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5 Software ID Tag Profile

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72

Foreword

73 The *Software ID Tag Profile* (DSP1067) was prepared by the Software Entitlement Working Group of the
74 DMTF.

75 DMTF is a not-for-profit association of industry members dedicated to promoting enterprise and systems
76 management and interoperability.

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94

Introduction

95 The information in this specification should be sufficient for a provider or consumer of this data to identify
96 unambiguously the classes, properties, methods, and values that shall be instantiated and manipulated to
97 obtain information regarding Software ID Tags.

98

Software ID Tag Profile

99 1 Scope

100 The *Software ID Tag Profile* (DSP1067) defines the process in which to obtain CIM-based software ID tag
101 information.

102 2 Normative references

103 The following referenced documents are indispensable for the application of this document. For dated or
104 versioned references, only the edition cited (including any corrigenda or DMTF update versions) applies.
105 For references without a date or version, the latest published edition of the referenced document
106 (including any corrigenda or DMTF update versions) applies.

107 2.1 Approved references

108 DMTF DSP0200, *CIM Operations over HTTP 1.4.0*,
109 http://www.dmtf.org/sites/default/files/standards/documents/DSP0200_1.4.0.pdf

110 DMTF DSP1033, Profile Registration Profile 1.0.0

111 SNIA Storage Management Initiative

112 2.2 References under development

113 DMTF DSP1002, *Diagnostics Profile 2.0.0*

114 2.3 Other references

115 ISO/IEC Directives, Part 2, *Rules for the structure and drafting of International Standards*,
116 <http://isotc.iso.org/livelink/livelink.exe?func=ll&objId=4230456&objAction=browse&sort=subtype>

117 Unified Modeling Language (UML) from the Open Management Group (OMG), <http://www.uml.org>

118 ISO/IEC 19770, Part 2, *Software identification tag*,
119 TODO: NEED URL

120 3 Terms and definitions

121 For the purposes of this document, the following terms and definitions apply. For the purposes of this
122 document, the terms and definitions given in DSP1033 and DSP1001 also apply.

123 3.1

124 can

125 used for statements of possibility and capability, whether material, physical, or causal

126 3.2

127 cannot

128 used for statements of possibility and capability, whether material, physical, or causal

129 3.3

130 **conditional**
131 indicates requirements to be followed strictly in order to conform to the document when the specified
132 conditions are met

133 **3.4**
134 **mandatory**
135 indicates requirements to be followed strictly in order to conform to the document and from which no
136 deviation is permitted

137 **3.5**
138 **may**
139 indicates a course of action permissible within the limits of the document

140 **3.6**
141 **need not**
142 indicates a course of action permissible within the limits of the document

143 **3.7**
144 **Online**
145 Production/customer OS whether system is in production or not

146 **3.8**
147 **optional**
148 indicates a course of action permissible within the limits of the document

149 **3.9**
150 **referencing profile**
151 indicates a profile that owns the definition of this class and can include a reference to this profile in its
152 "Related Profiles" table

153 **3.10**
154 **shall**
155 indicates requirements to be followed strictly in order to conform to the document and from which no
156 deviation is permitted

157 **3.11**
158 **shall not**
159 indicates requirements to be followed in order to conform to the document and from which no deviation is
160 permitted

161 **3.12**
162 **should**
163 indicates that among several possibilities, one is recommended as particularly suitable, without
164 mentioning or excluding others, or that a certain course of action is preferred but not necessarily required

165 **3.13**
166 **should not**
167 indicates that a certain possibility or course of action is deprecated but not prohibited

168 **3.14**
 169 **unspecified**
 170 Keyword indicating that this profile does not define any constraints for the referenced CIM element or
 171 operation

172 **4 Symbols and abbreviated terms**

173 The following symbols and abbreviations are used in this document.

174 **4.1**
 175 **SWID**
 176 Software Identification tag

177 **5 Synopsis**

178 **Profile Name:** Software ID Tag Profile

179 **Version:** 1.0.0

180 **Organization:** DMTF

181 **CIM schema version:** 2.43.0

182 **Central Class:** CIM_SoftwareIDTag

183 **Scoping Class:** CIM_SoftwareIDTag

184 The Software ID Tag Profile is an autonomous profile that provides a CIM interface to Software ID Tag
 185 data.

186
 187 CIM_SoftwareIDTag shall be the Central Class of this profile. The instance of CIM_SoftwareIDTag shall
 188 be the Central Instance of this profile.

189 Table 1 identifies profiles on which this profile has a dependency.

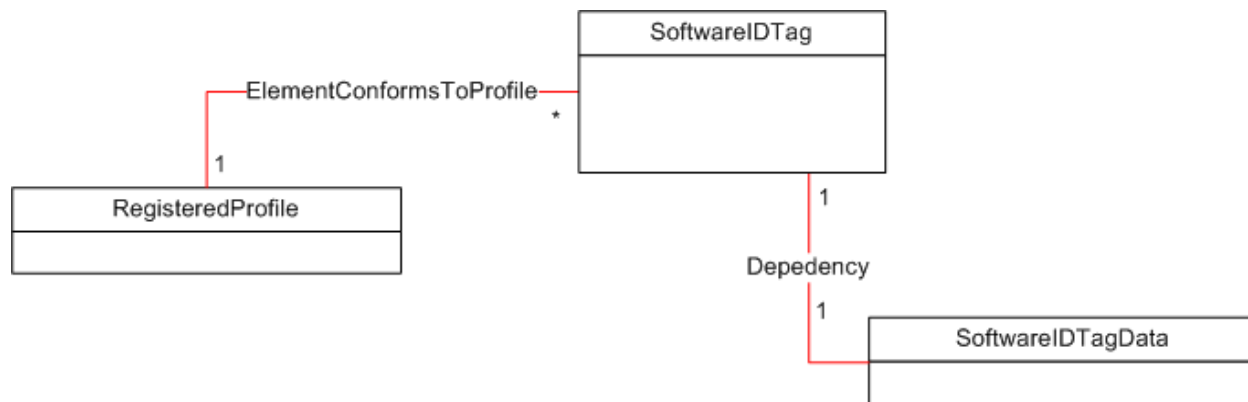
190 **Table 1 – Referenced profiles**

Profile Name	Organization	Version	Description
Profile Registration Profile	DMTF	1.1.0	Mandatory

191 **6 Description**

192 The *Software ID Tag Profile* provides the necessary properties and methods to represent software
 193 identification tags. The software identification tag (SWID) is an international standard defined in ISO/IEC
 194 19770-2. The SWID is a standardized data structure containing authoritative identification and
 195 management information about a software product. Product information provided in the software
 196 identification tag structure will often be provided in an XML data file. This profile describes the method in
 197 which the information is available in CIM.

198 Figure 1 represents the class schema for the *Software ID Tag Profile*. For simplicity, the prefix CIM_ has
 199 been removed from the names of the classes.



200
201 **Figure 1 - Software Identification Tag Profile**

202
203 This version of the profile does not model all of the information available in the SWID data structure in
204 CIM. A small subset is modeled in CIM and future version of this specification may expand the model.
205 The profile does provide a mechanism to retrieve the XML file so that a client may get any needed
206 information. CIM_SoftwareIDTag includes the properties needed to identify the product

207 **7 Implementation**

208 This clause details the requirements related to the arrangement of instances and their properties for
209 implementations of this profile.

210 **7.1 CIM_SoftwareIDTag**

211 One or more instance of CIM_SoftwareIDTag shall be implemented.

212 **7.1.1 CIM_SoftwareIDTag.EntitlementRequired**

213 CIM_SoftwareIDTag.EntitlementRequired is optional.

214 If implemented, this property value shall represent the value as defined in the Software ID tag XML file
215 that is the property value for CIM_SoftwareIDTagData.SoftwareIDTagXML associated to this instance
216 through CIM_Dependency.

217 **7.1.2 CIM_SoftwareIDTag.Name**

218 The CIM_SoftwareIDTag.Name specifies the name/title of the software represented by this software ID
219 tag property and shall be implemented.

220 This property value shall represent the value as defined in the Software ID tag XML file that is the
221 property value for CIM_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through
222 CIM_Dependency.

223 For more information, see Section 8.5.1 ISO/IEC 19770-2:2015 for more information.

224 **7.1.3 CIM_SoftwareIDTag.TagID**

225 The CIM_SoftwareIDTag.TagID property shall be a globally unique identifier and should be assigned a
226 GUID and shall be implemented.

227 This property value shall represent the value as defined in the Software ID tag XML file that is the
228 property value for CIM_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through
229 CIM_Dependency.

230 For more information, see Section 8.5.1 ISO/IEC 19770-2:2015 for more information.

231 **7.1.4 CIM_SoftwareIDTag.TagVersion**

232 The CIM_SoftwareIDTag.TagID property value is the string representation of the version of the tag and
233 shall be implemented. The default value is zero (0).

234 This property value shall represent the value as defined in the Software ID tag XML file that is the
235 property value for CIM_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through
236 CIM_Dependency.

237 For more information, see Section 8.5.1 ISO/IEC 19770-2:2015 for more information

238 **7.1.5 CIM_SoftwareIDTag.Version**

239 The CIM_SoftwareIDTag.Version represents the version of the product and shall be implemented. The
240 default value is zero (0.0). This property works along with the CIM_SoftwareIDTag.VersionSchema.

241 This property value shall represent the value as defined in the Software ID tag XML file that is the
242 property value for CIM_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through
243 CIM_Dependency.

244 For more information, see Section 8.5.1 ISO/IEC 19770-2:2015 for more information.

245 **7.1.6 CIM_SoftwareIDTag.VersionScheme**

246 The CIM_SoftwareIDTag.VersionScheme represents the version of the product and shall be
247 implemented. The default value is 2 (multipartnumeric). This property works along with the
248 CIM_SoftwareIDTag.Version.

249 This property value shall represent the value as defined in the Software ID tag XML file that is the
250 property value for CIM_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through
251 CIM_Dependency.

252 For more information, see Section 8.6.11 ISO/IEC 19770-2:2015 for more information.

253 **7.1.7 CIM_SoftwareIDTag.Patch**

254 The CIM_SoftwareIDTag.Patch represents whether the SWID is a patch or modification to another
255 software element. The property shall be implemented.

256 This property value shall represent the value as defined in the Software ID tag XML file that is the
257 property value for CIM_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through
258 CIM_Dependency.

259 For more information, see Section 8.6.11 ISO/IEC 19770-2:2015 for more information.

260 **7.1.8 CIM_SoftwareIDTag.Supplemental**

261 The CIM_SoftwareIDTag.Supplemental represents whether this tag is a supplemental tag that can be
262 merged with a primary tag.

263 This property value shall represent the value as defined in the Software ID tag XML file that is the
264 property value for CIM_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through
265 CIM_Dependency.

266 For more information, see Section 8.5.1 ISO/IEC 19770-2:2015 for more information.

267 **7.1.9 CIM_SoftwareIDTag.Entity**

268 The CIM_SoftwareIDTag.Entity property is mandatory. This property is an array of
269 CIM_SoftwareIDTagEntityStructures and represents the organization(s) responsible for this SWID tag. At
270 least one entry in the array shall be present for the tagCreator: the CIM_SoftwareIDTagEntityStructures.
271 Roles shall include at a minimum, the value "tagCreator". (The property value may include additional
272 roles.)

273 For more information, see Section 8.5.2 ISO/IEC 19770-2:2015 for more information.

274 **7.2 CIM_SoftwareIDTagData**

275 For each instance of CIM_SoftwareIDTag, there shall be an instance of CIM_SoftwareIDTagData
276 associated by CIM_Dependency.

277 **7.2.1 CIM_SoftwareIDTagData.SoftwareIDTagXML**

278 CIM_SoftwareIDTagData.SoftwareIDTagXML shall be implemented and shall contain the complete XML
279 document.

280 **8 Methods**

281 This clause details the requirements for supporting intrinsic CIM operations and extrinsic methods for the
282 CIM elements defined by this profile.

283 **8.1 Profile conventions for operations**

284 For each profile class (including associations), the implementation requirements for operations, including
285 those in the following default list, are specified in class-specific subclauses of this clause.

286 The default list of operations is as follows:

- 287 • GetInstance
- 288 • Associators
- 289 • AssociatorNames
- 290 • References
- 291 • ReferenceNames
- 292 • EnumerateInstances
- 293 • EnumerateInstanceNames

294 **8.2 CIM_SoftwareIDTag**

295 All operations in the default list in 8.1 shall be implemented as defined in [DSP0200](#).

296 NOTE Related profiles may define additional requirements on operations for the profile class.

297 **8.3 CIM_SoftwareIDTagData**

298 All operations in the default list in 8.1 shall be implemented as defined in [DSP0200](#).

299 NOTE Related profiles may define additional requirements on operations for the profile class.

300 **8.4 CIM_Dependency**

301 Table 2 lists implementation requirements for operations. If implemented, these operations shall be
 302 implemented as defined in [DSP0200](#). In addition, and unless otherwise stated in Table 2, all operations in
 303 the default list in 8.1 shall be implemented as defined in [DSP0200](#)

304 NOTE Related profiles may define additional requirements on operations for the profile class.

305 **Table 2 – Operations: CIM_BindsTo**

Operation	Requirement	Messages
Associators	Unspecified	None
AssociatorNames	Unspecified	None
References	Unspecified	None
ReferenceNames	Unspecified	None

306 **9 Use cases (informative)**

307 This clause provides informative use cases and object diagrams.

308 The following diagrams will be used to illustrate some of the use cases.

309 **10 CIM Elements**

310 Table 3 shows the instances of CIM Elements for this profile. Instances of the CIM Elements shall be
 311 implemented as described in Table 3. Clauses 7 (“Implementation”) and 8 (“Methods”) may impose
 312 additional requirements on these elements.

313 **Table 3 – CIM Elements: Software ID Tag Profile**

Element Name	Requirement	Description
Classes		
CIM_Dependency	Mandatory	See 10.1.
CIM_SoftwareIDTag	Mandatory	See 10.2.
CIM_SoftwareIDTagData	Mandatory	See 10.3.
CIM_SoftwareIDTagEntityStructure	Mandatory	See 10.4.
CIM_RegisteredProfile	Mandatory	See 10.5.
Indications		
None defined in this profile		

314 **10.1 CIM_Dependency**

315 CIM_Dependency is used to associate an instance of CIM_SoftwareIDTag to the instance of
 316 CIM_SoftwareIDTagData that represents the associated CIM_SoftwareIDTag. Table 4 defines the
 317 requirements for elements of this class.

318

319

Table 4 – Class: CIM_ Dependency

Elements	Requirement	Notes
Antecedent	Mandatory	Key: REF to the instance of CIM_SoftwareIDTag
Dependent	Mandatory	Key: REF to the instance of CIM_SoftwareIDTagData

320 **10.2 CIM_ SoftwareIDTag**

321 CIM_SoftwareIDTag includes the elements that describe the installed product.

322 Table 5 defines the requirements for elements of this class.

323

Table 5 – Class: CIM_ SoftwareIDTag

Elements	Requirement	Notes
InstanceID	Mandatory	Key
Name	Mandatory	See 7.1.2
TagID	Mandatory	See 7.1.3
TagVersion	Mandatory	See 7.1.4
Version	Mandatory	See 7.1.5
VersionScheme	Mandatory	See 7.1.6
Patch	Mandatory	See 7.1.7
Supplemental	Mandatory	See 7.1.8
Entity	Mandatory	See 7.1.9
EntitlementRequired	Mandatory	See 7.1.1

324 **10.3 CIM_ SoftwareIDTagData**

325 The constraints listed in Table 6 are in addition to those specified in the 10.2 CIM_SoftwareIDTag.

326

Table 6 – Class: CIM_ SoftwareIDTagData

Elements	Requirement	Notes
InstanceID	Mandatory	Key
SoftwareIDTagXML		

327 **10.4 CIM_ SoftwareIDTagEntityStructure**

328 The constraints listed in Table 7 are in addition to those specified in the 10.2 CIM_SoftwareIDTag.

329

Table 7 – Class: CIM_ SoftwareIDTagEntityStructure

Elements	Requirement	Notes
Name	Mandatory	
RegID	Mandatory	
Role[]	Mandatory	See 7.1.9

330 **10.5 CIM_RegisteredProfile**

331 The CIM_RegisteredProfile class is defined by the Profile Registration Profile. Table 8 defines the
332 requirements for elements of this class.

333 **Table 8 – Class: CIM_RegisteredProfile**

Elements	Requirement	Notes
InstanceID	Mandatory	Key
RegisteredName	Mandatory	Shall be "Software ID Tag"
RegisteredVersion	Mandatory	Shall be "1.0.0"
RegisteredOrganization	Mandatory	Shall be 2 (DMTF)
SpecificationType	Mandatory	Shall be 2 (Profile)

334
335
336
337
338

ANNEX A (informative)

Change log

Version	Date	Description
1.0.0	2014-07-19	Initial Version
1.0.0a	2014-10-15	Work in progress release
1.0.0a	2014-10-31	Work in progress release - comments from work group

339