpoint (Target)	182
Table 184 - SMI Referenced Properties/Methods for CIM_SystemDevice (Initiator PHY)	182
Table 185 - SMI Referenced Properties/Methods for CIM_SystemDevice (Initiator Ports)	183
Table 186 - SMI Referenced Properties/Methods for SNIA_LogicalPortStatistics	183
Table 187 - SMI Referenced Properties/Methods for SNIA_SASPHY	183
Table 188 - SMI Referenced Properties/Methods for SNIA_SASPhyStatistics	184
Table 189 - ATAPort OperationalStatus	186
Table 190 - CIM Elements for ATA Initiator Ports	187
Table 191 - SMI Referenced Properties/Methods for CIM_ATAInitiatorTargetLogicalUnitPath	188
Table 192 - SMI Referenced Properties/Methods for CIM_ATAPort	188
Table 193 - SMI Referenced Properties/Methods for CIM_ATAProtocolEndpoint (Initiator)	189
Table 194 - SMI Referenced Properties/Methods for CIM_ATAProtocolEndpoint (Target)	189
Table 195 - SMI Referenced Properties/Methods for CIM_ConnectivityCollection	190
Table 196 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation	190
Table 197 - SMI Referenced Properties/Methods for CIM_ElementStatisticalData (Port Statistics)	191
Table 198 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (Initiator)	191
Table 199 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (Target)	191
Table 200 - SMI Referenced Properties/Methods for CIM_HostedCollection (Connectivity Collection)	192
Table 201 - SMI Referenced Properties/Methods for CIM_MemberOfCollection (Connectivity Collection)	192
Table 202 - SMI Referenced Properties/Methods for CIM_SystemDevice (Initiator Ports)	192
Table 203 - SMI Referenced Properties/Methods for SNIA_LogicalPortStatistics	193
Table 204 - Related Profiles for SB Initiator Ports	194
Table 205 - FCPort OperationalStatus	195
Table 206 - CIM Elements for SB Initiator Ports	196
Table 207 - SMI Referenced Properties/Methods for CIM_ConnectivityCollection	197
Table 208 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation	197
Table 209 - SMI Referenced Properties/Methods for CIM_ElementStatisticalData (Port Statistics)	197
Table 210 - SMI Referenced Properties/Methods for CIM_FCPort	198
Table 211 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (Initiator)	199
Table 212 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (Target)	199
Table 213 - SMI Referenced Properties/Methods for CIM_HostedCollection (Connectivity Collection)	199
Table 214 - SMI Referenced Properties/Methods for CIM_MemberOfCollection (Connectivity Collection)	200
Table 215 - SMI Referenced Properties/Methods for CIM_SystemDevice (Initiator Ports)	200
Table 216 - SMI Referenced Properties/Methods for SNIA_LogicalPortStatistics	201
Table 217 - SMI Referenced Properties/Methods for SNIA_SBInitiatorTargetLogicalUnitPath	201
Table 218 - SMI Referenced Properties/Methods for SNIA_SBProtocolEndpoint (Initiator)	202
Table 219 - SMI Referenced Properties/Methods for SNIA_SBProtocolEndpoint (Target)	202
Table 220 - FCPort OperationalStatus	206
Table 221 - CIM Elements for FCoE Initiator Ports	207
Table 222 - SMI Referenced Properties/Methods for CIM_ConnectivityCollection	208
Table 223 - SMI Referenced Properties/Methods for CIM_DeviceSAPImplementation	208
Table 224 - SMI Referenced Properties/Methods for CIM_ElementStatisticalData (Port Statistics)	209
Table 225 - SMI Referenced Properties/Methods for CIM_EthernetPort	209
Table 226 - SMI Referenced Properties/Methods for CIM_FCPort	210
Table 227 - SMI Referenced Properties/Methods for CIM_FCPortStatistics	211
Table 228 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (Initiator)	212

This is a preview of "ISO/IEC 24775-3:2014". [Click here to purchase the full version from the ANSI store.](#)

Table 229 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint (Target)	212
Table 230 - SMI Referenced Properties/Methods for CIM_HostedCollection (Connectivity Collection)	212
Table 231 - SMI Referenced Properties/Methods for CIM_HostedCollection (FC Node)	213
Table 232 - SMI Referenced Properties/Methods for CIM_HostedDependency (NetworkPort to FCPort)	213
Table 233 - SMI Referenced Properties/Methods for CIM_LogicalPortGroup	213
Table 234 - SMI Referenced Properties/Methods for CIM_MemberOfCollection (Connectivity Collection)	214
Table 235 - SMI Referenced Properties/Methods for CIM_MemberOfCollection (FC Node)	214
Table 236 - SMI Referenced Properties/Methods for CIM_ProtocolEndpoint (Initiator)	214
Table 237 - SMI Referenced Properties/Methods for CIM_ProtocolEndpoint (Target)	215
Table 238 - SMI Referenced Properties/Methods for CIM_SCSIInitiatorTargetLogicalUnitPath	215
Table 239 - SMI Referenced Properties/Methods for CIM_SCSIProtocolEndpoint (Initiator)	216
Table 240 - SMI Referenced Properties/Methods for CIM_SCSIProtocolEndpoint (Target)	216
Table 241 - SMI Referenced Properties/Methods for CIM_SystemDevice (Ethernet Port)	217
Table 242 - SMI Referenced Properties/Methods for CIM_SystemDevice (Initiator Ports)	217
Table 243 - RemoteAccessPoint InfoFormat and AccessInfo Properties	219
Table 244 - CIM Elements for Access Points	220
Table 245 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint	220
Table 246 - SMI Referenced Properties/Methods for CIM_RemoteServiceAccessPoint	221
Table 247 - SMI Referenced Properties/Methods for CIM_SAPAvailableForElement	221
Table 248 - Supported Profiles for Cascading	230
Table 249 - Extrinsic Methods Supported by Cascading Subprofile	230
Table 250 - Cascading Capabilities Patterns	232
Table 251 - CIM Elements for Cascading	233
Table 252 - SMI Referenced Properties/Methods for CIM_ComputerSystem (Leaf System)	235
Table 253 - SMI Referenced Properties/Methods for CIM_Dependency (Object Managers)	236
Table 254 - SMI Referenced Properties/Methods for CIM_Dependency (Profile to Object Manager)	236
Table 255 - SMI Referenced Properties/Methods for CIM_Dependency (Systems)	236
Table 256 - SMI Referenced Properties/Methods for CIM_ElementCapabilities	237
Table 257 - SMI Referenced Properties/Methods for CIM_ElementConformsToProfile (Leaf)	237
Table 258 - SMI Referenced Properties/Methods for CIM_HostedCollection (Allocated Resources)	238
Table 259 - SMI Referenced Properties/Methods for CIM_HostedCollection (Remote Resources)	238
Table 260 - SMI Referenced Properties/Methods for CIM_HostedService (Allocation Service)	238
Table 261 - SMI Referenced Properties/Methods for CIM_HostedService (Object Manager)	239
Table 262 - SMI Referenced Properties/Methods for CIM_LogicalDisk	239
Table 263 - SMI Referenced Properties/Methods for CIM_LogicalIdentity (General)	240
Table 264 - SMI Referenced Properties/Methods for CIM_LogicalIdentity (LogicalDisk)	241
Table 265 - SMI Referenced Properties/Methods for CIM_LogicalIdentity (StorageVolume)	241
Table 266 - SMI Referenced Properties/Methods for CIM_MemberOfCollection (Allocated Resources)	242
Table 267 - SMI Referenced Properties/Methods for CIM_MemberOfCollection (Remote Resources)	242
Table 268 - SMI Referenced Properties/Methods for CIM_Namespace (Leaf)	242
Table 269 - SMI Referenced Properties/Methods for CIM_NamespaceInManager (Leaf)	243
Table 270 - SMI Referenced Properties/Methods for CIM_ObjectManager (Leaf)	243
Table 271 - SMI Referenced Properties/Methods for CIM_RegisteredProfile (Leaf)	244
Table 272 - SMI Referenced Properties/Methods for CIM_RemoteServiceAccessPoint (Leaf)	244
Table 273 - SMI Referenced Properties/Methods for CIM_SAPAvailableForElement	245
Table 274 - SMI Referenced Properties/Methods for CIM_StorageVolume	245
Table 275 - SMI Referenced Properties/Methods for CIM_SystemDevice (Leaf Devices)	246

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Table 276 - SMI Referenced Properties/Methods for SNIA_AllocatedResources	247
Table 277 - SMI Referenced Properties/Methods for SNIA_AllocationService.....	247
Table 278 - SMI Referenced Properties/Methods for SNIA_CascadingCapabilities.....	248
Table 279 - SMI Referenced Properties/Methods for SNIA_RemoteResources	249
Table 280 - OperationalStatus Details	252
Table 281 - CIM Elements for Health.....	254
Table 282 - SMI Referenced Properties/Methods for CIM_ComputerSystem	255
Table 283 - SMI Referenced Properties/Methods for CIM_LogicalDevice.....	255
Table 284 - SMI Referenced Properties/Methods for CIM_RelatedElementCausingError	256
Table 285 - OperationalStatus to Job State Mapping	259
Table 286 - Standard Message for Job Control Subprofile	260
Table 287 - CIM Elements for Job Control.....	263
Table 288 - SMI Referenced Properties/Methods for CIM_AffectedJobElement.....	264
Table 289 - SMI Referenced Properties/Methods for CIM_AssociatedJobMethodResult	264
Table 290 - SMI Referenced Properties/Methods for CIM_ConcreteJob.....	265
Table 291 - SMI Referenced Properties/Methods for CIM_MethodResult.....	267
Table 292 - SMI Referenced Properties/Methods for CIM_OwningJobElement.....	267
Table 293 - CIM Elements for Location.....	269
Table 294 - SMI Referenced Properties/Methods for CIM_Location	269
Table 295 - SMI Referenced Properties/Methods for CIM_PhysicalElementLocation.....	269
Table 296 - Redundancy Type.....	273
Table 297 - Supported Profiles for Multiple Computer System	276
Table 298 - CIM Elements for Multiple Computer System	279
Table 299 - SMI Referenced Properties/Methods for CIM_ComponentCS	280
Table 300 - SMI Referenced Properties/Methods for CIM_ComputerSystem (Non-Top-Level System).....	280
Table 301 - SMI Referenced Properties/Methods for CIM_ConcretIdentity.....	280
Table 302 - SMI Referenced Properties/Methods for CIM_IsSpare.....	281
Table 303 - SMI Referenced Properties/Methods for CIM_MemberOfCollection	281
Table 304 - SMI Referenced Properties/Methods for CIM_RedundancySet	281
Table 305 - CIM Elements for Physical Package.....	285
Table 306 - SMI Referenced Properties/Methods for CIM_Container	286
Table 307 - SMI Referenced Properties/Methods for CIM_LogicalIdentity.....	286
Table 308 - SMI Referenced Properties/Methods for CIM_PhysicalElementLocation.....	286
Table 309 - SMI Referenced Properties/Methods for CIM_PhysicalPackage (Component).....	287
Table 310 - SMI Referenced Properties/Methods for CIM_PhysicalPackage (System)	287
Table 311 - SMI Referenced Properties/Methods for CIM_Product (Component).....	288
Table 312 - SMI Referenced Properties/Methods for CIM_Product (System)	288
Table 313 - SMI Referenced Properties/Methods for CIM_ProductParentChild.....	289
Table 314 - SMI Referenced Properties/Methods for CIM_ProductPhysicalComponent (Component).....	289
Table 315 - SMI Referenced Properties/Methods for CIM_ProductPhysicalComponent (System)	290
Table 316 - SMI Referenced Properties/Methods for CIM_SystemPackaging (Component)	290
Table 317 - SMI Referenced Properties/Methods for CIM_SystemPackaging (System).....	290
Table 318 - Related Profiles for Power Supply	291
Table 319 - CIM Elements for Power Supply.....	292
Table 320 - SMI Referenced Properties/Methods for CIM_ElementCapabilities	293
Table 321 - SMI Referenced Properties/Methods for CIM_EnabledLogicalElementCapabilities.....	293
Table 322 - SMI Referenced Properties/Methods for CIM_IsSpare.....	293
Table 323 - SMI Referenced Properties/Methods for CIM_MemberOfCollection	294
Table 324 - SMI Referenced Properties/Methods for CIM_OwningCollectionElement.....	294
Table 325 - SMI Referenced Properties/Methods for CIM_PowerSupply.....	295
Table 326 - SMI Referenced Properties/Methods for CIM_RedundancySet	295

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Table 327 - SMI Referenced Properties/Methods for CIM_SuppliesPower	296
Table 328 - SMI Referenced Properties/Methods for CIM_SystemDevice	296
Table 329 - Related Profiles for Fan	297
Table 330 - CIM Elements for Fan	298
Table 331 - SMI Referenced Properties/Methods for CIM_AssociatedCooling	299
Table 332 - SMI Referenced Properties/Methods for CIM_AssociatedSensor	299
Table 333 - SMI Referenced Properties/Methods for CIM_ElementCapabilities	299
Table 334 - SMI Referenced Properties/Methods for CIM_EnabledLogicalElementCapabilities.....	300
Table 335 - SMI Referenced Properties/Methods for CIM_Fan.....	300
Table 336 - SMI Referenced Properties/Methods for CIM_IsSpare.....	301
Table 337 - SMI Referenced Properties/Methods for CIM_MemberOfCollection	301
Table 338 - SMI Referenced Properties/Methods for CIM_NumericSensor	301
Table 339 - SMI Referenced Properties/Methods for CIM_OwningCollectionElement.....	302
Table 340 - SMI Referenced Properties/Methods for CIM_RedundancySet	302
Table 341 - SMI Referenced Properties/Methods for CIM_Sensor.....	303
Table 342 - SMI Referenced Properties/Methods for CIM_SystemDevice	303
Table 343 - CIM Elements for Sensors	304
Table 344 - SMI Referenced Properties/Methods for CIM_AssociatedSensor	305
Table 345 - SMI Referenced Properties/Methods for CIM_ElementCapabilities	306
Table 346 - SMI Referenced Properties/Methods for CIM_EnabledLogicalElementCapabilities.....	306
Table 347 - SMI Referenced Properties/Methods for CIM_NumericSensor	306
Table 348 - SMI Referenced Properties/Methods for CIM_Sensor.....	308
Table 349 - SMI Referenced Properties/Methods for CIM_SystemDevice	309
Table 350 - Related Profiles for Base Server.....	310
Table 351 - CIM Elements for Base Server	311
Table 352 - SMI Referenced Properties/Methods for CIM_ComputerSystem	312
Table 353 - SMI Referenced Properties/Methods for CIM_ComputerSystemPackage	313
Table 354 - SMI Referenced Properties/Methods for CIM_ElementCapabilities	313
Table 355 - SMI Referenced Properties/Methods for CIM_EnabledLogicalElementCapabilities.....	313
Table 356 - SMI Referenced Properties/Methods for CIM_HostedService.....	314
Table 357 - SMI Referenced Properties/Methods for CIM_PhysicalPackage.....	314
Table 358 - SMI Referenced Properties/Methods for CIM_ServiceAffectsElement.....	315
Table 359 - SMI Referenced Properties/Methods for CIM_TimeService	315
Table 360 - Related Profiles for Media Access Device	316
Table 361 - OperationalStatus For MediaAccessDevice	317
Table 362 - CIM Elements for Media Access Device.....	318
Table 363 - SMI Referenced Properties/Methods for CIM_EnabledLogicalElementCapabilities.....	319
Table 364 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint.....	319
Table 365 - SMI Referenced Properties/Methods for CIM_MediaAccessDevice.....	319
Table 366 - SMI Referenced Properties/Methods for CIM_PhysicalPackage.....	320
Table 367 - SMI Referenced Properties/Methods for CIM_ProtocolEndpoint.....	321
Table 368 - SMI Referenced Properties/Methods for CIM_Realizes	321
Table 369 - SMI Referenced Properties/Methods for CIM_SAPAvailableForElement.....	321
Table 370 - SMI Referenced Properties/Methods for CIM_SystemDevice	322
Table 371 - Related Profiles for Storage Enclosure.....	323
Table 372 - CIM Elements for Storage Enclosure.....	329
Table 373 - SMI Referenced Properties/Methods for CIM_ConfigurationReportingService	329
Table 374 - SMI Referenced Properties/Methods for CIM_HostedService.....	330
Table 375 - CIM Elements for Software	332
Table 376 - SMI Referenced Properties/Methods for CIM_InstalledSoftwareIdentity.....	332
Table 377 - SMI Referenced Properties/Methods for CIM_SoftwareIdentity	333
Table 378 - Related Profiles for Software Inventory	334
Table 379 - CIM Elements for Software Inventory	335

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Table 380 - SMI Referenced Properties/Methods for CIM_ElementSoftwareIdentity	336
Table 381 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint	336
Table 382 - SMI Referenced Properties/Methods for CIM_HostedCollection	337
Table 383 - SMI Referenced Properties/Methods for CIM_InstalledSoftwareIdentity	337
Table 384 - SMI Referenced Properties/Methods for CIM_MemberOfCollection	337
Table 385 - SMI Referenced Properties/Methods for CIM_OrderedComponent	338
Table 386 - SMI Referenced Properties/Methods for CIM_OrderedDependency	338
Table 387 - SMI Referenced Properties/Methods for CIM_SAPAvailableForElement	338
Table 388 - SMI Referenced Properties/Methods for CIM_SoftwareIdentity	339
Table 389 - SMI Referenced Properties/Methods for CIM_SoftwareIdentityResource	339
Table 390 - SMI Referenced Properties/Methods for CIM_SystemSpecificCollection	340
Table 391 - Supported Profiles for Server	343
Table 392 - CIM Elements for Server	345
Table 393 - SMI Referenced Properties/Methods for CIM_CIMXMLCommunicationMechanism	346
Table 394 - SMI Referenced Properties/Methods for CIM_CommMechanismForManager	347
Table 395 - SMI Referenced Properties/Methods for CIM_HostedAccessPoint	347
Table 396 - SMI Referenced Properties/Methods for CIM_HostedService	347
Table 397 - SMI Referenced Properties/Methods for CIM_Namespace	348
Table 398 - SMI Referenced Properties/Methods for CIM_NamespaceInManager	348
Table 399 - SMI Referenced Properties/Methods for CIM_ObjectManager	349
Table 400 - SMI Referenced Properties/Methods for CIM_ObjectManagerCommunicationMechanism	349
Table 401 - SMI Referenced Properties/Methods for CIM_System	350
Table 402 - CIM Elements for Profile Registration	362
Table 403 - SMI Referenced Properties/Methods for CIM_ElementConformsToProfile (Associates Domain object (e.g. System) to RegisteredProfile)	363
Table 404 - SMI Referenced Properties/Methods for CIM_ElementConformsToProfile (Associates RegisteredProfiles for SMI-S and domain profiles)	363
Table 405 - SMI Referenced Properties/Methods for CIM_ElementSoftwareIdentity (Profile and SW identity)	364
Table 406 - SMI Referenced Properties/Methods for CIM_ElementSoftwareIdentity (Subprofile and SW identity)	364
Table 407 - SMI Referenced Properties/Methods for CIM_Product	364
Table 408 - SMI Referenced Properties/Methods for CIM_ProductSoftwareComponent	365
Table 409 - SMI Referenced Properties/Methods for CIM_ReferencedProfile	365
Table 410 - SMI Referenced Properties/Methods for CIM_RegisteredProfile (Domain Registered Profile)	366
Table 411 - SMI Referenced Properties/Methods for CIM_RegisteredProfile (The SMI-S Registered Profile)	366
Table 412 - SMI Referenced Properties/Methods for CIM_RegisteredSubProfile	367
Table 413 - SMI Referenced Properties/Methods for CIM_SoftwareIdentity	368
Table 414 - SMI Referenced Properties/Methods for CIM_SubProfileRequiresProfile	368
Table 415 - Indication Profile Methods that cause Instance Creation, Deletion or Modification	380
Table 416 - CIM Elements for Indication	387
Table 417 - SMI Referenced Properties/Methods for CIM_AlertIndication	388
Table 418 - SMI Referenced Properties/Methods for CIM_IndicationFilter (client defined)	389
Table 419 - SMI Referenced Properties/Methods for CIM_IndicationFilter (pre-defined)	390
Table 420 - SMI Referenced Properties/Methods for CIM_IndicationSubscription	391
Table 421 - SMI Referenced Properties/Methods for CIM_InstCreation	392
Table 422 - SMI Referenced Properties/Methods for CIM_InstDeletion	393
Table 423 - SMI Referenced Properties/Methods for CIM_InstModification	393
Table 424 - SMI Referenced Properties/Methods for CIM_ListenerDestinationCIMXML (Indication Handler)	394
Table 425 - Test that a Listener Destination if Functioning Properly	414
Table 426 - Discovery of Predefined IndicationFilters	414

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Table 427 - Create a subscription to a predefined indication filter	415
Table 428 - Create an IndicationFilter and subscribe to it.....	415
Table 429 - Creation of a semi-fixed Indication filters	416
Table 430 - Creation of a client defined FilterCollection	416
Table 431 - CIM Elements for Experimental Indication.....	417
Table 432 - SMI Referenced Properties/Methods for CIM_AlertIndication	419
Table 433 - SMI Referenced Properties/Methods for CIM_ElementCapabilities (Indication Config Service to Capabilities)	420
Table 434 - SMI Referenced Properties/Methods for CIM_FilterCollection (Client Defined)	420
Table 435 - SMI Referenced Properties/Methods for CIM_FilterCollectionSubscription (Filter Collection Subscription)	421
Table 436 - SMI Referenced Properties/Methods for CIM_HostedCollection (Hosted Filter Collection)	421
Table 437 - SMI Referenced Properties/Methods for CIM_HostedService (Indication Config Service to System).....	422
Table 438 - SMI Referenced Properties/Methods for CIM_IndicationFilter (client defined)	422
Table 439 - SMI Referenced Properties/Methods for CIM_IndicationFilter (pre-defined)	423
Table 440 - SMI Referenced Properties/Methods for CIM_IndicationSubscription.....	424
Table 441 - SMI Referenced Properties/Methods for CIM_InstCreation.....	425
Table 442 - SMI Referenced Properties/Methods for CIM_InstDeletion	425
Table 443 - SMI Referenced Properties/Methods for CIM_InstModification	426
Table 444 - SMI Referenced Properties/Methods for CIM_ListenerDestinationCIMXML (Indication Handler).....	427
Table 445 - SMI Referenced Properties/Methods for CIM_ListenerDestinationWSManagement (WS-Man Indi- cation Handler).....	428
Table 446 - SMI Referenced Properties/Methods for CIM_MemberOfCollection (Filter Collection to Filters)	428
Table 447 - SMI Referenced Properties/Methods for SNIA_IndicationConfigurationCapabilities	429
Table 448 - SMI Referenced Properties/Methods for SNIA_IndicationConfigurationService	429
Table 449 - CIM Elements for Object Manager Adapter	431
Table 450 - SMI Referenced Properties/Methods for CIM_CommMechanismForObjectManagerAdapter	431
Table 451 - SMI Referenced Properties/Methods for CIM_ObjectManagerAdapter	432
Table 452 - Capabilities	434
Table 453 - AddSystem Method Parameters	435
Table 454 - AddSystem Return Codes	436
Table 455 - DiscoverSystem Parameters	436
Table 456 - DiscoverSystem Return Codes.....	437
Table 457 - RemoveSystem Parameters	437
Table 458 - CIM Elements for Proxy Server System Management	438
Table 459 - SMI Referenced Properties/Methods for CIM_HostedService.....	439
Table 460 - SMI Referenced Properties/Methods for SNIA_SystemRegistrationCapabilities	439
Table 461 - SMI Referenced Properties/Methods for SNIA_SystemRegistrationService	440
Table 462 - CIM Elements for Device Credentials	442
Table 463 - SMI Referenced Properties/Methods for CIM_HostedService.....	442
Table 464 - SMI Referenced Properties/Methods for CIM_SharedSecret.....	442
Table 465 - SMI Referenced Properties/Methods for CIM_SharedSecretIsShared.....	443
Table 466 - SMI Referenced Properties/Methods for CIM_SharedSecretService	443
Table 467 - Related Profiles for Operational Power.....	445
Table 468 - Creation, Deletion and Modification Methods	452
Table 469 - CIM Elements for Operational Power	457
Table 470 - SMI Referenced Properties/Methods for CIM_ElementCapabilities	459
Table 471 - SMI Referenced Properties/Methods for CIM_ElementStatisticalData (Optional Element Stats).....	459
Table 472 - SMI Referenced Properties/Methods for CIM_ElementStatisticalData	

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(Top Level System Stats).....	460
Table 473 - SMI Referenced Properties/Methods for CIM_HostedCollection (Client Defined).....	460
Table 474 - SMI Referenced Properties/Methods for CIM_HostedCollection (Default).....	461
Table 475 - SMI Referenced Properties/Methods for CIM_HostedCollection (System to StatisticsCollection).....	461
Table 476 - SMI Referenced Properties/Methods for CIM_HostedService.....	461
Table 477 - SMI Referenced Properties/Methods for CIM_MemberOfCollection (Member of client defined collection).....	462
Table 478 - SMI Referenced Properties/Methods for CIM_MemberOfCollection (Member of power statistics collection).....	462
Table 479 - SMI Referenced Properties/Methods for CIM_MemberOfCollection (Member of pre-defined collection).....	463
Table 480 - SMI Referenced Properties/Methods for CIM_StatisticsCollection.....	463
Table 481 - SMI Referenced Properties/Methods for SNIA_OperationalPowerManifest (Client Defined).....	464
Table 482 - SMI Referenced Properties/Methods for SNIA_OperationalPowerManifest (Provider Support).....	465
Table 483 - SMI Referenced Properties/Methods for SNIA_OperationalPowerManifestCollection (Client De- fined).....	465
Table 484 - SMI Referenced Properties/Methods for SNIA_OperationalPowerManifestCollection (Provider De- fined).....	466
Table 485 - SMI Referenced Properties/Methods for SNIA_OperationalPowerStatisticalData (Optional Ele- ment Stats).....	466
Table 486 - SMI Referenced Properties/Methods for SNIA_OperationalPowerStatisticalData (Top Level System Stats).....	467
Table 487 - SMI Referenced Properties/Methods for SNIA_OperationalPowerStatisticsCapabilities	468
Table 488 - SMI Referenced Properties/Methods for SNIA_OperationalPowerStatisticsService	468

INFORMATION TECHNOLOGY –

STORAGE MANAGEMENT –

Part 3: Common profiles

FOREWORD

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International Standard ISO/IEC 24775-3 was prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

This International Standard, together with ISO/IEC 24775-1, ISO/IEC 24775-2 and ISO/IEC 24775-4 to ISO/IEC 24775-8, replaces ISO/IEC 24775, second edition, published in 2011, and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) reorganization into eight parts;
- b) maturity identification using stages; and
- c) new profiles.

The introduction contains a detailed list of the technical changes.

The list of all currently available parts of the ISO/IEC 24775 series, under the general title *Information technology – Storage management*, can be found on the IEC web site.

This is a preview of "ISO/IEC 24775-3:2014". [Click here to purchase the full version from the ANSI store.](#)

This International Standard has been approved by vote of the member bodies, and the voting results may be obtained from the address given on the second title page.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

IMPORTANT – The “colour inside” logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this publication using a colour printer.

Introduction

The Information Technology – Storage Management is published in several parts. *Information Technology – Storage Management, Part 3 Common Profiles* defines profiles that are used by profiles in other parts of this International Standard. In general, the common profiles do not fully define storage elements, but define non-storage management aspects that are common to storage domains. For example, the Access Points Profile defines a technique that the arrays, switches, or libraries may use to inform clients of non-CIM network interfaces that are available.

Some of the common profiles are based on DMTF profiles. For these profiles, the DMTF profile may be “specialized” to assure SNIA requirements are met.

Parts of this Standard

This International Standard is subdivided into the following parts:

- *Information technology – Storage management – Part 1: Overview*
- *Information technology – Storage management – Part 2: Common architecture*
- *Information technology – Storage management – Part 3: Common profiles*
- *Information technology – Storage management – Part 4: Block devices*
- *Information technology – Storage management – Part 5: Filesystems*
- *Information technology – Storage management – Part 6: Fabric*
- *Information technology – Storage management – Part 7: Host elements*
- *Information technology – Storage management – Part 8: Media libraries*

Changes since the Last Edition

This first multipart edition cancels and replaces the second edition published in 2011 and constitutes a technical revision. This edition includes the following significant changes with respect to the previous edition. The changes fall into three broad categories:

- **Improved organization.** The International Standard has been reorganized into eight parts to provide more information more easily. The parts are:
 - *Part 1 Overview:* The overview book provides a high level overview of the standard.
 - *Part 2 Common Architecture:* This part covers general information about the interface, such as security and protocols.
 - *Part 3 Common Profiles:* This part covers component profiles that extend profiles in other books, such as target ports and job control.
 - *Part 4 Block Devices:* This part covers storage profiles that support various forms of disk storage.
 - *Part 5 Filesystems:* This part covers profiles that support filesystems, such as NAS (Network Attached Storage).
 - *Part 6 Fabric:* This part covers profiles that deal with interconnection of host servers and storage devices, such as switches.
 - *Part 7 Host Elements:* This part covers profiles for storage software on host servers, such as disk partitioning and Host Hardware RAID controllers.
 - *Part 8 Media Libraries:* This part covers profiles that deal with removable media such as tape libraries.
- **Maturity identification.** As material is added to the standard it goes through various stages of maturity. The initial stage is *Experimental*, which is material that has not yet been implemented and is subject to change. The other stages indicate the degree of implementations. The stages are:
 - **Experimental:** Full design review, no commercial implementations.

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- **Implemented:** Initial implementations available, may be removed at minor revision.
- **Stable:** Three or more vendors have implemented the identified material, backward compatibility assured, removed only at major revision.
- **Finalized:** Relies solely on Finalized content, deprecated only at major revision.
- **Deprecated:** Obsolete material, may be removed in future revisions.
For a more detailed explanation of each maturity level and its typographical indication, see Clause 4 Typographical Conventions.
- **Expanded scope.** The range of SAN components modeled by the profiles defined in the parts has been greatly expanded.
- New profiles include:
 - *Part 3 Common Profiles:* Serial Attached SCSI (SAS) Target Port, Serial ATA (SATA) Target Ports, SB Target Port, SAS Initiator Ports, ATA Initiator Ports, FC-SB-x Initiator Ports, FCoE Initiator Ports, Power Supply, Fan, Sensors, Base Server, Media Access Device, Storage Enclosure, Software Inventory, Profile Registration, Proxy Server System Management, Operational Power.
 - *Part 4 Block Devices:* Block Storage Views, CKD Block Services, Erasure, Storage Server Asymmetry, Volume Composition, Storage Element Protection, Replication Services, Pools from Volumes, Group Masking and Mapping, Thin Provisioning.
 - *Part 5 Filesystems:* File Export, File Server Manipulation, File Storage, Filesystem, Filesystem Copy Services, Filesystem Performance, Filesystem Quotas, NAS Network Port, Host Filesystem, Filesystem Remote Copy Services.
 - *Part 6 Fabric:* Fibre Channel Security, Fabric Views, Virtual Fabrics, Switch Partitioning, SAS Expander, N Port Virtualizer, Inter Fabric Routing.
 - *Part 7 Host Elements:* Storage HBA, Host Hardware RAID Controller.
 - *Part 8 Media Libraries:* Partitioned Tape Library, Virtual Tape Library, Virtual Tape Library Copy and Library Views.
- The following experimental profiles were removed from the International Standard:
 - *Part 3 Common Profiles:* Security, 3rd Party Authentication, Authorization, Credential Management, Identity Management, Security Role Based Access Control and Security Resource Ownership.
 - *Part 4 Block Devices:* Pool Management Policy.
- The following profiles were deprecated:
 - *Part 3 Common Profiles:* Cascading (replaced by direct use of cascading classes).
 - *Part 4 Block Devices:* Volume Management (and not replaced).
 - *Part 6 Fabric:* Router (and not replaced).
 - *Part 7 Host Elements:* FC HBA (replaced by Storage HBA), SB Multipath Management (and not replaced).
 - *Part 8 Media Libraries:* InterLibraryPort Connection (and not replaced).
- In addition, many of the existing profiles have been enhanced.

This International Standard was prepared by the SNIA (Storage Networking Industry Association)¹. The standard is often referred to as **SMI-S** (*Storage Management Initiative Specification*).

1. Storage Networking Industry Association, 425 Market Street, Suite 1020, San Francisco, CA 94105, U.S.A., <http://www.snia.org>